



**WZI** INC.

## WZI INC. STATEMENT OF QUALIFICATIONS



*WZI Inc. is committed to providing the client with the products and services that exceed their expectations. WZI offers its clients a uniquely high level of expertise, an innovative technical approach, and disciplined project management.*

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## **I. CORPORATE OVERVIEW**

Headquartered in Bakersfield, California, with an additional office in Houston, Texas, WZI Inc. is an environmental and consulting engineering company, which has achieved a reputation for high quality, successful project management. WZI offers professional and technical services in regulatory compliance (air, water, waste), geoscience, hydrology, site characterization, hazardous waste management, and environmental impact assessment. WZI offers its clients a uniquely high level of expertise, an innovative, technical approach and disciplined project management.

Since its beginning, the WZI client base has grown to include projects located throughout the United States and internationally. The variety of high-quality work for which WZI is known is the result of successful project management and the affiliation of leading, specialized talent in complex, industry-specific areas. The success of the WZI approach to highly sensitive regulatory compliance, site characterization and waste management programs has already been clearly demonstrated by the rapid completion and permitting/licensing of some of the largest programs undertaken to date.

WZI demonstrates a clear understanding of the increasingly complex regulatory compliance and licensing statutes, and exhibits a strong capability to manage these sensitive programs. The selection of the appropriate level of expertise to address specific issues is important for forceful and rapid resolution of conflicts. WZI's extensive experience in permitting, its knowledge of and ability to overcome obstacles and its good working relations with the country's leading authorities ensure its clients high caliber performance and reduced permitting time.

## **II. SUMMARY OF SERVICES**

### **A. Regulatory Compliance**

WZI's expertise in regulatory compliance and development is unique. Federal, state and local regulations are always evolving and overlapping in responsibilities. An appreciation of this dynamic framework and innovation in technical approach are important keys to success in environmental work. WZI excels in the integrated application of innovative technology, disciplined methodology, and accurate interpretation of regulations.

WZI services encompass regulatory areas of environmental document preparation, air quality management services, water quality management, hazardous materials management and waste disposal/recycling alternatives determination. Hazards and liability assessment and compliance strategy planning require the integration of all compliance areas.

### **Public Hearings and Outreach**

WZI actively participates in public outreach efforts and have assisted numerous agencies to organize and implement outreach efforts. Additionally, WZI has worked closely with industry groups and public sector groups to successfully present jointly sponsored outreach. WZI actively participates in the policy development process both in public hearings and in smaller group oriented negotiations. Although not lobbyists, WZI does believe in presenting a balanced technical perspective to policy makers.

WZI Inc. was involved as a major formation participant in the following policy/outreach programs:

### **SPE/EPA Conference-Formation**

Mary Jane Wilson was one of the formation participants and chair of the fourth biannual conference which brought the petroleum industry and USEPA together to discuss technical /environmental issues.

Jesse D. Frederick was a participant in the strategic planning for the California Energy Commission in 1999, which provided a go forward plan for the Commission during deregulation.

Mary Jane Wilson and Jesse D. Frederick were on the Department of Energy Deep Water Strategic Planning Committee to promote the inclusion of the environmental sector (NGO's) in the DOE planning process.

Jesse D. Frederick has been a peer review expert on many issues concerning natural gas and electricity in the deregulated market for DOE and various industrial/energy market participants.

### **Local/Valley Participation**

Kern Economic Development Corporation, Bakersfield Chamber of Commerce, Kern Environmental Education Program, Vision 2020.

### **Environmental Document Preparation**

WZI has prepared a wide range of environmental documents under CEQA and NEPA guidelines. WZI has the experience and expertise to prepare Environmental Impact Statements, Environmental Impact Reports, Environmental Assessments and other land use documents for complex or controversial projects. WZI assists in identifying project impacts and in developing design measures to mitigate those impacts. WZI works closely with the lead agency and stakeholders to provide a well-documented analysis that addresses the key project impacts. WZI is experienced in presenting project environmental impacts at public hearings and in assuring project compliance with national and state regulatory guidelines.

WZI has supported lead agencies and written Environmental Impact Reports as well as performed critical studies on:

1. Mining operations
2. Agricultural operations, including dairies
3. Road projects
4. Residential projects, and
5. Commercial projects

WZI has proven experience and capability to perform studies of the following Environmental Factors:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology / Soils
- Hazards and Hazardous Materials
- Hydrology / Water Quality
- Land Use / Planning
- Mineral Resources
- Noise
- Population / Housing / Environmental Justice / Relocation Impact Analysis
- Public Services
- Recreation
- Transportation and Traffic, and
- Utilities and Service Systems.

### **Hazards and Liability Assessment**

Professional services in hazards and liability assessment addresses a matrix of compliance issues and technologies but is an important business-planning tool. These services include:

1. Site Assessments
  - Liability inspection of existing environmental problems.
  - Identification of conditions which represent potential environmental/health and safety hazards.
2. Audit of Compliance Documentation.
3. Due Diligence Reviews

WZI performs site assessments in phases in accordance with ASTM standards. Phase I is comprised of the search for evidence of past activities which might be inconsistent with current environmental standards. Activities include:

- a) Review past site usage utilizing aerial photographs and chain of title review.
- b) In-depth site interviews with personnel familiar with the site.
- c) Regulatory agency interfacing for compliance status and issuance of citations.
- d) Onsite reconnaissance identifying areas of concern and taking significant site photographs.
- e) Identification of geological and hydrogeological conditions.

