

## CURRICULUM VITAE

**Wetherbee Bryan Dorshow, PhD, GISP, RPA**

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### EXECUTIVE SUMMARY

Dr. Wetherbee Dorshow is President and CEO of Earth Analytic, Inc. (EAI), an Esri award-winning Santa Fe, New Mexico consulting firm founded in January 2000, specializing in the design, implementation, use and management of (GIS) geographic information systems for natural and cultural resource projects. Wetherbee has over 30 years of experience as a professional archaeologist, scientist, GIS analyst, database administrator, and GIS/web developer. Wetherbee also serves as Chief Scientist and Member of the Board at the Puente Institute, a not-for-profit organization that provides targeted geospatial support and services to environmental and cultural NGOs. Additionally, Wetherbee is an Adjunct Assistant Professor in the Anthropology Department at the University of New Mexico.

During the early years at EAI, Wetherbee directed a series of major archaeological survey and excavation projects for the US Army Corps of Engineers at the Pueblo of Santa Ana in Bernalillo, NM. Wetherbee and the EAI team have built customized GIS/GPS mapping and analysis systems for ranches covering over two million acres in the southwestern and central US. Between 2003 and 2005, Wetherbee helped engineer an ArcGIS geoprocessing and modeling system for The Trust For Public Land's (TPL) Greenprinting analysis framework. Other key TPL projects included GPS-based mapping of trees in the East Little Havana neighborhood, the [King County Washington Greenprint](#), and the Connecticut River Forests and Farmlands study.

Since founding EAI in 2000, Wetherbee has provided consulting services for major engineering and energy companies including Chevron, El Paso, Trigon EPC, Devon Energy, Amvest Corporation, Constellation Energy Encana Oil & Gas (USA), and many others. GPS-based inventory of gas gathering infrastructure is a key component of these natural resources projects, which entail the integration of geological, environmental sensitivity and land status data in enterprise GIS systems. At EnCana, Wetherbee helped to design and implement a robust Pipeline Integrity program with the Technical Business Services group, developing and populating a custom version of the ArcGIS Pipeline Data Model (APDM) and a suite of more than 30 custom tools designed to facilitate the capture and analysis of more than 90 pipeline risk attributes

In the renewable energy sector, Wetherbee oversaw the development and implementation of comprehensive GIS database and analysis framework for Torch Renewables. This geospatial integration effort included hands on training, analysis and tool development focused on targeting lands for leasing of wind rights, capture and analysis of site-specific meteorological data, and wind forecasting/early warning system design for wind farms. At the Ranney Ranch in southern New Mexico, Wetherbee helped the ranch owners to assess the logistics and impacts of a proposed 100+ turbine wind farm development slated for their property, shaping the turbine layout through GIS-based environmental analysis and visual simulations of various turbine layouts.

Leveraging partnerships with Esri and other web development companies, Wetherbee develops and supports a variety of advanced internet-based GIS systems, including an archaeological information system for the State of Vermont, a mapping interface for TPL's [LandVote](#) database, web-based smart-routing tools for EnCana, Other EAI projects headed by Wetherbee include conservation priority analysis in the Galisteo Basin, working with the Santa Fe Conservation Trust and Earth Works Institute, and statewide archaeological sensitivity

modeling for the Vermont Division for Historic Preservation (read the [article](#)). Wetherbee and his colleagues at the University of Vermont and University of Maine won a Special Achievement in GIS Award from Esri in 2006 for the Vermont archaeological modeling project. In 2015, Wetherbee provided the City of Santa Fe with a geospatial database to manage their archaeological projects, and assisted Santa Fe County in developing geospatial tools to manage, acquire and develop land for Open Space, Parks and Trails.

Wetherbee's work in conservation and planning in the energy sector include a partnership with Williams, Inc. In 2014-2016, Williams contracted with EAI to use Wetherbee's award-winning SmartFootprint™ modeling tools to create a nationwide coverage of suitability maps to optimize energy infrastructure planning in 45 states. Other energy companies such as Whiting, Inc. and Boardwalk have also partnered with EAI to use the SmartFootprint™ products in infrastructure planning. In 2016, Earth Analytic won an Esri Business Partner Conference Award for Best Use of Spatial Analysis and Analytics for Wetherbee's SmartFootprint™ suite of suitability modeling and decision-making tools.

Working with Dr. Wirt Wills at UNM, Wetherbee is Co-PI on an NSF-funded research grant for Land Use Modeling at Chaco Culture National Historic Park.

## **EDUCATION**

2012	Doctor of Philosophy, Anthropology, University of New Mexico
2000-2007	Environmental Systems Research Institute (Esri) Instructor-led Training (300+ hours)
1996	Master of Arts, Anthropology, University of New Mexico
1985	Bachelor of Arts, Anthropology, University of Vermont

## **CURRENT CARREER HIGHLIGHTS:**

- President and P.I. of a well-established GIS and environmental consulting firm specializing in GIS-enabled natural and cultural resource management; responsible for successful completion of over 200 projects for corporations, NGOs, State and Federal agencies, and international clients. Certified GISP.
- Winner, 2016 Esri 2016 Business Partner Conference Award for Best Use of Spatial Analysis and Analytics for Earth Analytic's SmartFootprint™ suite of suitability modeling and decision-making tools.
- Advisor and Team Member of the GEBCO-Nippon Foundation Alumni Shell Ocean Discovery Xprize Team. Served as Geospatial lead for this multidisciplinary, international team in the 7 Million Dollar Ocean Xprize, entailing autonomous seabed mapping. More details here: Recipient of an NSF-funded grant (2016-2017) as Principal Investigator at Chaco Culture National Historic Park (Collaborative Research: Three Dimensional Archaeological Landscape Reconstruction and Land Use Modeling).
- Adjunct Assistant Professor in the Anthropology at the University of New Mexico. Doctoral research involved predictive geospatial modeling for Archaeological research, conservation, and cultural resource management.
- Professional archaeologist with deep experience (28+ years) in cultural resource management and academic research projects in the Northeast and Southwestern US, Anguilla, and Costa Rica.
- Experienced geospatial professional with extensive training in GIS (400+ hours of Instructor-led Esri

courses), terrestrial LiDAR, and RTK GPS Survey.

- Author or Co-author of more than 75 technical archaeological and geospatial analysis reports summarizing collaborative research conducted as project director (Southwest Archaeological Consultants) and P.I. (Earth Analytic, Inc.).
- Recipient of a National Science Foundation NCALM grant for a proposal entitled Simulating Dynamic Hydrological Processes in Archaeological Contexts: A Proposal for Airborne Laser Swath Mapping (ALSM) at Chaco Canyon.
- Collaborator with the University of Vermont and University of Maine on the development and implementation of the Vermont Archaeological Sensitivity Model, a statewide archaeological sensitivity analysis and interactive mapping system. The project team received a Significant Achievement in GIS Award from Environmental Systems Research Institute in 2006.
- Collaborator with University of Vermont research in Fountain Cavern, in Anguilla, West Indies. The project entailed terrestrial laser scanning (LiDAR) of spelioglyphs and surrounding cave contexts for documentation and 3d visualization purposes.
- Collaborator with the University of Hawaii and Garcia and Associates at Ahu a Umi, a 16<sup>th</sup> century heiau on the high plateau between Hualālai and Mauna Loa, Island of Hawai'i. The project entailed terrestrial laser scanning and integrated geospatial mapping of this isolated and very significant Hawaiian site, which is listed on the US National Register of Historic Places. Responsibilities included the training of undergraduates in the use of LiDAR, total station, and GPS equipment in the field.

