

## 25DW370 (2368-S021)

Site 25DW370 is a historic foundation located in Section 13 T29N R51W, on top of a gentle east-west trending hill that slopes gently to the south (**Figure 112 and 114**). The foundation (Feature F1) is located in a currently used livestock enclosure that has endured much trampling. The site measures 182 feet by 151 feet and covers an area of 27,270 square feet. Vegetation consists of a very sparse grasses affording 90 percent bare ground visibility. Sediments consist of sandy loam intermixed with gravels (20%). Impacts to the site include historic ranching and farming activities throughout the area, livestock grazing and trampling, erosion, and traffic along a two-track road that has disturbed the foundation. The site datum is a GPS point taken from the southwest corner of the foundation (Feature F1).

Cultural materials consist of portions of rectangular shaped foundation (Feature F1), unused red bricks, wood remnants, and very small aqua, milk, and clear glass sherds scattered across the foundation area. Feature F1 is 25 feet by 25 feet with poured concrete remnants in each of the corners. Erosion and livestock and/or human activities have transported some of the concrete remnants 100 feet south and down-slope to the base of the southern fence of the livestock pen. There are also pieces of the foundation piled next to a gate, located in the northeast corner of the fenced enclosure, utilized for erosion control. Several utility poles are located within the livestock enclosure and may have been used to provide electricity for the structure (Feature F1) or an electrical water pump that may have once been located at this property. One large stock tank is located in the southeast portion of the livestock enclosure. A windbreak of planted cedar trees is located 70 feet north of Feature 1 and spans 100 feet east to west on the north side of the livestock enclosure (**Figure 113**). No other features were observed and the purpose of the foundation is unclear, but the associated artifacts do suggest habitation. White milk glass was commonly used for medicine, cosmetic, toiletry, food and specialty containers, and dates from the 1890s to 1960 (Fike 2002; IMACS 1984). Aqua glass was very versatile and used for many purposes and dated from 1800 to 1910 (Fike 2002; IMACS 1984).

This historic foundation is a commonly recorded feature in the area, but the National Register criterion does not dismiss resources as insignificant simply because there are numerous examples of the type. National Register eligibility for any property, including historic period archeological sites, depends on integrity and significance. Integrity for a historic period archaeological site is based on the presence of features and whether or not they can tell us something about the location. Site 25DW370 is a single foundation that does not retain enough integrity to qualify for the National Register. Lack of integrity alone, however, does not automatically exclude this site as eligible for the National Register. Significance was assessed following intensive survey and a historic records search that included a files search and architectural/structures property search conducted through the Nebraska SHPO; review of the National Register of Historic Places (NRHP) database for Dawes County, Nebraska; review of the National Historic Landmark inventory (NHL); review of General Land Office (GLO) Plats; and local literature review; that revealed sustained Euro-American historic occupation in this area occurred between 1890 to present day, and no leases or purchasers were found that can be associated with an important person or persons of "significance in history" or having an uncommon ethnic affiliation. Finally, the foundation at site 25DW370 is in very poor condition and lacks a unique design and any other unusual physical characteristic. Therefore, site 25DW370 does not possess enough significance to qualify for the National Register. Site 25DW370 is a common historic site likely associated with historic and early modern ranching or farming activities in the region that ARCADIS recommends **not eligible for listing on the NRHP and no further work is necessary**.





Figure 112. 25DW370, site overview with foundation (Feature F1) and brick scatter, facing southwest. Photograph taken by Ashley Howder on 2/16/11.





Figure 113. 25DW370, site overview with tree wind break and livestock enclosure containing utility poles and a stock tank, facing east. Photograph taken by Ashley Howder on 2/16/11.



## 25DW371 (2368-S022)

Site 25DW371 is a historic sandstone quarry site located in Section 18 T29N R51W, at the top of a low east-west trending ridge finger that is part of a large northwest to southeast trending ridge (**Figures 115 and 129**). The site measures 280 feet by 210 feet and covers an area of 845 square feet. Vegetation consists of moderate grass cover affording 75 percent bare ground visibility. Sediments consist of sandy clay loam with sands and regolith.

Cultural materials consist of 20 depressions (Features F1-F20) dug primarily into the ridge top with some depressions located down-slope to the north and east (**Figures 116-128**). The dimensions of these features vary greatly and are listed in Table 2 below. There are few stone outcrops of any kind throughout the area making the readily available sandstone at this location somewhat unique. Most of the depressions appear to be the result of mechanical quarrying, although they are of varying sizes and depths with some appearing more silted in than others. Quarried sandstone from this site was probably used by local homesteaders, farmers, and ranchers, for structure construction materials historically and at present. There were no indications stone has been recently removed from this ridge top location. No other cultural features or associated artifacts were observed in the area.