Phase II is the onsite sampling and Laboratory Analysis Program to evaluate contamination. Phase III is the remediation or mitigation of the environmental concerns defined during previous phases.

WZI has the expertise to perform environmental compliance audits and due diligence reviews. WZI tailors the audit protocols to the priorities specified by the client. WZI utilizes proprietary checklists, agency enforcement lists, as well as the UTILICOM "Auditmaster" System to establish the procedures.

WZI develops document databases as needed for clients to assist in audit implementation. From the audit results, recommendations are developed to address environmental compliance management.

### **Air Quality Management Services**

WZI has expertise in air quality management in California that is recognized statewide. The 1990 amendments to the California Clean Air Act and the Federal Clean Air Act have created a new cycle of regulatory activity, and a multitude of additional measures are now required to achieve ambient air quality standards. Air quality management services at WZI include permit acquisition, emissions tracking, air quality modeling/impact assessment, air toxics compliance and long range strategic planning.

### **Permit Acquisition**

WZI has experience working with Air Pollution Control Districts throughout California, including South Coast Air Quality Management District, Bay Area Air Quality Management District, Ventura, Santa Barbara and the new San Joaquin Valley Unified Air Pollution Control District. WZI has worked extensively with the California Air Resources Board as well as

obtaining Prevention of Significant Deterioration (PSD) permits from the U. S. Environmental Protection Agency (EPA). Typical permit acquisition tasks consist of the preparation of applications for Authorities to Construct and Permits to Operate, including the necessary engineering analyses. WZI works on behalf of its clients to expedite the review process and insure that the appropriate emissions profile is utilized. WZI also analyzes economic impacts and technological feasibility, control techniques, and Best Available Control Technology/Lowest Achievable Emission Rate determinations.

### **Emissions Tracking**

WZI develops facility specific emissions tracking systems which are designed to manage the dynamic nature of the dataset. Air emissions inventory and tracking systems monitor permit status, permitted/unpermitted stationary equipment inventory, mobile equipment inventory, significant fugitive source inventory, and emissions documents database. WZI will manage the database or train the client in the use of the tracking system.

### **Air Quality Modeling/Impact Assessment**

WZI utilizes air dispersion models in the assessment of the cumulative environmental impacts for California Environmental Quality Act (CEQA) documents. WZI has experience in priority pollutant modeling for housing developments as well as industrial projects. Included in our modeling capabilities are PSD, New Source Review (NSR) requirements, ISCST, CAMEO, Dense Gas Releases, transportation source modeling and reactive plume modeling. WZI works with the regulatory agencies involved in the selection process of the most acceptable model.

### **Air Toxics Compliance**

WZI prepares Toxic Emission Inventory Plans, Toxic Emission Inventory Reports and Health Risk Assessments pursuant to the requirements of the California Toxic Hot Spots Regulations. WZI assists its clients with test protocol development, toxic emissions tracking and risk communications to affected employees and the public. Complimenting these services, WZI performs dispersion modeling including ground level concentrations and particulate deposition rates.

## **Long Range Planning**

New regulatory measures have broad implications. Corporations must monitor public policy, anticipate inevitable change and devise preventive strategies to preserve options for future growth. Environmental activities and facility operations must be integrated. WZI works with clients in long-range business planning as well as impact assessment, nonattainment policy analyses, emissions trading and compliance audits.

## **Water Quality Protection Services**

WZI offers professional services to enable clients to comply with the Federal Clean Water Act. California's regulations also protect future beneficial uses of water in the state, which means more stringent compliance requirements. WZI professionals include registered geologists and engineers with extensive experience in California's hydrogeologic setting as well as the legal framework, which determines water use in the state.

WZI prepares compliance documents and technical support studies to assess water quality status. WZI is properly trained and experienced in the implementation of these plans. This includes groundwater monitoring plans, waste management plans, wastewater disposal feasibility studies and permitting, surface impoundment permitting and abandonment. All of these documents are frequently components of Waste Discharge Requirements issued in California. The Industrial Storm Water Permit program requires extensive monitoring and record keeping. WZI has the expertise which is necessary for compliance documentation for this program.

## **Hazardous Materials Management Services**

The Federal Superfund Amendments and Reauthorization Act (SARA Title III) and the California Health and Safety Code require preparation of detailed documents to protect the public and the environment caused by releases, fires or explosions of certain chemicals known as Acutely Hazardous Materials (AHMs). This program is referred to as a "Risk Management Program" (RMP). WZI is experienced in preparing the documents which are part of a RMP. The services WZI provides includes:

- Preparation of Business Plan
- Hazards and Operation ( HAZOP) Study
- RMP Development

WZI has extensive experience in the negotiation process with the RMP administering agencies, which are usually the city or county fire departments and/or health department.

### **Waste Disposal/Recycling Alternatives Determination**

Waste disposal/recycling alternatives determination requires the integration of innovative technology and accurate interpretation of regulations. WZI excels in this approach to problem solving. Disposal alternatives in California are limited and strictly regulated. Alternatives include land disposal in permitted facilities, chemical fixation and deep well injection of liquids. Recycling alternatives are not always defined and usually are developed from the broad understanding of industry which WZI has from the variety of clients they serve and from the range of experience of the professional staff.