#### **CERTIFICATIONS AND MEMBERSHIPS**

- GISP (GIS Professional)
- RPA (Register of Professional Archaeologists)
- Sigma Xi (Full Member, Albuquerque Chapter)
- Member, Society for American Archaeology

#### **PEER-REVIEWED PUBLICATIONS**

Zwolak, Karolina, Yulia Zarayskaya, Rochelle Wigley, Christina Lacerda, Tomer Ketter, Robert Anderson, Evgenia Bazhenova, Aileen Bohan, Wetherbee Dorshow, Mohamed Elsaid, Andrew Fitzcarrald, Robin Falconer, Timothy Kearns, Alison Proctor, Jaya Roperez, Ivan Rhyzov, Hadar Sade, Seeborouth Sattiabaruth, Benjamin Simpson, Masanao Sumiyoshi, and Neil Tinmouth

2019 The Shell Ocean Discovery Xprize Competition Impact On The Development Of Ocean Mapping Possibilities. Annual of Navigation. Polish Navigation Forum and Gdansk Branch of the Polish Academy of Sciences

Zwolak, K., Zarayskaya, Y., Wigley, R., Lacerda, C., Ketter, T., Anderson, R., Bazhenova, E., Bohan, A., Dorshow, W.B., Elsaied, M., Fitzcarrald, A., Falconer, R., Kearns, T., Proctor, A., Roperez, J., Ryzhov, I., Sade, H., Sattiabaruth, S., Simpson, B., Sumiyoshi, M. and Tinmouth, N.

2018 The Shell Ocean Discovery XPRIZE Competition Impact on the Development of Ocean Mapping Possibilities, *J. of Annual of Navigation* 2 5/ 20 1 8, DOI: 10.1515/aon-2018-0009.

Crock, John G., Nanny Carder and Wetherbee Bryan Dorshow

2017 'Marineness', the Underwater Seascape and Variability in Maritime Adaptations in the Late Ceramic Age Northern Lesser Antilles. *Environmental Archaeology*, DOI: 10.1080/14614103.2017.1345468

Drake, Brandon Lee, W.H. Wills, M.I Hamilton, and Wetherbee Bryan Dorshow

2014 Strontium isotopes and the reconstruction of the chaco regional system: Evaluating uncertainty with bayesian mixing models. *PLoS ONE* (2014) 9, 5 (e95580) DOI: 10.1371/journal.pone.0095580

Dorshow, Wetherbee Bryan

2012 Modeling agricultural potential in Chaco Canyon during the Bonito phase: a predictive geospatial approach, *Journal of Archaeological Science*, Volume 39, Issue 7, July 2012, Pages 2098-2115, ISSN 0305-4403.

<http://www.sciencedirect.com/science/article/pii/S0305440312000623>

Wills, Wirt H., David W. Love, Susan J. Smith, Karen R. Adams, Manuel R. Palacios-Fest, Wetherbee B. Dorshow, Beau Murphy, Jennie O. Sturm, Hannah Mattson, and Patricia L. Crown

2017 Water Management at Pueblo Bonito: Evidence from the National Geographic Society Trenches. *American Antiquity*, Volume 81, 449-470.

Wills, Wirt H. and Wetherbee Bryan Dorshow

2012 Agriculture and community in Chaco Canyon: Revisiting Pueblo Alto, *Journal of Anthropological Archaeology*, Volume 31, Issue 2, June 2012, Pages 138-155.

<http://www.sciencedirect.com/science/article/pii/S0278416511000651>

Wills, Wirt H., Brandon Lee Drake, and Wetherbee Bryan Dorshow

2014 Prehistoric Deforestation at Chaco Canyon? *Proceedings of the National Academy of Sciences*. *PNAS* 2014 111 (32) 11584-11591; published ahead of print July 28, 2014, doi:10.1073/pnas.1409646111

Wills, Wirt H., F. Scott Worman, Wetherbee Bryan Dorshow and Heather Richards

2012 Shabik'eschee Village in Chaco Canyon: Time to Move Beyond the Archetype. *American Antiquity*, Volume 77, Issue 2, April 2012, Pages 326-350.

## **OTHER PUBLICATIONS, PRESENTATIONS AND PROFESSIONAL REPORTS**

Anschuetz, K., W. Dorshow, and L. Viklund

1995 *Archaeological Survey and Monitoring of Proposed Borrow Pit Areas for the New Mexico Solid Waste Authority Red Rocks Regional Landfill near Thoreau, New Mexico*. Southwest Archaeological Consultants Research Series 392. Santa Fe.

Anschuetz, K, G. Deyloff, and W. Dorshow

1994 *A Cultural Resource Management Survey in Jemez Valley*. Southwest Archaeological Consultants Research Series 358a. Santa Fe.

Biella, J. and W. Dorshow, Editors

- 1997 *Cultural Definition on the Southern Park Plateau of Northeastern New Mexico: The Ancho Canyon Archaeological Project, Volumes I and II*. Southwest Archaeological research series 327E. Santa Fe.
- Crock, J., A. Quinn, R. Corey, W. Dorshow, and J. Petersen  
 1991 *Archaeological Phase II Testing of the Oakland, Rice Rips, Automatic, and Union Gas Hydroelectric Projects, Kennebec and Somerset Counties, Maine*. University of Maine, Farmington.
- Crock, Dorshow and Tim Wawrzyniec  
 2009 Point Clouds and Ceremonial Caves: The Use of Ground-Based LIDAR in the Interpretation and Preservation of Fountain Cavern, Anguilla. Paper presented at the 23rd Congress of the International Association of Caribbean Archaeology, Antigua.
- Dorshow, Wetherbee  
 2017 Toward a Dynamic Geospatial Model of Shifting Hydrologic Regimes and Agricultural Potential at Chaco Canyon: Report from the Field. Paper presented in a Society for American Archaeology Conference Symposium titled Recent Analytical Contributions to Chacoan Archaeology. Vancouver, Canada.
- 2000 *An Archaeological Assessment of the Raton Coal-Bed Methane 12" Pipeline and Van Bremmer Discharge 8" Pipeline Project Corridors on the Vermejo Park Ranch, Colfax County, New Mexico*. Earth Analytic, Inc. Research Report EA 2. Las Vegas.
- 1997 Why Farm When You Can Forage?: Northeastern New Mexico Prehistoric Subsistence in Regional Context. Paper presented at the 1997 Annual Meeting of the Society for American Archaeology, Nashville, Tennessee.
- 1997 Chapter 8: Projectile Point Analysis. In *Cultural Definition on the Southern Park Plateau of Northeastern New Mexico: The Ancho Canyon Archaeological Project, Volume II*, edited by J. Biella and Wetherbee Dorshow. Southwest Archaeological research series 327E. Santa Fe.
- 1997 Chapter 17: Ancho Canyon Chronology. In *Cultural Definition on the Southern Park Plateau of Northeastern New Mexico: The Ancho Canyon Archaeological Project, Volume II*, edited by J. Biella and Wetherbee Dorshow. Southwest Archaeological research series 327E. Santa Fe.
- 1996 Three Millennia on the Southern Park Plateau, Northeast New Mexico. Paper presented at the 1996 Annual Meeting of the Society for American Archaeology, New Orleans, LA.
- 1996 *An Archaeological Survey of 6.57 Acres of Private Land Southwest of the Santa Fe Downs Racetrack, Santa Fe County, New Mexico*. Southwest Archaeological Consultants Research Series 410. Santa Fe.
- 1996 An Assessment of Sites Within the Proposed East-Half Expansion Area of the Ancho Canyon Mine on the Vermejo Park Ranch, Northeast New Mexico. Southwest Archaeological Consultants Research Series 408a. Santa Fe.
- 1995 *A Cultural Resources Inventory Along Two Segments of Old Highways 84/85 near Rowe and Pecos, New Mexico*. Southwest Archaeological Consultants Research Series 406. Santa Fe.
- 1995 *An Archaeological Survey of Approximately 55 Acres on the Bishop's Lodge Property, Santa Fe*. Southwest Archaeological Consultants Research Series 401. Santa Fe.
- 1995 *A Cultural Resources Survey for the Proposed 1995 Coal Exploration Project at the York*