Table 2. Feature Dimensions.

Feature Number	Length (ft.)	Width (ft.)
F1	18	8
F2	30	4
F3	16	10
F4	25	10
F5	10	2
F6	20	10
F7	8	8
F8	11	8
F9	20	7
F10	10	7
F11	10	7
F12	13	13
F13	10	7
F14	10	8
F15	13	10
F16	3	3
F17	13	7
F18	13	8
F19	13	7
F20	20	13

This historic quarry is an uncommon feature in the area, but does not contain diagnostic artifacts or features. National Register eligibility for any property, including historic period archeological sites, depends on integrity and significance. Integrity for a historic period archaeological site is based on the presence of features and whether or not they can tell us something about the location. Site 25DW371 contains multiple features that, archaeologically, don't really tell us much about their time of use or purpose, thus they don't retain enough integrity to qualify for the National Register. Lack of integrity alone, however, does not



automatically exclude this site as eligible for the National Register. Significance was assessed following intensive survey and a historic records search that included a files search and architectural/structures property search conducted through the Nebraska SHPO; review of the National Register of Historic Places (NRHP) database for Dawes County, Nebraska; review of the National Historic Landmark inventory (NHL); review of General Land Office (GLO) Plats; and local literature review; that revealed sustained Euro-American historic occupation in this area occurred between 1890 to present day, and no leases or purchasers were found that can be associated with an important person or persons of "significance in history" or having an uncommon ethnic affiliation. Finally, the depression features at site 25DW371 lack a unique design or any other unusual physical characteristic. Therefore, site 25DW371 does not possess enough significance to qualify for the National Register. Site 25DW371 is a historic quarry site likely associated with historic and early modern ranching or farming activities in the region that ARCADIS recommends **not eligible for listing on the NRHP and no further work is necessary.**



Figure 115. 25DW371, site overview, facing east. Photograph taken by Ashley Howder on 2/17/11.





Figure 116. 25DW371, Feature F1 (to left) and Feature F2 (to right), facing northeast. Photograph taken by Ashley Howder on 2/17/11.



Figure 117. 25DW371, Feature F3, facing northeast. Photograph taken by Ashley Howder on 2/17/11.





Figure 118. 25DW371, Feature F4, facing north. Photograph taken by Ashley Howder on 2/17/11.



Figure 119. 25DW371, Feature F5, facing south south-east. Photograph taken by Ashley Howder on 2/17/11.





Figure 120. 25DW371, Feature F6, facing north. Photograph taken by Ashley Howder on 2/17/11.



Figure 121. 25DW371, Feature F7 (to left) and Feature F8 (to right), facing southwest. Photograph by Ashley Howder on 2/17/11.





Figure 122. 25DW371, Feature F9 (downhill), Feature F10 (middle), and Feature F11 (uphill), facing south. Photograph taken by Ashley Howder on 2/17/11.



Figure 123. 25DW371, Feature F12 (near), Feature F13 (middle), and Feature F14 (crew member), facing southwest. Photograph taken by Ashley Howder on 2/17/11.





Figure 124. 25DW371, Feature F15, facing west. Photograph taken by Ashley Howder on 2/17/11.



Figure 125. 25DW371, Feature F16 (foreground) and Feature F17 (background), facing west. Photograph taken by Ashley Howder on 2/17/11.





Figure 126. 25DW371, Feature F18, facing north. Photograph taken by Ashley Howder on 2/17/11.



Figure 127. 25DW371, Feature F19, facing west. Photograph taken by Ashley Howder on 2/17/11.





Figure 128. 25DW371, Feature F20, facing west. Photograph taken by Ashley Howder on 2/17/11.



## Previously Recorded Sites

## 25DW00-243 (2368-S016)

Site 25DW00-243 is a historic homestead located in Section 7 T50W R29N, east and west of Hollibaugh Road (**Figures 130 and 153**). The Nebraska State Historic Preservation Office, in cooperation with the Nebraska State Historical Society, completed a historic building inventory of Dawes County in 2005 that identified the main farmhouse (Feature F2) as DW00-243, an abandoned house built circa 1890.

ARCADIS revisited the property in 2010 and recorded three houses (Features F1, F2, and F4), four outbuildings (Features F3, F5, F6, and F7), an orchard, a network of fenced animal enclosures, numerous abandoned farm implements, and one large debris pile. The site measures 1,225 feet by 455 feet and covers an area of 421,122 square feet. Vegetation across the property consists of sparse to moderate mixed grasses affording a bare ground visibility that varied between 70 to 100 percent across the site area. Sediments consist of silt sandy loam. Impacts to the site include historic ranching and farming activities throughout the area, vandalism, grazing, and wind and water erosion. The site datum is a GPS point taken from the southwest corner of Feature F1.