### **B. Petroleum Engineering**

WZI provides full range petroleum engineering services. WZI's professionals have the international expertise to deliver technically comprehensive and practical field engineering.

The reservoir management approach to project surveillance must use a coupled system consisting of wells, surface facilities, and the reservoir. All must be considered in a balanced way to maximize economic oil recovery. Also, a team effort from various functional areas is mandatory for development and implementation of a successful reservoir management program.

### **Reservoir Engineering Studies**

Reservoir engineering studies provide the basis for oil and gas field development strategic planning.

Before a reservoir study is undertaken it is important to obtain sufficient data to define the reservoir geometry and producing parameters. The former is done by a geological study and the latter by a specification of and collection of the necessary data components. After the data are

collected and organized, any of the following types of reservoir studies may be conducted:

- Development program planning.
- Reservoir performance prediction under various operating conditions.
- Water flooding and EOR potential.
- Gas deliverability projects.
- Oil, gas and products reserve estimates.

Methods may include analytical calculations, analogy with other fields and reservoir simulation.

### **Geologic Studies**

Geologic studies represent an integral part of oil and gas industry and to reservoir engineering studies. WZI services include:

- Prospect Evaluation
- Well Log Analysis
- Non-producing Property Evaluation
- Production Geology Studies

### **Reserve/Economic Studies**

WZI professionals are experienced in making reserve and economic studies for a variety of purposes, including:

- Evaluation Reports and Fair Market Value
- Due Diligence
- Unit Participation
- Market and Economic Studies
- Investment Analysis
- SEC Reserve Reporting

## **Disposal and Injection System Design**

WZI prepares disposal feasibility studies, regulatory documents, and the required engineering/geologic studies to identify disposal options available in the oil and gas field.

### **C. Mining Engineering**

WZI has the capabilities to offer a broad range of services to the mining industry. These services span the full spectrum of needs experienced by a mining project from early exploration activities through development, operations and closure.

## **Property Acquisition and Exploration**

Early evaluation of a mineral property includes the need to develop an understanding of the land ownership position and geology of the property. Equally important, however, consideration must be given to the geohydrology, plant and animal habitats, and existing environmental liabilities which are associated with the property. Failure to have a thorough understanding of these aspects may seriously impede, or prevent, development of an otherwise promising mineral property. Toward this end, WZI can assist in evaluating mineral properties with the following services:

- Reconnaissance Studies
- Site Assessment
- Geophysical Surveys
- Detailed Hydrogeological and Mineral Development Mapping
- Biota Studies
- Biological Field Surveys
- Due Diligence

## **Development and Operations**

As a mineral property advances through the exploration phases, consideration must be given to conceptual design and preliminary economics of the project. Environmental and operational considerations are critical to the evaluation and decision making processes during this phase of

the project. WZI's professional staff has a thorough understanding of these important processes with a realistic and practical approach to their interrelationship, including:

- Conceptual Design
- Cost Estimating
- Preliminary Feasibility Studies

When a mineral property transitions from exploration to development and operations, a new spectrum of technical assistance needs arise. A team effort involving people from various functional areas is mandatory for successful development and operation of a mineral property. WZI can support these needs in the following areas:

- Environmental Permitting
- SMARA Mining and Reclamation Plans
- Habitat Conservation Plans
- Site Grading and Drainage
- Equipment Selection and Specification
- Operations Planning and Control
- MSHA Training and Retraining of Miners
- MSHA Training Records Program
- Environmental Audits
- Health and Safety Programs

### **Site Closure**

At the end of the economic life of a mineral property, the operator must assure that operations cease and the project is closed in an environmentally responsible manner. WZI can assist in these activities with expertise in the following areas:

- Site Closure Planning and Documentation
- Mine and Tailings Site Characterization
- Mine and Tailings Site Remediation

## **D. Geosciences**

WZI provides geological professional and field support services for surface and subsurface site characterization for geotechnical studies, hydrogeological studies and minerals exploration/development.

### **Geotechnical Studies**

WZI maintains a full time staff of certified engineering geologists, registered geologists and registered geophysicists who are qualified to perform geotechnical studies. Services include:

- Preliminary Site Investigations
- Grading and As-built Inspection and Reports
- Slope Stability and Fault Studies
- Septic System Feasibility and Design

WZI has completed comprehensive geotechnical studies on as large as 13,000 acres for feasibility planning.

### **Hydrogeological Studies**

WZI has expertise in California hydrogeology which is recognized statewide. WZI has successfully located water supply wells for industrial and domestic users and designed and supervised well testing and analysis. WZI has designed and conducted monitoring programs to determine well interference and aquifer properties, and performed water budgets for utilization in strategic water supply planning. Additionally, WZI served as the County Hydrologist for the Kern County Environmental Health Services Department from 1991 to 1994. WZI services include:

- Interpretation of geophysical logs for well construction.
- Regional and site specific hydrogeologic studies.
- Well design and construction supervision.
- Pumping test design and analysis.
- Water quality/water supply risk analyses.