*Canyon Mine in Colfax County, New Mexico.* Southwest Archaeological Consultants Research Series 390. Santa Fe.

- 1995 Architectural Change amid Subsistence Stability: A Plains Woodland Case. Paper presented at the Symposium: Reassessing the Human Occupation along the West Margin of the Southern Plains (organized by Wetherbee Dorshow). 1995 Plains Conference, Laramie, Wyoming.
- 1995 Tool Technology and Diversity on the Southern Park Plateau: An Archaic to Plains Woodland Case from Northeastern New Mexico. Paper presented at the 1995 Meeting of the Society for American Archaeology, Minneapolis, Minnesota.
- 1994 Revisions of the Archaeological Record of Northeastern New Mexico. Paper presented at the 67th Annual Pecos Conference, August 1994. Mesa Verde, Colorado.
- 1994 *An Archaeological Survey of 5+ Acres of Private Land on the Zorro Ranch in the Southern Galisteo Basin, Santa Fe County, New Mexico.* Southwest Archaeological Consultants Research Series 367. Santa Fe.
- 1994 *An Archaeological Survey of 549 Acres of Private Land Northeast of the Santa Fe Downs Racetrack, Santa Fe County, New Mexico.* Southwest Archaeological Consultants Research Series 363. Santa Fe.
- 1994 *A Cultural Resources Inventory Survey of 6.52 Acres in the Tesuque Drainage Basin.* Southwest Archaeological Consultants Research Series 361. Santa Fe.
- 1994 *A Cultural Resources Inventory Survey of Proposed Ventilation Shafts and Transmission Lines in the Cimarron Underground Mine Area, Colfax County, New Mexico.* Southwest Archaeological Consultants Research Series 352. Santa Fe.
- 1994 *A Cultural Resources Inventory Survey of New Mexico State Highway 94 Between Ledoux and South Carmen, New Mexico.* Southwest Archaeological Consultants Research Series 353. Santa Fe
- 1994 *An Archaeological Survey of the Proposed 1994 Coal Exploration Project at the York Canyon Mine, Colfax County, New Mexico.* Southwest Archaeological Consultants Research Series 355. Santa Fe.
- 1993 Recent Archaeological Investigations on the Southern Park Plateau. Paper presented at the 66th Annual Pecos Conference, August 1993. Springerville, Arizona.
- 1993 *The Proposed 1993 Coal Exploration Project at the York Canyon Mine in Colfax County, New Mexico.* Southwest Archaeological Consultants Research Series 329. Santa Fe.
- 1993 *A Cultural Resources Inventory Survey of 3.6 Acres along Forest Roads northwest of Holman, Mora County, New Mexico.* Southwest Archaeological Consultants Research Series 328. Santa Fe
- 1993 *An Archaeological Survey of NM Rt. 120 in the vicinity of Wagon Mound and Ocate, Mora County, New Mexico.* Southwest Archaeological Consultants Research Series 326. Santa Fe.
- 1993 *A Cultural Resources Investigation of the East Ridge Mine Expansion Area, Colfax County, New Mexico.* Southwest Archaeological Consultants Research Series 325. Santa Fe.
- 1993 *A Relocation of 39 Kaiser Steel Sites within the Five-Year Mining Plan, Colfax County, Raton, New Mexico.* Southwest Archaeological Consultants Research Series 319. Santa Fe.

- 1992 *An Archaeological Survey of Proposed Drill Holes in the Arkansas River Drainage, Colfax County, New Mexico*. Southwest Archaeological Consultants Research Series 302. Santa Fe.
- Dorshow, W., B. Ambler, and J. Biella
- 1997 Chapter 7: Lithic Technology and Tool Use in Ancho Canyon, Northeast New Mexico. In *Cultural Definition on the Southern Park Plateau of Northeastern New Mexico: The Ancho Canyon Archaeological Project, Volume II*, edited by J. Biella and Wetherbee Dorshow. Southwest Archaeological research series 327E. Santa Fe.
- Dorshow, Wetherbee and Timothy Baugh
- 1999 Chapter 3: Archaeological Overview of the Park Plateau. In *Cultural Resources of the Gachupin-Brackett Mine: Preliminary Investigations of Cultural Landscapes on the Southern Park Plateau*, edited by Wetherbee Dorshow and Steven Mack, pp. 4-47. Southwest Archaeological Consultants Research Series 425b, Santa Fe.
- Dorshow, W, J. Biella, A. Linse, L. Viklund, and G. Deyloff
- 1997 Chapter 6: Ancho Canyon Sites. In *Cultural Definition on the Southern Park Plateau of Northeastern New Mexico: The Ancho Canyon Archaeological Project, Volume I*, edited by J. Biella and Wetherbee Dorshow. Southwest Archaeological research series 327E. Santa Fe.
- Dorshow, W., R. Corey and B. Robinson
- 1991 *An Archaeological Phase I Survey of the Vermont Gas Pipeline Project, Franklin County, Vermont*. University of Maine, Farmington.
- 1996 *Preliminary Report on the Excavation of Ten Sites in the Ancho Canyon Mine East Half Expansion Area, Colfax County, New Mexico*. Southwest Archaeological Consultants Research Series 416d. Santa Fe.
- Dorshow, Wetherbee, Patricia Crown and John Crock
- 2015 Clear Views from the Ground: 3D Modeling of Architecture and Rock Art from Chaco to Anguilla. Paper presented in a Society for American Archaeology Conference Symposium titled Ancient Architecture and Spatial Technology: A Global Perspective. San Francisco, CA.
- Dorshow, W. G. Deyloff and L. Viklund
- 1993 *A Preliminary Report for the 1993 Field Season: The Ancho Canyon Mine, Colfax County, New Mexico*. Southwest Archaeological Consultants Research Series 327d. Santa Fe.
- Dorshow, W. and S. Dominguez
- Dorshow, Wetherbee, Steve Dominguez and Steven Mack
- 2000 The Ancho Canyon Mine East-Half Excavation Project. Southwest Archaeological Consultants Research Series 420, Santa Fe.
- Dorshow, W. and S. Dominguez
- 1996 *Archaeological Testing Results from Nine Sites in the Ancho Surface Mine East-Half, Colfax County, New Mexico*. Southwest Archaeological Consultants Research Series 416b. Santa Fe.
- Dorshow, Wetherbee and Steven Mack, eds.
- 2000 Cultural Resources of the Gachupin-Brackett Mine: Preliminary Investigations of Cultural Landscapes on The Southern Park Plateau. Southwest Archaeological Consultants Research Series 425b, Santa Fe.

