

**Curriculum Vitae
of
GARY L. HIX, R.G., CWD/PI**

EDUCATION & TRAINING

University of Phoenix, 1984, M. A. Business Management
University of Arizona, 1979, B. S. Geology
OSHA 10-Hour Outreach Construction Industry. April, 2010

CERTIFICATIONS, REGISTRATION'S, & LICENSES

Certified Professional Geologist, American Institute Professional Geologists
Certified Well Driller and Pump Installer, National Ground Water Association
Registered Professional Geologist, Arizona #13515

ASSOCIATION MEMBERSHIPS:

National Ground Water Association, Ground Water Scientist member
Arizona Geological Society, Geologist member
Arizona Hydrological Society, Hydro-geologist member
Arizona State Bar, Contract Law Section, Technical member
Arizona Water Well Association, President Elect in 2010
American Institute of Professional Geologists, Certified member

EXPERIENCE BRIEF

Gary Hix has over thirty years of experience in the fields of geology, groundwater resource management, and water well drilling projects. His career in hydrogeology and resource management began as a staff Hydrologist for Tucson Water. Here, he was involved in many water resource evaluations and well drilling and construction projects. He left Tucson Water in 1986 to work for a water well drilling company. He became an Arizona licensed water well drilling contractor in 1988, and since then has been responsible for the drilling and construction of numerous private, municipal water supply, and ground water monitoring wells.

Gary is also a Registered Geologist in Arizona and has worked as a consultant preparing technical specifications and well drilling contracts. He as often worked with design engineering firms to prepare technical specifications for the well drilling phase of larger projects. His specialty has been air assisted reverse circulation municipal water wells, with additional first hand experience with mud rotary and Dual Rotary casing advancement drilling methods. Gary has professionally stamped technical specifications for water well drilling contracts, conducted numerous pre-bid meetings, bid evaluations and award recommendations. In addition, as a licensed contractor himself, he has signed and filed numerous ADWR Well Drillers Logs and Completions Reports.

JOB HISTORY

2007 – Present. Water Well Consultant, owner of In2Wells, LLC.
1993 - 2007 Owner-Manager of Saguaro Well & Pump Co.
1991 - 1993 Vice President Maher Environmental Drilling, Inc. Tempe, AZ.
1990 - 1990 Sr. Hydrogeologist Applied Geosciences, Inc. Tustin, CA.
1986 - 1990 Vice President, Western Well & Pump, Inc., Tempe, AZ.
1985 - 1986 Capital Improvement Program Engineer, Tucson Water
1979 - 1985 Hydrogeologist, Tucson Water, Planning Division
1968 - 1979 Explorationist, Heinrichs GeoExploration Co. Tucson, AZ.

PARTIAL LIST OF TECHNICAL PRESENTATIONS, AND PUBLISHED ARTICLES, RELATED TO WATER WELL DRILLING, CONSTRUCTION AND GROUNDWATER RESOURCE MANAGEMENT

1. "Why Bounds vs. New Mexico is Important to All Arizona Water Well Drillers and Pump Installers", Article submitted for publication in the Well Said a quarterly newsletter of the Arizona Water Well Association, for Fall, 2010
2. "The Future of Private Water Wells in Arizona" article published in the Well Said a quarterly newsletter of the Arizona Water Well Association, Summer, 2010
3. "Ask the Driller" a series of presentations done with the University of Arizona Water Resources Research Center and Az. Co Operative Ag. Extension workshop "Well, What Do We Know?" in Dec, 2009, Young, AZ; Jan. 16, 2010 Maricopa, Az.; May 1, 2010 Chandler, Az.
4. "The Future of Private Water Wells in Arizona" a Power Point presentation given April 26, 2010 for the Pima Association of Governments Watershed Planning Committee. Tucson, Az.
5. "When You Need Water Well or Pump Work, Who Are You Going to Call?" a presentation made at the Rural Water Association Conference and Expo. Feb. 17, 2010, Laughlin, NV.
6. "Well Drillers: Do You Inspect Private Water Well Systems?" an article published in the Well Said the newsletter of the Arizona Water Well Association, Fall, 2009.
7. "A Call for Changes, or Let's Get This Fixed!" an article published in the Frontrunner, a publication of the Hogan School of Real Estate, Nov/Dec, 2009.
8. "How Global Climate Changes Will Affect Aquifers in Southern Arizona and the Impacts It Will Have on Private Water Wells" NGWA Ground Water Summit, Hilton El Conquistador Resort, Tucson, AZ. April 23, 2009