- Water use feasibility studies.
- Design and implementation of geophysical surveys used in environmental studies.
- Preparation of regulatory compliance environmental documents.
  - Solid Waste Assessment Tests (SWAT)
  - Hydrogeologic Assessment Reports (HAR)
  - Report of Wastewater Discharge (RWD)

### **Natural Resource Asset Evaluation**

WZI performs mineral appraisals and exploration studies for both industrial, precious metal and petroleum natural resources.

These studies are conducted in phases from non-obtrusive surveys and literature review to subsurface boring and trenching on-site. This allows maximum client interface to direct the effort towards the desired objective.

#### **E. Geophysics**

WZI is experienced in the following geophysical and specialty geoscience methods:

- Ground and Airborne Total Field and Vertical Gradient Magnetics
- High resolution Seismic Reflection and Refraction
- Electromagnetic Conductivity
- D. C. Electrical Resistivity and Induced Polarization
- Ground Penetrating Radar
- Radiometric Mapping
- Open hole geophysical logging
- Post-Completion Borehole Geophysical and Televideo Logging
- Surface or Spontaneous Potential mapping
- Microgravity
- Air Quality Monitoring, Mapping and Modeling
- Soil Gas and Geochemical Sampling
- Underground Facility Mapping

WZI offers a suite of complementary geophysical methods to enhance the evaluation of subsurface conditions for environmental site assessment and geotechnical engineering projects. Results of the geophysical survey can be calibrated with information from direct measurements to provide high data density over relatively large areas quickly at reasonable cost.

### **Facility Engineering**

WZI provides facility engineering services including design, procurement and construction management. Our team provides these services for both private sector and for Department of Defense.

### III. CORPORATE ORGANIZATION

WZI Inc. has offices in California and Texas. WZI Inc.'s organization and interface with associates provides an appropriate level of expertise in each necessary discipline. WZI Inc.'s professionals have established a reputation for successful project management of unique, high-interest programs. Experience summaries for WZI professional personnel follows:

#### **Principals**

Mary Jane Wilson	President, Chief Executive Officer
Jesse D. Frederick	Vice-President
James E. Armstrong, P.E.	Executive Vice President, WZI Offshore LLC

#### **Professional Staff**

Laura M. Bazeley	Senior Technical Advisor
J. Allen Waggoner	Managing Geologist
Steve Perez	Manager
F.J. (Chuck) Allen, P.E.	Senior Petroleum Engineering Advisor, WZI Offshore LLC
Richard Wilson	Project Manager
Shamim Reza	Staff Engineer
Gerard Randolph	Staff Engineer
Jessica O'Brien	Environmental Specialist
Pamela Willis	Environmental Specialist
Roger A. McRae	Professional Geologist
David W. Chenot	Senior Petroleum Engineer
Allen H. Rubbert	Senior Petroleum Engineer
Jorge Haiek	Environmental Specialist/Programmer I
Yi Lu	Assistant Planner

### **Mary Jane Wilson, President**

Mary Jane Wilson is President and Chief Executive Officer of WZI. She is an engineer and a Registered Environmental Assessor in the State of California. Ms. Wilson has over thirty years professional experience in engineering. She is recognized internationally as an environmental specialist. Ms. Wilson served on the California Environmental Protection Agency's Hazardous Waste Regulatory Programs Task Force Committee. She is recognized as a specialist in permitting difficult projects with multi-agency approval requirements.

Ms. Wilson assures that WZI's overall management objectives are being accomplished and provides technical leadership in strategic planning and negotiation with regulatory agencies. Ms. Wilson is experienced in managing environmental activities and has interfaced extensively with local, state and federal agencies. Her knowledge of permitting is unique because she has been involved in the evolution of environmental regulations, as well as having represented clients at public hearings. Her technical expertise in the field of reservoir engineering greatly enhances her ability to assess the impacts of environmental decisions. Ms. Wilson's published papers have given her national recognition as a premier expert in environmental matters.

### **Jesse D. Frederick, Vice-President**

Jesse D. Frederick, Vice-President of WZI, Chemical Engineer and a Registered Engineer in the State of Texas, has twenty-four years professional experience as an engineer, project manager and department manager, having served as the Manager of Environmental Affairs for a Fortune 1000 company. Mr. Frederick has developed cost effective permitting and compliance strategies for various sized projects ranging from \$50 million to \$500 million, including international projects. He has extensive domestic experience in environmental compliance and permitting, and has been involved in regulatory development and the public review process throughout the United States.

Mr. Frederick is a recognized expert in the field of environmental compliance strategy for the electrical production industry and has written published papers on subjects ranging from emissions measurement to cost effective management.

### **James E. Armstrong, P.E., Executive Vice President, WZI Offshore LLC**

James Armstrong, Executive Vice President of WZI Offshore LLC, has over 40 years experience in the exploration and production industry, domestically and internationally. Mr. Armstrong also

has extensive experience in planning design and implementation of offshore and on shore drilling and workover equipment and systems, specializing in modular designs which are weight efficient and can be mobilized and demobilized on bottom supported or floating platforms without the use of a derrick barge.