Dorshow, Wetherbee and Steven Mack

2000 Appendix II: Testing Results from 48 Sites in the Proposed Gachupin-Brackett Mine Area. In *Cultural Resources of the Gachupin-Brackett Mine: Preliminary Investigations of Cultural Landscapes on the Southern Park Plateau*, edited by Wetherbee Dorshow and Steven Mack. Southwest Archaeological Consultants Research Series 425b, Santa Fe.

Dorshow, Wetherbee, Steven Mack, Samantha Ruscavage-Barz and Cherie Scheick

2000 Chapter 9: Culture, Environment and Time: An Initial Assessment of the Gachupin-Brackett Cultural Landscape Using GIS Analysis. In *Cultural Resources of the Gachupin-Brackett Mine: Preliminary Investigations of Cultural Landscapes on the Southern Park Plateau*, edited by Wetherbee Dorshow and Steven Mack, pp. 62-99. Southwest Archaeological Consultants Research Series 425b, Santa Fe.

Dorshow, Wetherbee, Steven Mack, Hilary Kluger, Jonathan Van Hoose and Dave Barz

2000 Appendix I: Survey Site Descriptions for 290 Sites Recorded in the Proposed Gachupin-Brackett Mine Area. *Cultural Resources of the Gachupin-Brackett Mine: Preliminary Investigations of Cultural Landscapes on the Southern Park Plateau*, edited by Wetherbee Dorshow and Steven Mack. Southwest Archaeological Consultants Research Series 425b, Santa Fe.



Dorshow, W. and B. Robinson

1990 *Archaeological Phase I Reconnaissance Survey Rt. 107 Bridge Replacement Project, Stockbridge, Vermont*. University of Maine, Farmington.

Dorshow, Wetherbee and Cherie Scheick

2000 Chapter 1: An Introduction to the Gachupin-Brackett Archaeological Project. In *Cultural Resources of the Gachupin-Brackett Mine: Preliminary Investigations of Cultural Landscapes on the Southern Park Plateau*, edited by Wetherbee Dorshow and Steven Mack, pp. 1-3. Southwest Archaeological Consultants Research Series 425b, Santa Fe.

2000 Chapter 10: Project Evaluations and Recommendations. In *Cultural Resources of the Gachupin-Brackett Mine: Preliminary Investigations of Cultural Landscapes on the Southern Park Plateau*, edited by Wetherbee Dorshow and Steven Mack, pp. 192-221. Southwest Archaeological Consultants Research Series 425b, Santa Fe.

Dorshow, Wetherbee, Cherie Scheick, Steven Mack, Kurt Anschuetz, and Timothy Baugh

2000 *A Regional Research Design for Archaeological Research in the Pittsburg and Midway Coal Mining Companies Raton Properties Study Area*. Southwest Archaeological Consultants Research Series 425c, Santa Fe.

Dorshow, W. and C. Scheick

1997 Chapter 4: Previous Research In *Cultural Definition on the Southern Park Plateau of Northeastern New Mexico: The Ancho Canyon Archaeological Project, Volume I*, edited by J. Biella and W. Dorshow. Southwest Archaeological research series 327E. Santa Fe.

Dorshow, W. and C. Scheick

1992 *A Preliminary Report for the Ancho Mine Area Phase 2 Fieldwork: KS-42, KS-277, KS-282 and SW 301-101*. Southwest Archaeological Consultants Research Series 311A. Santa Fe.

Dorshow, W., C. Scheick and R. Lang

1997 Chapter 3: The Cultural Environment. In *Cultural Definition on the Southern Park Plateau of Northeastern New Mexico: The Ancho Canyon Archaeological Project, Volume I*, edited by J. Biella and Wetherbee Dorshow. Southwest Archaeological research series 327E. Santa Fe.

Dorshow, W., C. Scheick and L. Viklund

1996 *A Cultural Resources Survey for the Proposed 1996 Coal Exploration Project at the York Canyon Mine, Colfax County, New Mexico*. Southwest Archaeological Consultants Research Series 408c. Santa Fe.

Dorshow, Wetherbee, Jonathon Van Hoose, Hilary Kluger, Steven R. Mack, and Lonyta Viklund

2000 Chapter 5: The Archaeological Data. In *Cultural Resources of the Gachupin-Brackett Mine: Preliminary Investigations of Cultural Landscapes on the Southern Park Plateau*, edited by Wetherbee Dorshow and Steven Mack, pp. 62-99. Southwest Archaeological Consultants Research Series 425b, Santa Fe.

Dorshow, W. and L. Viklund

1996 *An Archaeological Assessment of Three Sites within a Proposed Road Right-of-Way in Salyers Canyon on the Ancho Canyon Mine, Northeast New Mexico*. Southwest Archaeological Consultants Research Series 416c. Santa Fe.

Linse, A, G. Deyloff, W. Dorshow and L. Viklund

1992 *Preliminary Report for Phase IV Fieldwork in the Ancho Canyon Mine*. Southwest Archaeological

Consultants Research Series 311C. Santa Fe.

Penner, W., W. Dorshow, and B. Byszewski

2000 An Archaeological Assessment of the El Paso Raton 115 KV Transmission Line Corridor on the Vermejo Park Ranch in Western Colfax County, New Mexico. Earth Analytic, Inc. Research Report EA 12. Las Vegas.

Penner, W., B. Byszewski and W. Dorshow

2001 *A Cultural Resources Assessment of Three Parcels on Santa Ana Mesa and One Parcel in the Rio Grande Bosque at the Pueblo of Santa Ana, Bernalillo County, New Mexico.* Earth Analytic, Inc. Research Report EA 31. Las Vegas.

Penner, W., B. Baletti, B. Byszewski and W. Dorshow

2001 *A Cultural Resources Assessment of Areas to be Impacted by the Rio Jemez WHIP Project at the Pueblo of Santa Ana, Bernalillo County, New Mexico.* Earth Analytic, Inc. Research Report EA 41. Las Vegas.

Robinson, Jess, John Crock, and Wetherbee Dorshow

2016 Paleoindian uses of Maritime Environments in the Far Northeast. Paper presented in a Society for American Archaeology Conference Symposium titled In Human adaptations to Late-glacial and early Holocene Climate and Environmental Changes: towards a Trans-Atlantic Perspective. Orlando, Florida.

Robinson, B., E. Cowie, T. Buchanan, W. Dorshow, C. Quinn and J. Petersen

1991 *Archaeological Phase I Survey of the Vermont Segment of the Champlain Pipeline Project, Volume II.* University of Maine. Farmington.

Scheick, C. and W. Dorshow

1996 *Revised Data Treatment Plan for the Excavation of Significant Sites in the Proposed East-Half Expansion Area of the Ancho Canyon Mine.* Southwest Archaeological Consultants Research Series 408d. Santa Fe.

Viklund, L., G. Deyloff, and W. Dorshow

1992 *A Preliminary Report for Phase III Fieldwork at the Ancho Canyon Mine Area: 292-4, -5, -6, -7, -8, -9, -11 and 301-4, -5 and -6.* Southwest Archaeologist Consultants Research Series 311B. Santa Fe.