9. "Ground Water Awareness Week and Geologic Development of the Ground Water Aquifers in the Tucson Area" Arizona Small Business Association, SOHO-Small Office-Home Office weekly meeting. Tucson, AZ. March 4, 2009
10. "Teaching New Employees How to Diagnose Water Well & Pump Problems Over the Phone." Mountain States Ground Water Exposition, Laughlin, NV. February 12, 2009.
11. "Water Well Drilling Methods", a power point presentation for Bureau of Land Management employees, Las Vegas, NV. and Phoenix, AZ. May 2002. May 2004, May 2006, Aug. 2008, & May, 2010.
12. "Private Water Well and Residential Properties", a Continuing Education course for Real Estate Agents currently being taught at the Hogan School of Real Estate, Tucson. Starting in 2006 bi-monthly through 2010.
13. "I Can See Clearly Now" An article published in the Well Said, A quarterly publication of the Arizona Water Well Association, Winter, 2008.
14. "How to Maintain a Profit Margin in these Difficult Times, Illustrations and Ideas". An oral presentation at the Arizona Water Well Association Quarterly Meeting, April 12, 2008.
15. "Workmanship Standards for Domestic Water Wells, Are We All On The Same Page"? A presentation for the Mountain States Ground Water Exposition. Laughlin, NV. February 14, 2008.
16. "What is a Certified Flow Test?" Frontrunner, A publication of Hogan School or Real Estate, Nov/Dec, 2007.
17. "Private Water Well and Transfers of Real Property, A Case Study", Frontrunner, 18. A publication of Hogan School or Real Estate, Jun/July, 2007
19. "Water Quantity & Quality Issues During Residential House Sales With a Private Water Well," Frontrunner, A publication of Hogan School or Real Estate, Jan/Feb, 2007.
20. "Agents: Don't Let a Private Water Well Get You Into Hot Water", Frontrunner, A publication of Hogan School or Real Estate, Mar/Apr, 2007,
21. "Licensing of Water Well Pump Installers, The Time has Come". Editorial in the Well Said, a Publication of the Arizona Water Well Association, Spring, 2007.
22. "Be Aware Water Well Drillers and Pump Installers, The ROC May Come After You, Too!", Editorial in the Well Said, a Publication of the Arizona Water Well Association, Summer, 2007.

23. "Economics of Well Drilling" and "Trouble Shooting Submersible Pumps & Motors", two workshops (Power Point and hands on) presented at the NGWA Groundwater Expo. Las Vegas, NV. Dec 12-15, 2004.
24. "Using Technology- Adapting Off-the-Shelf Motor Protection and Monitoring Devices", Pump Users Expo, Baton Rouge, LA. a Power Point presentation. September 15-17, 2004.
25. "Water Well Construction and Maintenance", Pima Community College, ASETT Center, Tucson, AZ. A two day (multi-media and field trip) course in well construction methods, pump installation and maintenance. August 11-12, 2003, and April 28-29, 2004.
26. "Constant Pressure Systems, First Hand Experiences", Water Well Journal, A publication of Ground Water Publishing Co. Vol. 57, No 3. March, 2000.
27. "Protecting Submersible Motors from Lightning and Other Voltage Spikes" Water Well Journal, Vol. 56, No. 1, January, 1999. A publication of Ground Water Publishing Co.
28. "A Well Driller's Perspective from the Trenches", Water Conditioning and Purification, A publication of Publicom, Inc. Tucson, Az. December, 1998.
29. "How to Survive Changes in the Environmental Market". Water Well Journal, March, 1998. Vol. 55, No. 12. A publication of Ground Water Publishing Co.
30. "NPDES Permits Required for Water Well Drillers? What Next?" Water Well Journal, February, 1998. Vol. 55, No. 2. A publication of Ground Water Publishing Co.
31. "Wells and Water Quality Problems, It's A Different World Today", Water Conditioning and Purification, A publication of Publicom, Inc. Tucson, AZ. December, 1997.
32. "It's time for a Change in Written Water Well Specifications: A Contractor's Perspective". Water Well Journal, August, 1997. Vol 51. No. 8. A publication of Ground Water Publishing Co.
33. "Protect Your Eyes Now, for Better Use Later On!" Water Well Journal, June, 1997. Vol 51. No. 6. A publication of Ground Water Publishing Co.
34. "New Equipment Allows New Thinking About Equipping Water Systems", Well Said, April, 1997. A publication of the Arizona Water Well Association.
35. "You'll Get a Boost out of the Latest in Pump Technology". Water Well Journal, May, 1997. Vol 51. No. 5. A publication of Ground Water Publishing Co.
36. "Maps: Where Would We Be Without Them? Where Are We Going With Them?" Water Well Journal, March, 1997. Vol 51. No. 3. A publication of Ground Water Publishing Co.