Cultural features include three houses (Features F1, F2, and F4), two storage sheds (Features F3 and F5), one livestock shelter (Feature F6), one foundation and chicken coop gate (Feature F7), an orchard, a network of fenced animal enclosures, numerous abandoned farm implements, five abandoned vehicles, two silos, and one large historic debris pile.

One small house (Feature F1) has a rectangular floor plan measuring 16 feet by 32 feet (**Figure 131**). Feature F1 has a metal roof, metal siding, a brick chimney, two rooms, a white enamel washing machine, and interior shelving. This small structure appears to have functioned as a house and a laundry shed. There are pieces of concrete from a foundation that surround the base of the house for landscaping purposes as opposed to supporting the structure. At the time of abandonment, the structure had electricity as evidenced by electrical outlets and light fixtures remaining in the structure.

The main farmhouse (Feature F2) is located on the east side of Hollibaugh Road and is a one and a half story front gable house with 6/6 windows, a four panel door, 4+ rooms, and an addition on the back or east side of structure (**Figure 132 and 133**). The farmhouse (Feature F2) has a rectangular floor plan that measures 36 feet by 18 feet, has composite and white horizontal wood siding, wide fascia board, and a rolled asphalt roof. The front door is accessed by way of a small wooden front porch that is in poor condition on the west face of the house and opens into a living room. Inside the main room is a curved stair case leading to the upper story (**Figure 132**). The upper story appears to have a finished interior. There is a lumber stamp reading "6-61" on the upper northwest corner of the south face of the house (**Figure 134**). At the time of abandonment, the house had electricity as evidenced by light fixtures and electrical appliances remaining in the structure. There are two outbuildings in the direct vicinity of the main farmhouse, a wood frame house that has been converted into a washing shed (Feature F1) 210 feet northeast and one side gable storage shed (Feature F3) 70 feet southwest. One 1953 Willys Overland pickup truck and several wagons are parked behind, or on the east side, the house (**Figure 135**).

The side gable storage shed (Feature F3) has a rectangular floor plan measuring 10 feet by 16 feet (**Figure 136**). Feature F3 has a wood frame construction, unpainted horizontal siding, a narrow door, and two small upper windows on the southern face. The side gable shed is adjacent and north of the orchard. The orchard



is rectangular in shape and measures 141 feet by 118 feet, and was planted directly north of the second farmhouse (Feature F4) (**Figure 137**).

The second farmhouse (Feature F4) is an unpainted, one story, side gable house in considerably poorer condition than the main farmhouse (**Figure 138**). The original floor plan was relatively square, measuring 25 feet by 32 feet. The front of the house (e.g. the eave line and door) faces the east toward the unpaved driveway and away from Hollibaugh Road (**Figure 139**). A sizeable side gable porch measuring 8 feet by 24 feet has been added to the front of the house, and is structurally unstable thus preventing entry. The horizontal wooden siding and wooden shingles are unpainted. The house contains 3+ rooms and a dirt crawl space used for storage (**Figure 140**). The crawl space is filled with abandoned furniture, including one chair, shelves, drawers, and a table. At the time of abandonment, the structure had electricity as evidenced by electrical outlets and light fixtures remaining in the structure. A wood paneled flatbed trailer is parked in the dirt road directly behind the house. One foundation and standing chicken coop gate (Feature F7) is located 62 feet northeast. There is one white side gable shed (Feature F5) 102 feet southeast of the farmhouse (Feature F4).

The white side gable shed (Feature F5) has a rectangular floor plan and measures 16 feet by 10 feet (**Figure 141**). The shed (Feature F5) has white painted horizontal wood siding, a wood plank roof, and a small door and small window on the south face of the structure. There is a small metal stock tank directly adjacent to the south face of the shed. The structure (Feature F5) may have been used for storage or as a livestock shelter. There is one red livestock shed (Feature F6) 189 feet east of the white side gable shed (Feature F5).

One animal shed (Feature F6) located 189 feet east of the white side gable shed is located within a network of fenced animal enclosures (**Figure 142**). The animal shed (Feature F6) has a rectangular floor plan, measures 20 feet by 12 feet, a wood frame construction, and was originally painted cherry red. The shed (Feature F6) has a wide, wood plank door on the east face of the structure. There are four squat windows on the south face of the structure and one window on the west face.

One remnant foundation (Feature F7) located 30 feet north of a standing chicken coop gate is located east of farmhouse (Feature F4) and measures approximately 23 feet by 23 feet (**Figure 143**). Foundation (Feature F7) appears razed and is in poor condition.