**Laura M. Bazeley, Senior Technical Advisor**

Laura M. Bazeley has over twenty six years professional experience in the fields of geology, hydrogeology, environmental investigations, environmental permitting and regulatory compliance. Over her career, Ms. Bazeley has been involved in all phases of projects from planning to implementation, project management and technical review. Her experience includes preparation of documents for CEQA and NEPA compliance, coordination of permitting for new projects, preparation and supervision of geology and groundwater investigations, environmental audits/site evaluations, waste evaluations, and regulatory compliance evaluation for mergers and acquisitions. One of her strengths is the application of her technical expertise to the various aspects of environmental issues. Types of companies for which she has provided consulting services include petroleum exploration and production, petroleum refiners, electric power generation, mining, wineries, electronic manufacturing, dry cleaners, glass manufacturing, metal stamping, and recycling facilities. Clients have included government agencies, private businesses, and attorneys. Ms. Bazeley is a Professional Geologist, a Certified Hydrogeologist and a Registered Environmental Assessor in the state of California.

**J. Allen Waggoner, Geologist Manager**

J. Allen Waggoner has over 27 years professional experience in geology, engineering geology and environmental and geotechnical investigations, as well as experience in regional and local subsurface investigations for petroleum exploration and development. He has been involved with planning and conducting numerous geological, environmental and groundwater related site investigations involving site evaluation and remediation. His experience also includes projects involving regulatory compliance and environmental audits. Mr. Waggoner is a California Registered Geologist, a Certified Engineering Geologist, and a California Registered Hydrogeologist.

**Steve Perez, Manager**

Steve Perez has an extensive background in Federal, State and Local Government. He served two terms as a Kern County Supervisor as well as two terms as Chairman of the Board. He has served on more than 30 State Boards and Commissions and chaired the Administration of Justice

Committee and Law Enforcement Subcommittee for the National Association of Counties. Mr. Perez was a deputy sheriff with the Kern County Sheriff's Department for many years.

**F. J. (Chuck) Allen, P.E., Senior Petroleum Engineering Advisor, WZI Offshore LLC**

Chuck Allen has over 40 years in the upstream petroleum industry, particularly in drilling management. He has over 15 years of contracting management including planning, operations and profit responsibility. He was worldwide drilling manager for a major oil company, operating as many as 130 rigs – land, offshore and helicopter. He has been engaged in drilling engineering, well planning and supervision for many years, both onshore and offshore, frontier operations and deep, critical wells, including pioneering extended reach wells. He is a Petroleum Engineering graduate of Oklahoma University.

**Richard Wilson, Project Manager**

Richard Wilson received his Bachelor of Science degree in Computer Engineering from the University of Southern California, in Los Angeles, California, and his Masters of Business Administration from Embry-Riddle Aeronautical University in Daytona Beach, Florida. He is experienced in building systems and automation, including energy analysis and savings programs. He has performed work in HVAC systems and controls design, and existing oilfield well analysis. He is an experienced manager of multi-million dollar projects and business units. Richard has also served as a Captain in the United States Air Force, as a Minuteman III ICBM Crew Commander.

**Shamim Reza, Staff Engineer**

Shamim Reza has over 9 years of experience as a mechanical engineer. Mr. Reza holds a Bachelor of Science degree in Mechanical Engineering from Bangladesh Institute of Technology, as well as a Master of Science degree in Mechanical Engineering from the University of Wisconsin-Milwaukee. He has experience in computational fluid dynamics analyses, and has worked as a design engineer.

**Gerard Randolph, Staff Engineer**

Gerard Randolph received his Bachelor of Science degree in Chemical and Biochemical Engineering from Tulane University in New Orleans, LA. Mr. Randolph has experience in air modeling, conducting CEQA/NEPA level air assessments, and handling all aspects of air permitting processes. Mr. Randolph's joint work entitled *Wall Coating Behavior of Catalyst Slurries in Non-Porous Ceramic Microstructure* has been published in Chemical Engineering Science.

**Jessica O'Brien, Environmental Specialist**

Jessica O'Brien holds a Bachelor of Science degree in Environmental Management from Columbia Southern University in Orange Beach, Alabama, having graduated Magna Cum Laude. Ms. O'Brien has experience in pollution prevention, hazardous waste regulation, air quality issues, and other various environmental concerns.

**Pamela Willis, Environmental Specialist**

Pamela Willis received her Bachelor of Science degree in Business from the University of Pittsburgh, in Pittsburgh, PA. She has experience in conducting CEQA/NEPA level air assessments, and handling all aspects of air permitting processes.

**Roger A. McRae, Professional Geologist**

Roger McRae has over 18 years experience in geology as well as environmental and petroleum analysis. Mr. McRae has extensive experience in production geology, including subsurface fluid migration and injection, mapping and digital modeling, geophysical log analysis, petrophysical formation evaluation and interpretation, environmental evaluation, database creation and management, well planning, and field supervision. Mr. McRae also has experience with hydrogeology, as well as the analysis of effluents and hazardous wastes. Mr. McRae is a California registered Professional Geologist.

**David W. Chenot, P.E., Senior Petroleum Engineering Advisor**

David Chenot has over forty years of experience in the petroleum industry. He has a strong base of experience in water flood and steam flood secondary recovery projects, well completion design, reservoir engineering and property evaluation. As Vice President of Petroleum Engineering, he supervised the petroleum engineering department of Occidental Petroleum Corporation during a period when production grew from 3,000 barrels per day to 650,000 barrels per day. He participated in development and reservoir management decisions regarding the A and D Reefs in Libya, Piper and Claymore fields in the North Sea, various Orient and Talara fields in Peru and the Cano Limon field in Columbia. The combined recovery of these fields is in excess of six billion barrels. His management and technical skills are considered an asset to interdisciplinary studies.