## EMPLOYMENT SYNOPSIS

Jan. 2000-Present	President and CEO Earth Analytic, Inc. Santa Fe, New Mexico <a href="http://www.earthanalytic.com">http://www.earthanalytic.com</a> Earth Analytic, Inc. is an Authorized Esri Business Partner and Reseller
June 2009-2011	Co-Owner and Vice President Santa Fe GIS Corporation. Santa Fe, New Mexico <a href="Http://www.santafegis.com">Http://www.santafegis.com</a>
Jan. 1992-Dec. 1999	Archaeological Project Director Southwest Archaeological Consultants, Inc. Santa Fe, New Mexico Supervisors: Cherie Scheick
Aug.- Nov. 1991	Archaeologist University of New Mexico Office of Contract Archaeology Albuquerque, New Mexico Supervisor: Joseph Winter
May 1989-Aug. 1991	Archaeological Crew Chief, Archaeologist University of Maine Archaeology Research Center Farmington, Maine Supervisor: James B. Petersen
June-Aug. 1988	Archaeologist Maryland Geology Survey of Archaeology Baltimore, Maryland Supervisor: Carol Ebright
Aug. 1987	Archaeologist University of Maine Archaeology Research Center Farmington, Maine Supervisor: James B. Petersen
June- July 1987	Archaeologist University of Vermont Contract Archaeology Program Burlington, Vermont Supervisor: Peter Thomas

## PROFESSIONAL EXPERIENCE

### Earth Analytic, Inc.

Jan. 2000-Present Program Director/Principal Investigator for Earth Analytic, Inc., a Santa Fe-based consulting firm specializing in GIS-enabled natural and cultural resource management. The following table summarizes some major projects directed by Wetherbee Dorshow.

Earth Analytic Client	Project Description	Dates
Amvest Corporation	GIS support for geological studies and presentations in the eastern US and Oklahoma. Implemented a centralized enterprise GIS system (Citrix Server farm) for the corporation.	2003-2007
Amvest Osage, Inc.	GIS development, support and maintenance project for coal-bed methane gas operations on 400,000 acres of land in northeast, Oklahoma. A major component of this work is the support of advanced geological analysis systems that incorporate multiple software packages.	2001-2007
Armendaris Ranch	GIS development, support and maintenance project for the 300,000+ acre Armendaris Ranch near T or C New Mexico	2002
Bad River Ranches, LLC	GIS development, support and maintenance project for the 131,000 acre Bad River Ranch near Fort Pierre, South Dakota	2001-2002
Bar None	Bar Non Ranch Fire Severity Study (Helena, MT)	2001
Bell Ranch	GIS support, analysis , and training for the 350,000 acre Bell Ranch in eastern NM.	2006-2007
Bill Sanders	Canyon Blanco Ranch Archaeological Survey	2002
Bionomics Southwest	GIS analysis and training	2003
Blancett Ranch	GIS consulting for the Blancett Ranch (Farmington Area)	2003
Bluestem, LLC	GIS development, support and maintenance project for the 48,000 acre Bluestem Ranch near Pawhuska, Oklahoma	2001-2002
City of Santa Fe	Archaeological redocumentation for sites on City Properties; Ph I/II	2002
Commonweal Conservancy	GIS/GPS support for sustainable development in the Galisteo Basin	2003-2007
Conservation Properties Inc.	Aerial imagery and photogrammetry, GIS development, and hydrologic modeling for the Patagonia Preserve development near Patagonia, Arizona	2004-2005
Constellation Energy Group	Migration of a multi-user Citrix GIS environment to a new server.	2007
CEP MidContinent, LLC.	GIS support for 10-15 users (geology, pipeline, database, etc..)	2007
Cornerstones Community Partnerships	GIS training, support and field data collection associated with detailed assessment and restoration of traditional architecture in the American Southwest. Projects include total station mapping of the San Miguel Mission in Santa Fe	2003-2005
Dawson	Dawson Surveyors GIS development, training and support	2004
Design Workshop	Design Workshop--SF county openspace arch. Graphics	2004
Devon Energy	Van Bremmer Transmission Line Archaeological Survey	2001
Devon Energy	Commercially navigable waterways analysis for Devon operations nationwide	2004

<b>Earth Analytic Client</b>	<b>Project Description</b>	<b>Dates</b>
Devon Energy	Devon/El Paso GIS development, training and support for environmental compliance on the Vermejo Park Ranch near Raton, NM	2000-2002
Earth Works Institute	GIS development and GPS/total station mapping of the Earth Works Institute Ranch	2002-2003
El Paso Energy	El Paso Production GIS Support (Raton, NM)	2002
El Paso Energy	Archaeological survey for the 2003 road and drilling expansion project, Vermejo Park Ranch	2003
Encana Oil & Gas (USA)	GIS/GPS system development, training and support for Encana's Ft. Lupton, CO field office	2004-present
Encana Oil & Gas (USA)	GIS/GPS system development, training and support for Encana's Parachute, CO field office.	2006-present
Encana Oil & Gas (USA)	Enterprise GIS design and implementation for the SET Geospatial and Asset Integrity teams at Denver HQ.	2006-present
FIML Natural Resources	GIS and GPS support for field data collection and management; arcgis server development and implementation	2007-present
Fire Logistics	GIS support for wildfires in Montana	2002
Flying D Ranch	GIS development, support and maintenance project for the Flying D Ranch	2003-2004
Forked Lightning Ranch (Jane Fonda)	Forked Lightning Ranch satellite imagery acquisition and GIS support	2003-present
Galisteo Watershed Conservation Initiative	Designed and implemented a comprehensive land conservation priority modeling and analysis framework for the Galisteo Basin in NM. Worked with the NM State Engineer's office, the Santa Fe Conservation Trust, Earth Works Institute and other partners to develop project priorities	2006-2007
Geodeorb.com	Real Estate Web application development	2002
HydroPartners, LLC	Environmental and Economic suitability analysis, application development. And web hosting for renewable energy	
KOB-TV/Santa Fe New Mexican/Earthanalytic.com	Fire-progression mapping for New Mexico news coverage and website publishing. Fires include: Cerro Grande, Viveash, Dalton, Borrego, and Ponil Fires.	2000-2002
Ladder Ranch, LLC	GIS design, support, maintenance, and training project at the 250,000-acre Ladder Ranch near Caballo, New Mexico.	2002
Land Conservation Consulting Services	Land Conservation Consulting Services--GPS support--CA Cons. Easements	2004
Lindsay Holt	Total Station mapping of homesite	2003
Lisa Styles	GIS-based solar insolation modeling at Bishops Lodge for landscape architect Lisa Styles of Santa Fe, New Mexico.	2000
Lopez Garcia Group	GIS/GPS support for Lopez Garcia Group	2004
Los Trigos Ranch	Los Trigos Ranch GIS development, training and support	2003-present
MarkWest Energy Partners	Enterprise GIS development, SmartFootprint™ and web application support, ArcGIS Server/Mobile sys admin, survey data integration, and general GIS support	2010-present
New Mexico Dept. of Public Education	New Mexico Department of Education	2004