Two historic debris piles are located on the south side of the dirt road behind the farmhouses (Features F2 and F4) and chicken coop (Feature F7) (**Figure 144**). The debris piles contain scrap metal, wood remnants, tires, and other household and farm debris. The main debris pile is considerably larger and contains two Perfection cooking stoves. There are wagons, automobile and farm machinery, and household items scattered across the site area (**Figure 145**).

There is a dirt road that runs generally parallel to Hollibaugh Road behind the farmhouses (Features F2 and F4) and up the hill 253 feet to the south connecting this property with previously recorded site DW00-242 (B. Chapman House) (**Figure 153**). In addition to the structures and associated features and debris on the east side of Hollibaugh Road, there are two sheet metal grain silos and a large historic mechanical machinery debris scatter located on the west side of Hollibaugh Road that were recorded as part of historic homestead site 25DW00-243 (**Figure 146**). This large scatter measures 505 feet by 234 feet and covers an area of 1,335 square feet. Cultural materials consist of 50+ large farm implements and 50+ scrap metal parts and fragments. Diagnostic artifacts include a 1954 Ford flatbed truck with a 1976 Nebraska license plate (**Figure**



147), a 1951 Ford Victoria car (**Figure 148**), a Gleaner Baldwin Model "R" combine manufactured from 1929 to 1935 (**Figure 149**), a John Deere 2-row Lister corn planter first manufactured in 1928 and popular in the 1930s for erosion control (**Figure 150**) (William Lee, South Dakota State Agricultural Heritage Museum Exhibits/Restoration, personal communication 2011), a dump rake of unknown manufacture from the 1910s to 1920s (**Figure 151**) (William Lee, South Dakota State Agricultural Heritage Museum Exhibits/Restoration, personal communication 2011), and three early electric washing machines of unknown manufacture from the late 1920s to the early 1950s (**Figure 152**). Some debris has been washed down-slope into a steep large drainage to the north of the site area.

Historic homestead site 25DW00-243 was probably occupied from the late 1800s through the mid-1900s. This historic homestead consists of features and debris commonly recorded in the area, but the National Register criteria does not dismiss resources as insignificant simply because there are numerous examples of the type. National Register eligibility for any property, including historic period archeological sites, depends on integrity and significance. Integrity for a historic period archaeological site is based on the presence of features and whether or not they can tell us something about the location. Site 25DW00-243 is an early historic homestead with multiple features that are in poor physical condition but do retain integrity in that they are informative about early farming and ranching strategies in northwestern Nebraska. Significance was assessed following intensive survey and a historic records search that included a files search and architectural/structures property search conducted through the Nebraska SHPO; review of the National Register of Historic Places (NRHP) database for Dawes County, Nebraska; review of the National Historic Landmark inventory (NHL); review of General Land Office (GLO) Plats; and local literature review; that revealed sustained Euro-American historic occupation in this area occurred between 1890 to present day, and no leases or purchasers were found that can be associated with an important person or persons of "significance in history" or having an uncommon ethnic affiliation. Finally, the features associated with site 25DW00-243 lack a unique design and any other unusual physical characteristic. Therefore, site 25DW00-243 does not possess enough significance to qualify for the National Register. Site 25DW00-243 is a common historic site associated with historic and early modern ranching or farming activities in the region that ARCADIS recommends **not eligible for listing on the NRHP and no further work is necessary**. ARCADIS believes historic homestead site 25DW00-243 has numerous features with associated artifacts that could reveal more complex and in-depth temporal contexts and spatial extents to provide meaningful data that would address more important research questions and recommends Cameco Resources avoid all construction activities within 200 feet of the 25DW00-243 site boundary.





Figure 130. 25DW00-243, overview, facing southeast. Photograph taken by Ashley Howder on 12/05/101.



Figure 131. 25DW00-243, house (Feature F1), facing northeast. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 132. 25DW00-243, house (Feature F2), facing east. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 133. 25DW00-243, south face of main house (Feature F2) showing shed roof addition, 6/6 windows, siding, and asphalt roof, facing north. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 134. 25DW00-243, south face of main house (Feature F2) showing lumber stamp “6-61”, facing north. Photograph taken by Ashley Howder, on 12/05/2010.