**Allen H. Rubbert, Senior Petroleum Engineering Advisor**

Allen H. Rubbert has over 40 years of domestic and international experience in petroleum engineering and the appraisals of oil and gas properties with property values up to \$1.5 billion.

Mr. Rubbert's experience also includes developing business plans and capital investment justification.

**Jorge Haiek, Environmental Specialist/Programmer I**

Jorge Haiek received his Bachelor of Science degree in Computer Science from California State University Bakersfield, in Bakersfield, California. Mr. Haiek assists in Title V air permitting processes, provides support on CAD and process designs, and is proficient in computer assembly and hardware solutions.

**Yi Lu, Assistant Planner**

Yi Lu earned her Bachelor of Architecture from Xiamen University in China. She continued her education by earning a Master of Business Administration and a subsequent Master of Planning degree from the University of Southern California. Ms. Lu has experience in working with numerous regulatory agencies in areas of city planning, transportation modeling and urban design. She works with CEQA documentation, General Plan updates and planning entitlements. Ms. Lu is also a member of the American Planning Association.

#### **IV. COMPANY EXPERIENCE**

WZI Inc. is a unique professional services consulting firm that maintains a full-time professional staff with a strong base in health and safety, environmental, and petroleum experience. WZI Inc. has performed many large permitting and auditing projects throughout the western United States. All WZI personnel are trained in health and safety issues in the work environment and have had no reportable industrial accidents since its inception in 1986. WZI's blend of environmental and oil and gas project experience has been valuable in the permitting of projects throughout the United States. WZI's broad base of understanding of all aspects of the oil and gas business has been a resource to clients requiring feasibility projections of various permitting scenarios for proposed projects.

WZI Inc. has prepared Environmental Impact Statements and Environmental Assessments pursuant to guidelines set forth in the National Environmental Protection Act and has prepared Environmental Impact Reports in accordance with the California Environmental Quality Act. Completed projects have varied from industrial facilities (i.e. electrical generation plants) to hazardous waste disposal facilities (i.e. injection wells, incinerator) to typical residential developments. These projects involve the integration and coordination of federal, state and local jurisdictions coupled with public input. The scope of the endeavors included:

- Identification, description and analysis of feasible project alternatives including a no project alternative.
- Identification and discussion of project impacts generally considering noise, wildlife, odor, waste, air, water, traffic, chemical hazards, visual impairment and cultural resources.
- Identification and analysis of cumulative impacts in the project area.
- Preparation of socio-economic studies.
- Development and description of measures to mitigate adverse impacts.
- Modeling of projected scenarios.

WZI Inc. has successfully completed projects as described above for the following project developers:

- Aera Energy
- Borba Dairies
- ChevronTexaco
- El Paso Merchant Energy
- Golden Queen Mining
- Land Concepts, Inc
- Martin McIntosh
- Rand Mining Co.
- The Chambers Group
- U.S. Borax, Inc.
- Bear Mountain Limited
- Cal–Cart Materials
- Destec Energy, Inc.
- Fugro-McClellan Inc.
- Hunt Oil Company
- Midway Sunset Cogeneration Co
- Power Systems Engineering
- Sequoia Engineering
- The City of Ridgecrest
- Vanderham Dairy

### **Oil and Gas Engineering Services**

Oil and gas evaluations have been undertaken on behalf of our clients for a number of reasons. The two most important are the determination of fair market value in the ownership transfer of mineral rights and the maximization of oil recovery. WZI has also provided lease facilities installation design and supervision and operations management for independent operators.

WZI Inc. has completed many evaluations and recognizes the importance of identifying the client's needs prior to undertaking the project in order to prepare a focused outline. Evaluations substantiate the subsurface structure and stratigraphy through the construction of a framework of cross sections and maps.

Economic analysis is as much a part of the reservoir study as performance calculations because the petroleum industry is concerned with depletable natural resources (oil and gas reservoirs) which are difficult to find, properly develop and efficiently operate. Reservoir, well-by-well, analysis of fluid volumes and pressures undertaken for the proper development of an oil and gas field provides another way to verify the continuity of sands and/or sealing faults as is needed.

WZI recognizes the importance of field lease operations as a key point in the economic success of oil and gas operations. The lease supervisor has the opportunity to fine-tune production by

controlling lease equipment. This control extends to environmental impact of operations. WZI Inc. has personnel with experience in field operations.

WZI Inc.'s current oil and gas client listing includes:

- Aera Energy
- Castle Peak Resources, LLC
- Commander Oil Ltd.
- Hunt Oil Company
- Island Operators
- Macpherson Oil Company
- Pioneer Natural Resources
- Unocal Corporation
- Halliburton Energy Services
- BP
- ChevronTexaco.
- Greka Energy, LLC
- Hunter Living Trust
- Jaco Production
- Naftex Operating Co.
- Royale Energy
- Berry Petroleum Operations, Inc

### **Permitting and Auditing Services**

WZI Inc. has an extensive background in permitting and compliance auditing for industry. In addition to performing specific permitting assignments, WZI has actively participated in the state and local regulatory process to develop workable solutions to mandated standards.