37. "Lump Sum Pricing of Well Drilling and Construction Services". Water Well Journal, January, 1997. Vol 51. No. 1. A publication of Ground Water Publishing Co.
38. "Annual Services Contracts: Can They Work For You?" Water Well Journal, October, 1996. Vol 50. No. 10. A publication of Ground Water Publishing Co.
39. "Well Drillers in Court". Water Well Journal, June, 1996. Vol 50. No. 6. A publication of Ground Water Publishing Co.
40. "Wellhead Treatment Methods for Ground Water" Water Well Journal, April, 1996. Vol 50. No. 4. A publication of Ground Water Publishing Co.
41. "Pre-installation Check of Submersible Motors and Pumps: Logical Procedure or Ritual?" Water Well Journal, December, 1995. Vol 49. No. 12. A publication of Ground Water Publishing Co.
42. "Service and Repair of Small Submersible Pumps". Water Well Journal, March, 1996. Vol 50. No. 3. A publication of Ground Water Publishing Co.
43. "Land Subsidence and Ground Water Withdrawal". Water Well Journal, November, 1995. Vol 49. No. 11. A publication of Ground Water Publishing Co.
44. "The Outcome of A Well: the Contractor's Responsibility?" Water Well Journal, October, 1995. Vol 49. No. 10. A publication of Ground Water Publishing Co.
45. "Homemade Rig Drives a Point Home". Water Well Journal, July, 1995. Vol 49. No. 7. A publication of Ground Water Publishing Co.
46. "Practical Advice for Conducting Well and Pump Tests". Water Well Journal, June, 1995. Vol 49. No. 6. A publication of Ground Water Publishing Co.
47. "Innovative Tools and Techniques for Developing Ground Water Monitoring Wells". An Outdoor Action Workshop, Proceedings of the 9th. Annual Outdoor Action Conference. May, 1995. Las Vegas, NV.
48. "Using Sand Points to Install Ground Water Monitoring Wells". Water Well Journal, May, 1995. Vol. 49. No. 5. A publication of Ground Water Publishing Co.
49. "Gone Fishing – in a Monitoring Well", Water Well Journal, April, 1995, Vol. 49., No. 4., A publication of Ground Water Publishing Co.
50. "Reverse Rotary Water Well Drilling Using the Air-Assisted Method", Water Well Journal, September, 1994. Vol 48, No. 9. A publication of Ground Water Publishing Co.
51. "Hydraulic Swedging to Repair Wells Spells Success for One Contractor", Water Well Journal, October, 1994. Vol 48, No. 10. A publication of Ground Water Publishing Co.

52. "Monitoring Well Security", Water Well Journal, November, 1994. Vol. 48., No. 11, A publication of Ground Water Publishing Co.
53. "What You Don't Find Isn't There, Or Is It? Or The absence of Proof is not Proof of Absence". Ground Water Monitoring Review, Winter, 1994. A publication of Ground Water Publishing Co.
54. "Sand and Wells - Not a Good Combination", Water Well Journal, July, 1994. Vol 48, No. 7. A publication of Ground Water Publishing Co.
55. "Establishing New Ground Rules Between Consultants and Contractors", a workshop presented at the Eighth National Outdoor Action Conference, Minneapolis, MN., May, 1994.
56. "Conservation de Agua Y Energia," Seminario Y Taller, A four day Symposium in San Luis Potosi, Mexico, Presentations on Water Well Design and Construction Methods, Water Well Maintenance and Rehabilitation, Cascading Water a Threat to Wells, and How Down Hole TV Logging Aid in Well & Pump Repairs. Noviembre, 1993.
57. "Contracts and Specifications, Bidding Drilling Specifications and Contracts", A workshop at the 7th. National Outdoor Action Conference, Las Vegas, NV. May, 1993. Annual convention of the National Ground Water Association.
58. "Contracts and Specifications, How to Protect Your Drilling Company", Water Well Journal, May, 1994. Vol 48, No. 5. A publication of Ground Water Publishing Co.
59. "Well Maintenance and Rehabilitation, an Overview", Water Well Journal, February, 1993, Vol. 47. No. 2. A publication of Ground Water Publishing Co.
60. "How Downhole TV Cameras Aid Well and Pump Repair". Water Well Journal, March 1992, Vol. 46. No. 4, A publication of the Ground Water Publishing Co.
61. "Cascading Water: A thread to Ground Water Quality". Water Well Journal, April, 1990, Vol. 44. No. 4, a publication of the Ground Water Publishing Co.
62. "Monitoring, the Tools of Ground Water Management", Paper presented at the Annual Meeting of American Society of Civil Engineers, Las Vegas, NV. April, 1982.