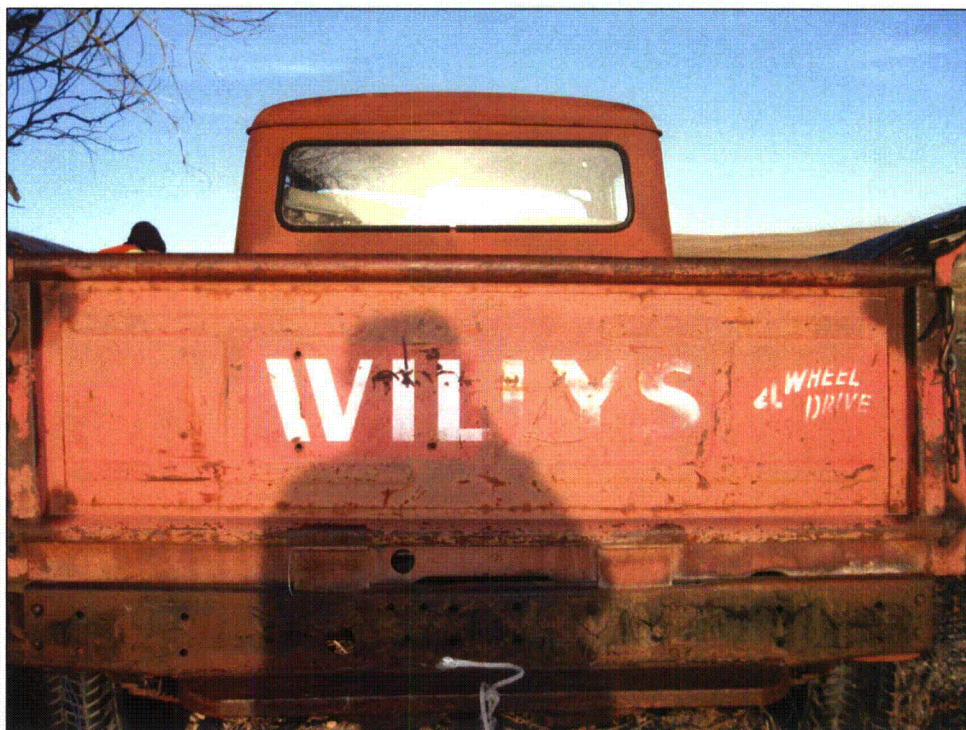


Figure 135. 25DW00-243, 1953 Willys Overland pickup truck, facing northeast. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 136. 25DW00-243, side gable shed (Feature 3) near main farm house, facing northwest. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 137. 25DW00-243, orchard, facing southeast. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 138. 25DW00-243, farmhouse (Feature F4) showing the north and west faces of the structure, facing southeast. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 139. 25DW00-243, farmhouse (Feature F4) showing front porch, facing northwest. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 140. 25DW00-243, crawl space beneath farmhouse (Feature F4), facing south. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 141. 25DW00-243, white side gable shed (Feature F5), facing northeast. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 142. 25DW00-243, animal shed (Feature F6) with fencing in background, facing southeast. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 143. 25DW00-243, chicken coop gate and foundation (Feature F7) with Feature F5 and Feature F4 in the background, facing west. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 144. 25DW00-243, main debris pile with Feature F2 in the background, facing west northwest. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 145. 25DW00-243, wagon with Feature F2 in the background, facing west northwest. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 146. 25DW00-243, silo and farm machinery, facing northwest. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 147. 25DW00-243, 1954 Ford flatbed truck with a 1976 Nebraska license plate. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 148. 25DW00-243, 1951 Ford Victoria car. Photograph taken by Ashley Howder, on 12/05/2010.