WZI Inc. recently completed the permitting of a \$50,000,000 cogeneration project in Kern County, the first to be located within the city limits of Bakersfield. This controversial project was finished in six months through the successful mobilization and coordination of a multi-disciplined task force of WZI Inc. and client personnel. WZI further expedited the permit approval by quickly addressing agency concerns and questions throughout the regulatory review process.

WZI Inc. has audited and successfully permitted facilities for the following companies:

- Agrico Cogeneration Company
- Angus Petroleum Corporation
- ARCO Oil & Gas
- Billiton Minerals
- Andrews Petroleum
- Anheuser - Busch Corp.
- Berry Petroleum Operations, Inc
- Borba Dairy Farms

- BP
- Cactus Gold Mine
- California Dairies
- Cheese and Protein International
- Clean Soils, Inc
- Destec Energy, Inc.
- Energy Development of California Inc
- ESI Energy
- Frito-Lay Inc.
- Glamis Gold Mining
- ICF Resources
- Johnson Controls
- KMS Energy
- LFC Power System
- Macpherson Oil Company
- National Cement Company
- OXY USA Inc
- Petan Oil Company
- San Joaquin Biomass Cogeneration
- Shell Oil Company
- Stockdale Energy
- Tannehill Oil Company
- U.S. Borax, Inc.
- Victory Oil Company
- Buttes Resources Company
- Calaveras Cement Company
- Carrec Oil Associates
- ChevronTexaco
- Delano Energy Company
- Energy Transfer
- Enron Gas Processing Company
- Fresno Cogeneration Partners, L.P.
- General Production Service
- Guy Chaddock and Company
- IOPA
- Kern Oil and Refining Company
- Land O'Lakes, Inc
- Lone Star Gas Processing
- Mobil Oil E & P
- Nuevo Energy Company
- PPG Industries
- Rand Mining Company
- Sempra Energy
- Sierra Power Cogeneration
- Sunthetic Energy of America
- UPF Corporation
- Vanderham Dairy
- Witco Corporation

### **Spill Contingency Plans, Emergency Planning and Risk Management Plans**

Oil Spill Contingency Plans provide response guidelines for responsible parties when a spill occurs. Contingency Plans typically provide for the pre-planning, management and coordination of all of the operations at a spill, plus communications between parties. WZI has assisted clients with compliance with the Oil Pollution Act of 1990 and 40 (CFR 112.7 (SPCC Plans)).

WZI has prepared numerous health risk assessments and screening assessments to determine the environmental health effects of projects. WZI has prepared Risk Management Plans for facilities which use or store hazardous chemicals. These plans included Hazards and Operability Studies, Consequence Analyses and Risk Analyses. WZI has assisted in facility designs to mitigate risks.

WZI has prepared the preceding for the following companies:

- Andrews Petroleum
- Bear Mountain, Ltd.
- BP
- Cactus Gold Mines, Inc.
- Crystal Geyser Water Co.
- Destec Engineering, Inc.
- Golden Queen Mining Co.
- Kern Ice and Cold Storage
- National Cement Co.
- Ormesa, Ltd.
- Pepsi-Cola
- Turlock Irrigation District
- Bear Creek Winery
- Berry Petroleum
- Butler Mfg.
- ChevronTexaco
- Dairyman's Cooperative Creamery
- Favorite Foods, Inc.
- Greka Energy
- Naftex Holdings
- O/C Tanks Corp.
- OXY USA, Inc.
- Petrolite, Inc.
- U.S. BORAX, Inc.

#### **Emissions Inventories, Air Modeling and Regulatory Analysis**

WZI has performed regulatory analyses and source applicability reviews in six western states. WZI has significant experience in the preparation of emission inventories and tracking systems in addition to air modeling and permitting. WZI has quantified emissions using published emission factors and source test factors. Additionally, WZI has developed source test protocols and supervised the actual source test procedure. WZI has performed Title V impact analyses for strategic planning purposes for a number of companies as well as preparing comments for industry submittal regarding the 1990 Amendments.

WZI has prepared an Operator Management Plan for a petroleum refinery under San Joaquin Valley Unified Air Pollution Control District Rules 4451 and 4452. WZI has also identified the devices and components which may be sources of fugitive emissions and conducted the fugitive detection measurements to evaluate compliance with the Plan.

These services have been provided for the following companies:

- Aera Energy
- Agrico Cogeneration Company
- Angus Petroleum Corporation
- Agri-Cel
- Andrews Petroleum
- Anheuser - Busch Corp.