<b>Earth Analytic Client</b>	<b>Project Description</b>	<b>Dates</b>
Payson Verde River Ranch	GIS development, support and maintenance project for the 14,000+ acre Payson Verde River Ranch near Payson, Arizona. Project includes GPS tracking of goats used in fuels reduction effort.	2003-2005
Pecos National Historic Park	Pecos National Historic Park satellite imagery acquisition and GIS support	2003-2004
Pecos River Ranch (Val Kilmer)	Pecos River Ranch satellite imagery acquisition, boundary mapping and geographic analysis; ongoing GIS support	2003-present
Public Lands Interpretive Association	Mobile GIS/Communications support for a National Geographic sponsored trek across public lands between the Canadian and Mexican borders.	2003
Pueblo of Santa Ana	Cultural resources inventory survey of 295 acres along the Rio Grande River and on Santa Ana Mesa, Bosque & Fire Management Plan	2001
Pueblo of Santa Ana	A Cultural Resources Assessment of Areas to be Impacted by the Rio Jemez WHIP Project at the Pueblo of Santa Ana, Sandoval County, New Mexico	2001
Pueblo of Santa Ana	The Rio Jemez Reservoir Delta and Access Road Archaeological Survey (41B)	2002
Pueblo of Santa Ana	A Cultural Resources Assessment of Approximately 70 Acres for the Weir and Access Road at the Pueblo of Santa Ana, Sandoval County, New Mexico	2002
Pueblo of Santa Ana	Archaeological survey for the 2003 Bosque Project	2003
Pueblo of Santa Ana	Archaeological survey for the Weir access road project	2003
Pueblo of Santa Ana	Santa Ana Mesa Fence line & Jemez Dam Access Road Survey	2003
Pueblo of Santa Ana	Archaeological survey for the Mesa Well project for the BIA	2003
Pueblo of Santa Ana	A Cultural Resources Assessment of Proposed Erosion Control Measures for the 2003 Rio Jemez Weir Access Road Project	2003
Pueblo of Santa Ana	Archaeological survey and testing on the margins of the traditional Pueblo of Tamaya.	2003
Quivira Coalition	GIS training, support and analysis for varied ecological projects.	2002-2007
Ranney Ranch	GIS development and field data collection for a 40,000+ acre ranch near Corona NM. Recent work includes the development of viewshed/environmental sensitivity buffers and 3D wind turbine simulations for a proposed wind energy project on the ranch.	2005-present
R.T. Hicks Consultants	GIS-based analysis support and training for hydro-geological analysis in New Mexico	2000-2006
Rio Grande Foundation for Communities and Cultural Landscapes	Rio Grande Foundation San Juan Homelands GIS Support	2000
S&K Aerospace	GIS database development and support for a large-scale DOT superfund site cleanup project. Tasks also included setup of a survey-grade GPS system at the MOAB UMTRA site, ground water and uranium contamination plume modeling, and LIDAR data collection and analysis.	2008-present

<b>Earth Analytic Client</b>	<b>Project Description</b>	<b>Dates</b>
Sandhills Ranch Properties, LLC	GIS development, support and maintenance project for four ranches comprising the 250,000+ acre Sandhills Ranch Properties complex in northwestern Nebraska and southwestern South Dakota	2000-2002
San Francisco River Association	GIS database and application environment development, training, etc.. for this restoration-focused non-profit.	2005-2008
Santa Fe Conservation Trust	GIS/GPS support for the inventory and documentation of conservation easements and trail systems in Santa Fe County, NM.	2002-2008
Santa Fe County Land-Use Planning Division	GPS data collection and GIS support for the Cerrillos Hills Archaeological Survey Project.	2001
Santa Fe Permaculture, LLC	GPS data collection and GIS-based mapping of residential properties for Santa Fe Permaculture	2002
Santa Fe Public Schools	Gonzales Elementary School Cultural Resources Investigations	2002
Souder Miller	GIS cons. For Souder Miller and Assoc.	2003
Southwest Archaeological Consultants, Inc.	SW 447 Ortiz Mines GPS/GIS	2000
Southwest Archaeological Consultants, Inc.	SW 450 Cerrillos Hills GPS/GIS	2000
Southwest Archaeological Consultants, Inc.	Southwest Archaeological Consultants Star Lake GIS support	2001
Southwest Archaeological Consultants, Inc.	GIS consulting and analysis for the Gachupin-Bracket Archaeological Excavation Project, Vermejo Park Ranch, NM	2004
Southwest Archaeological Consultants, Inc.	GIS support for archaeological projects at the South Hospah Mine, and the Star Lake Ortiz Mines in western New Mexico.	2000-2001
Southwest Environmental Consultants	GIS support for forestry projects throughout the Southwest	2000
Tercio Ranch	Tercio Ranch	2004
The Trust For Public Land	The Trust For Public Land GIS analysis and support, including advanced modeling, ArcIMS mapping systems development and management, hardware/software support, and applications development. Helped to engineer an ArcGIS geoprocessing and modeling system for The Trust For Public Land's (TPL) Greenprinting analysis framework. Work also entailed the creation of nine major web-based interactive mapping, database and analysis systems for specific TPL projects. One of these projects is called <a href="#">LandVote</a> .	2003-2005
Torch Renewables	GIS database design, training, analysis and tool development focused on targeting lands for leasing of wind rights, capture and analysis of site-specific meteorological data, and wind forecasting/early warning system design for wind farms.	2008-present
Trigon EPC	Cultural resources inventory survey of the El Paso Project 2000 Transmission Line on the Vermejo Park Ranch in Colfax County, New Mexico.	2000
Trigon EPC	Trigon GIS Implementation and Training	2000
Trigon EPC	Satsop pipeline GIS development, including web-based mapping	2000

<b>Earth Analytic Client</b>	<b>Project Description</b>	<b>Dates</b>
Trigon EPC	Cultural resources inventory survey of the 2000 El Paso Coal Bed Methane Pipeline on the Vermejo Park Ranch in Colfax County, New Mexico.	2000
Trigon EPC	Paiute Pipeline profile, phase 2	2002
Trigon EPC	Cenex Pipeline system GIS development and submittal to OPS/NPMS	2002
Trigon EPC	GIS development and support for the Advantage Pipeline Project (CO,KS)	2003
Trigon EPC	Mapco Pipeline project GIS development, including ArcIms component	2003
Trigon EPC	GIS conversion project, Salt River Project Gas Pipeline	2003
Trigon EPC	Entrega Internet Mapping System Development and Implementation	2004
Trigon EPC	Encana Enterprise GIS design	2004
Trigon EPC	2000-2002 GIS analysis, support, and training services for various Trigon EPC, LLC construction and engineering projects in the Western United States	2000-2002
Trigon EPC	MacDonald Island, CA Pipeline GIS Support	2003
Trigon EPC	Development, implementation, and maintenance of a web-enabled GIS database for a proposed 500 mile Sonoran pipeline in the Western United States.	2001
Turner Endangered Species Fund	Turner Endangered Species Fund wolf reintroduction feasibility study	2000
Turner Endangered Species Fund	GIS Support for TESF wolf reintroduction studies in northeast New Mexico.	2001
Turner Endangered Species Fund	GIS/GPS support for the Swift Fox reintroduction project	2002
Turner Enterprises, Inc.	General GIS Support for Turner Enterprises, Inc., Ted Turner's ranch management group in Bozeman	2001-2004
Turner Enterprises, Inc.	GIS-based burn severity analysis for the Bar None Ranch near Helena, Montana.	2001
University of Vermont Consulting Archaeology Program (UVMCAP)	GIS development, analysis, training and support for archaeological projects in Vermont, including 3D simulations of Revolutionary War and War of 1812 Battles in Vermont, field data collection to GIS analysis and map generation workflows, etc..	2000-present
University of Vermont, Department of Anthropology	LIDAR mapping of spelioglyphs in a limestone cave and archaeological investigations at the prehistoric Arawakan Rendezvous Bay site the island of Anguilla in the Caribbean	2006-2007
US West Communications	GIS support, analysis and mapping for the Hi-Meadows and Bobcat Gulch Fires in Colorado	2000
US Army Corps of Engineers	GIS database and web application development: Geodatabase design and implementation, ArcGIS Server database and web mappiing integration with CompuScan document management system software	2009-present
Valles Caldera National Preserve	Interactive mapping (ArcIms) website development, implementation and hosting for the Valles Caldera National Preserve.	2003-2004