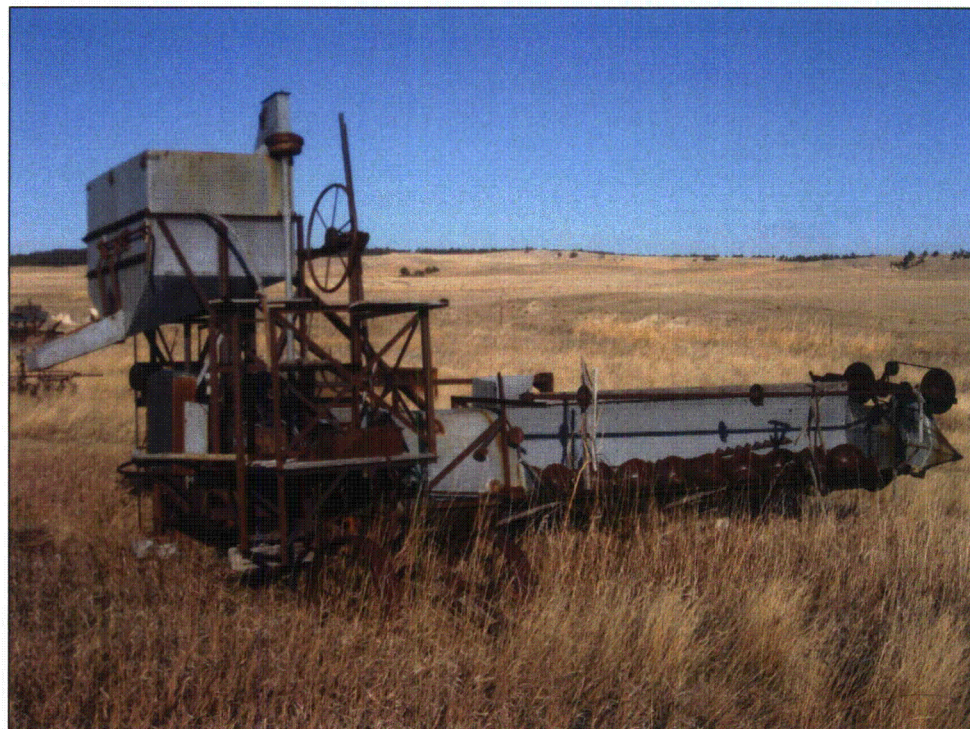


Figure 149. 25DW00-243, Gleaner Baldwin Model "R" combine. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 150. 25DW00-243, John Deere 2-row Lister corn planter. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 151. 25DW00-243, dump rake of unknown manufacture. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 152. 25DW00-243, early electric washing machines of unknown manufacture. Photograph taken by Ashley Howder, on 12/05/2010.



## 25DW00-242 (2368-S017)

Site 25DW00-242 is a historic home in Section 7 T29N R50W on Hollibaugh Road. The Nebraska State Historic Preservation Office, in cooperation with the Nebraska State Historical Society, completed a historic building inventory of Dawes County in 2005 that identified this property as the "B. Chapman House" built circa 1910.

ARCADIS revisited the property in 2010 and recorded one house (Feature F1), one cistern (Feature F2), and one storage shed (Feature F3) (**Figures 154 and 158**). The site measures 475 feet by 280 feet and covers an area of 105,290 square feet. Vegetation across the property consists of sparse to moderate mixed grasses affording a bare ground visibility that varied between 70 to 100 percent across the site area. Sediments consist of silt sandy loam. Impacts to the site include historic ranching and farming activities throughout the area and wind and water erosion. The site datum is a GPS point taken from the southeast corner of Feature F1.

The house (Feature F1) is a one-and-one-half story gable front and wing house with a compound floor plan (**Figure 154**). The exterior is stucco, with a modern asphalt shingle roof (**Figure 155**). The home appeared to be recently occupied, and closer examination without the homeowners' consent was considered too intrusive for this undertaking.

One concrete cistern (Feature F2) is located 50 feet north of the house and measures 9.5 feet east to west and 17.4 feet north to south, with a modern water tap and modern garden hoses (**Figure 156**). Two 250-gallon propane tanks are located between the cistern and the home (F1).

One wood paneled, asphalt shingled roof, storage shed (Feature F3) is located 191 feet southeast of the house and measures 12.2 feet east to west and 17.4 feet north to south (**Figure 157**).

Historic homestead site 25DW00-242 was probably inhabited from the early 1900s through present time, and appeared recently occupied. This historic homestead consists of features and debris commonly recorded in the area, but the National Register criteria does not dismiss resources as insignificant simply because there are numerous examples of the type. National Register eligibility for any property, including historic period archeological sites, depends on integrity and significance. Integrity for a historic period archaeological site is based on the presence of features and whether or not they can tell us something about the location. Site 25DW00-242 is an early historic homestead with multiple features that are in good physical condition and are informative about early farming and ranching strategies in northwestern Nebraska. Significance was assessed following intensive survey and a historic records search that included a files search and architectural/structures property search conducted through the Nebraska SHPO; review of the National Register of Historic Places (NRHP) database for Dawes County, Nebraska; review of the National Historic Landmark inventory (NHL); review of General Land Office (GLO) Plats; and local literature review; that revealed sustained Euro-American historic occupation in this area occurred between 1890 to present day, and no leases or purchasers were found that can be associated with an important person or persons of "significance in history" or having an uncommon ethnic affiliation. Finally, the features recorded at site 25DW00-242 lack a unique design and any other unusual physical characteristic. Therefore, site 25DW00-242 does not possess enough significance to qualify for the National Register. Site 25DW00-242 is a common historic site associated with historic and early modern ranching or farming activities in the region that ARCADIS recommends **not eligible for listing on the NRHP**. Due to the unknown occupancy



status of this homestead and good condition of features recorded at this site, ARCADIS recommends Cameco Resources avoid all construction activities within 200 feet of the 25DW00-242 site boundary.



Figure 154. 25DW00-242, south face of "B. Chapman House" (Feature F1), facing north. Photograph taken by Ashley Howder, on 12/05/2010.