- APTCO, LLC
- ASV Wines, Inc.
- Berry Petroleum Operations, Inc
- Borba Dairy Farms
- Bush Oil Company
- Cactus Gold Mine
- California Dairies
- Cheese and Protein International
- Clean Soils, Inc
- Cummins West, Inc.
- Delano Energy Company
- Elk Corporation
- Energy Transfer
- ESI Energy
- Fresno Cogeneration Partners, L.P.
- General Production Service
- Greka Energy
- Helt Engineering
- IOPA
- Kern Oil and Refining Company
- KMS Energy
- LFC Power System
- Macpherson Oil Company
- Midway Sunset Cogeneration Company
- Mobil Oil E & P
- Mt. Poso Cogeneration Company
- Natco
- Nuevo Energy Company
- Panama99 Properties
- Petan Oil Company
- Petrissans Dairy
- Rand Mining Company
- Sempra Energy
- Sierra Power Cogeneration
- Sun-Maid Raisins
- Tannehill Oil Company
- ARCO Oil & Gas
- Baker Performance Chemicals
- Billiton Minerals
- BP
- Buttes Resources Company
- Calaveras Cement Company
- Carrec Oil Associates
- ChevronTexaco
- Crutcher-Tufts Corporation
- DBA Advantage Homes
- Destec Energy, Inc.
- Energy Development of California Inc.
- Enron Gas Processing Company
- Fluid Containment
- Frito-Lay Inc.
- Glamis Gold Mining
- Guy Chaddock and Company
- ICF Resources
- Johnson Controls
- Kern Medical Center
- Land O'Lakes, Inc.
- Lone Star Gas Processing
- McIntosh and Associates
- Mobil Chemical Company
- Mojave Cogen Company
- Naftex Holdings
- National Cement Company
- OXY USA Inc
- PPG Industries
- Petro Minerals Corporation
- Petrolite Corporation
- San Joaquin Biomass Cogeneration
- Shell Oil Company
- Stockdale Energy
- Sunthetic Energy of America
- Texaco Trading and Transportation

- UPF Corporation
- Vanderham Dairy
- Victory Oil Company
- Westinghouse Electric
- U.S. Borax
- Vaquero Energy
- Witco Corporation

### **Health Risk Assessments and Risk Management Plans**

WZI has prepared numerous health risk assessments and screening assessments to determine the environmental health effects of projects. WZI has prepared Risk Management Plans for facilities which use or store hazardous chemicals. These plans included Hazards and Operability Studies, Consequence Analyses and Risk Analyses. WZI has assisted in facility designs to mitigate risks.

WZI has prepared the above for the following companies:

- Bear Creek Winery
- BP
- California Dairies
- Cummins West, Inc.
- Destec Energy, Inc.
- Frito Lay, Inc.
- Heublein, Inc.
- Land O'Lakes
- Naftex Holdings
- O/C Tanks Corporation
- Panama99 Properties
- PPG Industries
- Spartan Energy, Inc.
- Unocal Corporation
- Berry Petroleum
- Cactus Gold Mines
- Crystal Geyser Water Co.
- Dairyman's Coop. Creamery
- El Paso Corporation
- Guild Winery
- Kern Ice and Cold Storage
- Midway Sunset Cogeneration Company
- National Cement Company
- OXY USA Inc.
- Pepsi-Cola
- Southern Valley Chemical
- United Agri Products
- U.S. Borax, Inc.

### **Environmental Site Assessments**

WZI Inc. has significant experience in performing environmental site assessments for real estate transactions, liability reduction, regulatory compliance mandate and expert second opinion.

Environmental site assessments describe the type and extent of contamination for existing and

potential hazards. WZI Inc. has extensive experience preparing environmental site assessment work plans which meet County, State and Federal guidelines. Furthermore, WZI Inc. strictly adheres to State of California guidelines for site assessments as defined by the Leaking Underground Fuel Tank (LUFT) Manual: Guidelines for Site Assessment, Cleanup and Underground Storage Tank Closure.

Typical site assessment tasks include:

- Extensive site history, which includes historical air photo examination, public records/permitting/violations search, interviews with individuals familiar with the site.
- Work plan preparation with the appropriate sampling and health and safety protocol.
- On-site drilling, sampling and laboratory analyses, as needed.
- Evaluation of all data to present a comprehensive analysis of the environmental conditions at the site.
- Discussions of remediation/mitigation alternatives.
- Coordination of remediation/mitigation work.

WZI Inc. has significant experience in performing environmental audits for liability reduction, regulatory compliance mandates and expert second opinion. Environmental audits are the systematic approach to looking at past, present and future performance in the environmental arena. WZI has experience working in staff positions at the client's offices in auditing and compliance review, as well as in overall management and focus of compliance audit projects. WZI has performed management reviews at Cape Canaveral and at the Naval Petroleum Reserve at Elk Hills assessing total asset management and organizational design.

WZI Inc. has successfully completed assessments throughout the United States. Selected clients include:

- ARCO Oil and Gas Company
- Atlantic Oil Company
- Berry Petroleum Company
- BP
- Burt Fugate
- Cauzza Brothers
- Argo Realty
- Atrium Capital Corporation
- Borba Dairy Farms
- Brian W.F. Banducci
- Calpine Corporation
- ChevronTexaco

- City of Shafter
- D.P. Investments
- Dopaco, Inc.
- FMP Vineyards
- Kern Schools Federal Credit Union
- Kyle Carter
- Midway Sunset Cogeneration Company
- OXY USA Inc.
- Petrissans Dairy
- Prudential Realty Group
- Shell Oil Company
- The Koll Company
- Vaquero Energy
- Victory Oil
- Welltech Inc.
- Cummins West, Inc.
- Destec Energy, Inc.
- El Paso Corporation
- Golden State Drilling
- Klein, DeNatale, Goldner et al.
- Leo Black Electric
- Mission Resources
- Paramount Petroleum
- Pride Petroleum Services
- Saint Augustine's Episcopal Church
- Spartan Energy, LLC.
- U.S.Borax, Inc
- Vanderham Dairy
- Wellhead Power
- West Coast Packaging Materials, Inc.