<b>Earth Analytic Client</b>	<b>Project Description</b>	<b>Dates</b>
Vermejo Park Ranch, LLC	Vermejo Park Ranch Website design and maintenance through partnership with Geodeorb.com. www.vermejoparkranch.com	2002
Vermejo Park Ranch, LLC	GIS design, support, maintenance, and training for the 579,000 acre Vermejo Park Ranch near Raton, New Mexico. Recent projects include a ranch-wide forest economic analysis	2000-2008
Villagra Building	Villagra Building Archaeological testing and mitigation projects, Santa Fe, NM	2003
Vermont Agency of Commerce and Community Development	Multiple projects and general GIS analysis support, including the development of a statewide archaeological sensitivity model that won a Special Achievement in GIS Award from Esri in 2006. Recent efforts include the building of a web-portal (ArcIMS, ArcSDE, Geocortex IMF) for the VT Division of Historic Preservation's archaeological and Historic databases.	2002-present
Vermont Agency of Natural Resources	Archaeological sensitivity modeling and mapping for VTANR with UVMCAP	2003
Whiting Petroleum	Enterprise GIS design, implementation and support, including ArcGIS Server and ArcGIS Mobile, APDM schema customization, etc..	2010-present
Williams Midstream	SmartFootprint™ pipeline routing, reporting and profile software integration for the entire state of Pennsylvania	2012-present
Vermont Division of Historic Preservation	GIS implementation and training for the Vermont Division of Historic Preservation. Major projects include the development of an award-winning statewide archaeological sensitivity model and associated	2003-2004
Whitney Appraisal Associates	Ponil Ranch fire severity mapping, GIS training and support on multiple appraisal projects	2003-2007
Z Bar Ranch, LLC	2000-2001 design, support, maintenance, and training project at the 40,000 acre Z Bar Ranch near Aetna, Kansas	2000-2002
Zillow	Provided GIS support and consulting services for the initial development of Zillow.com, a major real estate appraisal and mapping website.	2005-2006

### **Southwest Archaeological Consultants, Inc.**

- June 1999-Dec. 1999      Project Director/Field Director, Vermejo Projects. Supervised 18-20 persons in the excavation of 15 sites in the Gachupin-Brackett Mine Area.
- Oct. 1998-June 1999      Project Director, Vermejo Projects. Tasks include the compilation and co-authorship of a preliminary testing report (Dorshow and Mack 1998), a 300-site survey report (Dorshow and Mack, in prep.) and a regional research design (Dorshow, Scheick, Mack, Anschuetz, and Baugh, in prep.); editing analytical chapters for a 15-site mitigation project report (Dorshow, Dominguez and Mack, in prep.); developing and utilizing a GIS that incorporates archaeological and ecological data derived from ongoing Gachupin-Brackett survey, testing and excavation projects.
- May 1998- Oct. 1998      Field Director/Project Director, Gachupin-Brackett Survey and Excavation Project. Supervised 15 persons in the survey of roughly 1,000 acres and the test excavation of

48 lithic scatters the proposed Gachupin- Bracket Mine area, Colfax County, NM.

- Oct. 1997-May 1998 Assistant Project Director, Vermejo Projects. Duties included Gachupin-Bracket Survey data analysis and report preparation/authorship, Gachupin-Bracket testing research design preparation/ authorship, and Ancho East Half Excavation project data analysis and report preparation/authorship.
- May 1997-Oct. 1997 Field Director, Gachupin-Bracket Mine Survey project. Supervised three crews of four people in non-disturbance pedestrian survey of 5600 ac in the proposed Gachupin-Bracket Mine area, Colfax County, NM.
- Nov. 1996-May 1997 Project Coordinator/Director, Ancho Canyon Mine East Half excavation project (Ancho East Half). Duties included co-authorship and preparation of preliminary report, database management, analysis coordination and sample selection for testing, mitigation and analysis project in the Ancho Canyon Mine, Colfax County, NM.
- June-Nov. 1996 Field Director, Ancho East Half Excavation Project. Duties included supervision of 15 people in testing and mitigation phase investigations at 19 prehistoric sites (multicomponent rockshelters, pit structures, open campsites and lithic scatters) in the Ancho Canyon Mine, and preparation/authorship of revised research design/data treatment plan and testing report.
- June 1996 Project Director, Vermejo Coal Exploration Survey Project. Duties included supervision of one person in survey of drill holes and access roads on the Vermejo Park Ranch, NM and final report preparation/authorship.
- May-June 1996 Project Director, Ancho East Half Excavation Project. Duties included preparation and co-authorship of a research design/data treatment plan for 19 sites in the Ancho Canyon Mine.
- May 1996 Supervisory Archaeologist, College Hills Survey Project. Duties included supervision of three persons in pedestrian survey of 500 acres near Santa Fe and report preparation/authorship.
- April 1996 Project Director, Ancho East Half Reassessment Survey. Duties included supervision of two, three person crews in the relocation and reassessment 24 previously recorded sites in the Ancho Canyon Mine.
- March 1996 Supervisory Archaeologist, McKinley Mine Excavation Project. Duties included supervision of 2-6 people in the full-scale excavation of a Pueblo III residential site in the McKinley Mine, McKinley County, NM.
- February 1996 Project Director, Las Estrellas Survey Project. Duties included survey of 7 acres in Santa Fe County, NM and report preparation/authorship.
- Nov. 1995-Jan. 1996 Project Coordinator/Supervisory Archaeologist, Ancho Canyon Mine West Half Excavation Project. Duties included preparation, partial authorship and editing of final report on the excavation and analysis of 43 sites in the Ancho Canyon Mine.