Figure 155. 25DW00-242, cistern (Feature F2), facing north northwest. Photograph taken by Ashley Howder, on 12/05/2010.





Figure 156. 25DW00-242, shed (Feature F3), facing south southeast. Photograph taken by Ashley Howder on 12/05/2010.



### C. Isolated Finds Descriptions

Isolated resources recorded in the MEAUP consist of five historic isolated resources. The five historic isolated resources (2368-I004, 2368-I004, 2368-I011, 2368-I013, 2368-I019, 2368-I023) contain artifacts representing a pattern of early land utilization and ranching, dating from the Expansion period (1890-1919) through the WWII-era (1940-1946).

#### 2368-I004

Isolated resource 2368-I004 consists of one John Deere 2-row Lister corn planter and one John Deere disc harrow located in Section 19 T29N R50W located in an open field. Vegetation consists of a moderate to dense grass cover affording 50 to 75 percent bare ground visibility. The John Deere 2-row Lister corn planter dates to 1928 and was available in the John Deere General Catalog No. 6, page 144 (**Figure 158**) and. This model was popular during the 1930s and was used to control erosion. The John Deere disc harrow is most likely tractor-drawn and retains a "JD" manufacturer's mark (**Figure 159**). Impacts to the site include historic ranching and farming activities throughout the area, and wind and water erosion.



Figure 158. 2368-I004, John Deere 2-row Lister corn planter, facing south. Photograph taken by Adam Graves on 11/19/10.





Figure 159. 2368-I004, John Deere disc harrow, facing northwest. Photograph taken by Adam Graves on 11/19/10.

#### 2368-I007

Isolated resource 2368-I007 consists of historic debris located in Section 35 T30N R51W, at the head of an eroded ephemeral drainage that trends west-east. Vegetation consists of a dense ground cover affording 10 percent bare ground visibility. The historic debris consists of one the metal canister (**Figure 160**) and one crushed galvanized metal pail. Impacts to the isolate include historic ranching and farming activities throughout the area, grazing, and wind and water erosion.





Figure 160. 2368-I007, metal canister. Photograph taken by Adam Graves on 11/21/10.

#### 2368-I011

Isolated resource 2368-I011 consists of one International Harvester disc harrow located in Section 2 T29N R51W, on a level bench below a large northwest-southeast trending ridge. Vegetation consists of moderate to dense grass cover affording 50 to 75 percent bare ground visibility. Sediments consist of medium-brown clay loam intermixed with sandstone gravels of an unknown depth. The International Harvester disc harrow has metal discs, a metal hitch, and joined wooden parts (**Figure 161**). International Harvester manufactured this model, which was originally horse-drawn, from circa 1900 to 1945 (William Lee, South Dakota State Agricultural Heritage Museum Exhibits/Restoration, personal communication 2011). Impacts to the isolate include historic ranching and farming activities throughout the area, grazing, and wind and water erosion.





Figure 161. 2368-I011, International Harvester disc harrow, facing east. Photograph taken by Ashley Howder on 12/2/10.

#### 2368-I013

Isolated resource 2368-I013 is one historic International Harvester Canada rod weeder located in Section 1 T29N R51W, on the western edge of a large ridge above a broad drainage and west of a currently cultivated field. Vegetation consists of tall, dense grass affording 40 percent bare ground visibility. Sediments consist of sandy clay loam of unknown depth. The rod weeder is an all metal construction with a hitch (**Figure 162**) that retains an "IHC" manufacturer's mark (**Figure 163**). International Harvester Canada (IHC) was established in the early 1900s as the seat of Canadian operations for J.P. Morgan's International Harvester corporation established in 1902. IHC became a leading manufacturer of agricultural implements from the early- to mid-19<sup>th</sup> century and then of industrial construction equipment and vehicles into the mid-1980s. This model was originally horse-drawn and was most likely manufactured during the 1940s (William Lee, South Dakota State Agricultural Heritage Museum Exhibits/Restoration, personal communication 2011). Impacts to the isolate include historic ranching and farming activities throughout the area, grazing, and wind and water erosion.





Figure 162. 2368-I013, IHC rod weeder, facing south. Photograph taken by Ashley Howder on 12/4/10.



Figure 163. 2368-I013, "IHC" manufacturer's mark. Photograph taken by Ashley Howder on 12/4/10.