- October 1995 Project Director, Bishop's Lodge Survey Project. Duties included supervision of two, three person crews in 55 acre survey near Santa Fe, NM, and final report preparation/authorship.
- September 1995 Supervisory Archaeologist, McKinley Mine Excavation Project. Supervised selection and coordinated analysis of radiocarbon and tree-ring samples from 1993-1994 excavations in the McKinley Mine, and authored analytical chapter on absolute chronology.
- July-Sept. 1994 Supervisory Archaeologist, McKinley Mine Excavation Project. Duties included supervision of 6-10 people in excavation of large Pueblo III site at the McKinley Mine.
- June 1995 Supervisory Archaeologist, Vermejo Coal Exploration Survey Project. Duties included survey of drill holes and access roads on the Vermejo Park Ranch, NM and final report preparation/authorship.
- June 1994-Oct. 1995 Project Coordinator/Supervisory Archaeologist, Ancho West Half Excavation Project. Duties included preparation, partial authorship and editing of final report on the excavation and analysis of 43 sites in the Ancho Canyon Mine, Colfax County, lithic analysis, database management and analysis coordination.
- June 1994 Supervisory Archaeologist, Zorro Ranch Survey Project. Duties included supervision of one person in survey of 5 acres in the northern Estancia Basin, Santa Fe County, NM and final report preparation/authorship.
- April-May 1994 Supervisory Archaeologist, Vastar Survey Project. Duties included supervision of 1 to 4 persons in large-scale survey near Jemez, NM, and final report preparation/authorship.
- April-May 1994 Supervisory Archaeologist, Santa Fe Downs Survey Project. Duties included supervision of 1 to 4 persons, in 549-ac survey near Santa Fe, NM and final report preparation/authorship.
- April 1994 Supervisory Archaeologist, 1994 Coal Exploration Survey Project. Duties included survey of drill holes and access roads on the Vermejo Park Ranch, NM and final report preparation/authorship.
- April 1994 Supervisory Archaeologist, Carmen-Ledoux Survey Project. Duties included the supervision of one person in survey of 4 acres near Mora, NM and report preparation/authorship
- April 1994 Supervisory Archaeologist, Upper York Canyon Survey Project. Duties included supervision of one person in small-scale survey on the Vermejo Park Ranch, NM and final report preparation/authorship.
- Nov. 1993-Mar.1994 Supervisory Archaeologist, Ancho West Half Excavation Project. Duties included laboratory supervision of 1 to 3 people, archival research, analysis coordination, lithic analysis, stratigraphic analysis, analytical sample selection, and report preparation/authorship.

Sept.-Nov. 1993 Supervisory Archaeologist, McKinley Mine Excavation Project. Duties included supervision of 4-8 persons in excavation of a Pueblo III residential site in the McKinley Mine, McKinley County, NM.

August 1993 Supervisory Archaeologist, Pecos River Survey Project. Duties included supervision of two crew members in survey of 640 acres near San Jose, San Miguel County and report preparation/authorship.

May-July 1993 Assistant Project Director, Ancho West Half Excavation Project. Duties included supervision of eight persons and one crew chief in excavation of 23 sites in the Ancho Canyon Mine, and preliminary report preparation/authorship.

April 1993 Supervisory Archaeologist, Holman Survey Project. Duties included supervision of one person in small-scale survey near Mora, NM and final report preparation/authorship.

April 1993 Supervisory Archaeologist, Wagon Mound Survey Project. Duties included supervision of two people in survey of 50+ acres near Wagon Mound, NM and final report preparation/authorship.

April 1993 Supervisory Archaeologist, East Ridge Survey Project. Duties included supervision of two people in survey of 15 acres on the Vermejo Park Ranch, NM and final report preparation/authorship.

Jan.-April 1993 Lithic Analyst, Las Campanas Excavation Project. Duties included analysis of lithic artifacts from 70 sites near Santa Fe, NM and authorship of final report chapter summarizing results.

November 1992 Field Director/Supervisory Archaeologist, Ancho West Half Reassessment Project. Duties included supervision of two crews of four people in the relocation and reassessment of 34 sites in the Ancho Canyon Mine and preparation of final report.

October 1992 Supervisory Archaeologist, McKinley Mine Excavation Project. Duties included supervision of 2-4 people in the excavation of a small pueblo site and a fieldhouse site on the McKinley Mine northwest of Gallup, New Mexico.

June- Sept. 1992 Supervisory Archaeologist, Ancho West Half Excavation Project. Duties included supervision of 3-6 people in the excavation of 18 sites in the Ancho Canyon Mine.

June 1992 Supervisory Archaeologist, Ancho North Survey Project. Duties included supervision of 3 people in 200-acre survey on the Vermejo Park Ranch and final report preparation/authorship.

April-May 1992 Archaeologist, Las Campanas Excavation Project. Duties included technical excavation, photography, stratigraphic interpretation, site documentation, and cartography for 30 sites near Santa Fe, NM.

April 1992 Supervisory Archaeologist, Vermejo Coal Exploration Survey Project. Duties included survey of drill holes and access roads on the Vermejo Park Ranch, NM and final report preparation/authorship.

Jan.-March 1992 Archaeologist, Las Campanas Excavation Project. Duties included technical excavation, photography, stratigraphic interpretation, site documentation, and cartography for 30 sites near Santa Fe, NM.

**University of New Mexico Office of Contract Archaeology**

Aug.-Nov. 1991 Archaeologist/Burial Excavation Specialist, ENRON Excavation Project. Duties included technical excavation at large Anasazi settlements in NM and AZ, photography, stratigraphic interpretation, site documentation, with emphasis on human interments.

**University of Maine at Farmington Archaeological Research Center**

May-June 1990 Supervisory Archaeologist, Weston Testing Project. Duties included supervision of 4 people in test excavations at 16 sites along the Weston Reservoir, Somerset County Maine, and preparation/authorship of final report.

June 1990 Supervisory Archaeologist, Missisquoi River Testing Project. Duties included supervision of four people in test excavations at an Archaic site in Franklin County, Vermont and report preparation/authorship.

June 1990 Supervisory Archaeologist, Alder Pond Survey. Duties included supervision of three person survey crew in Somerset County, Maine and report preparation/co-authorship.

July 1990 Supervisory Archaeologist, Togue Pond Survey and Testing Project. Duties included supervision of three persons in survey and testing in Piscataquis County, Maine and report preparation/co-authorship.

July -Aug. 1990 Supervisory Archaeologist, Messalonskee Testing Project. Duties included supervision of four people in testing of 12 sites along the Messalonskee Reservoir, Kennebec and Somerset Counties, Maine.

Sept.-Oct. 1990 Supervisory Archaeologist, Vermont Gas Survey and Testing Project. Duties included supervision of eight people in survey and 10-site testing project along the Vermont Gas Pipeline in Franklin County, Vermont, and final report preparation/co-authorship.

November 1990 Supervisory Archaeologist, Stockbridge Survey Project. Duties included supervision of six people in 20-acre reconnaissance survey in Stockbridge, Vermont and final report preparation/authorship.

Nov.-Dec. 1990 Supervisory Archaeologist, Vernon Excavation Project. Duties included supervision of eight people in excavation of a Late Archaic site in Vernon, Vermont.

May 1990-June 1991 Supervisory Archaeologist, Champlain Pipeline Survey and Testing Project. Duties included report preparation/authorship for a large-scale reconnaissance survey in northern Vermont.

May-Aug. 1989 Archaeologist, Moosehead Lake Survey and Testing Project. Participated in reconnaissance survey and testing in the Moosehead Lake Region, Maine.

August 1987 Archaeologist, Brockway Site Excavation Project. Participated in excavation of a

deeply stratified, multicomponent site in Milo, Maine.

**Maryland Geology Survey of Archaeology**

June-Aug. 1988            Archaeologist, Higgens Site Excavation Project. Participated in excavation of a Paleoindian period site in Odenton, Maryland.

**University of Vermont Contract Archaeology Program**

June-July 1987            Archaeologist, Missisquoi Excavation Project. Participated in excavation of a stratified, Archaic site on the Missisquoi River in Highgate Falls, Vermont.