2368-I019

Isolated resource 2368-I019 consists of one McCormick-Deering No. 7 mower located in Section 12 T29N R51W, along a two-track road in a natural depression at the bottom of a south trending slope in rolling uplands. Vegetation consists of moderate to dense grass cover affording percent 20 to 60 percent bare ground visibility. Sediments consist of sandy loam intermixed with a few small gravels of unknown depth. This horse-drawn mower is of mixed wood and metal construction and retains the "McCormick-Deering No.7" manufacturer's mark (**Figures 164 and 165**). The McCormick-Deering No. 7 model was manufactured from 1929-1939 (William Lee, South Dakota State Agricultural Heritage Museum Exhibits/Restoration, personal communication 2011). Impacts to the isolate include historic ranching and farming activities throughout the area, grazing, and wind and water erosion.



Figure 164. 2368-I019, mower, facing west. Photograph taken by Ashley Howder on 12/6/10.





Figure 165. 2368-I019, "McCormick-Deering No. 7" manufacturer's mark. Photograph taken by Ashley Howder on 12/6/10.

#### 2368-I023

Isolated resource 2368-I023 is a large farm implement located in Section 7 T29N R50W, at the base of a north to south trending creek drainage. Vegetation consists of a moderate to dense grass cover affording 60 percent bare ground visibility. Sediments consist of sandy loam of unknown depth. Isolated resource 2368-I023 consists of a metal axle, two 10-spoke metal wheels, and attached wood remnants (**Figure 166**). Impacts to the isolate include historic ranching and farming activities throughout the area, grazing, and wind and water erosion.



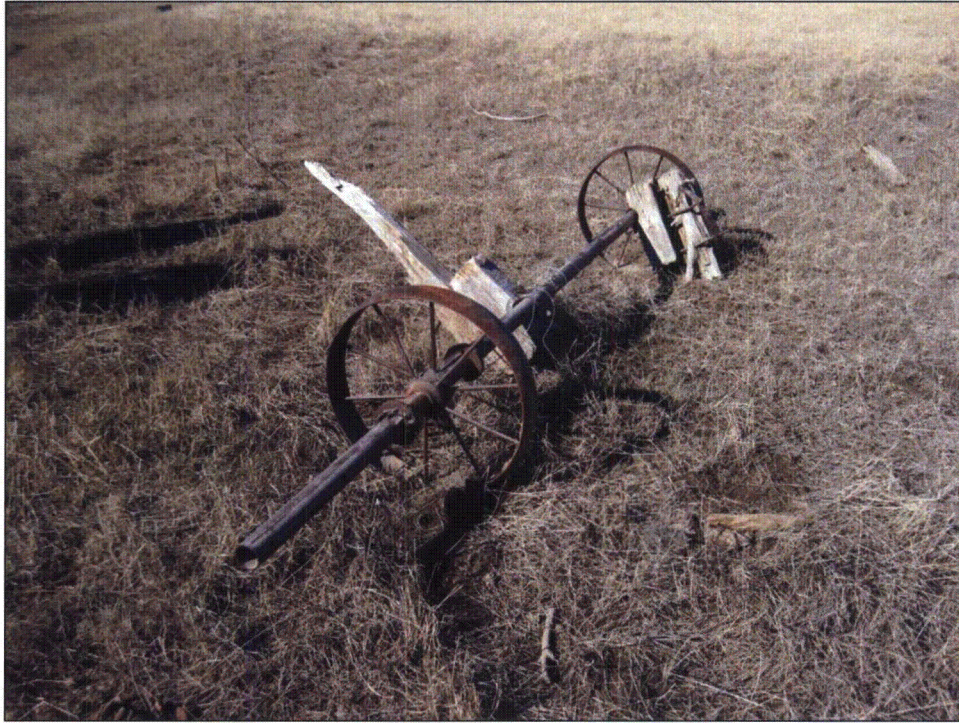


Figure 166. 2368-I023 Farm implement, facing northeast. Photograph taken by Ashley Howder on 2/17/11.

## IX. Conclusions/Summary

### A. Evaluations and Recommendations

#### 1. Comparison of Expected and Actual Results

Historic occupation throughout the MEAUP is not well documented. Based on the background research, ARCADIS anticipated discovering modern and historic trash debris or dumps, historic foundations and structures, and prehistoric lithic scatters or isolated finds situated sporadically across the MEAUP. ARCADIS recorded 15 newly discovered historic sites and five historic isolated finds within the project area. ARCADIS updated two previously recorded historic sites within the project area. No prehistoric cultural resources were observed in the MEAUP. The 17 historic sites assessed during this undertaking includes eight home/farmsteads (25DW00-242, 25DW00-243, 25DW359, 25DW360, 25DW361, 25DW365, 25DW366, 25DW370) three debris scatters (25DW357, 25DW363, 25DW369), two cisterns (25DW358, 25DW364), one corral (25DW367), one bridge (25DW362), one dugout (25DW368), and one quarry (25DW371).

Historic homestead site's 25DW00-242, 25DW00-243, 25DW360, 25DW361, 25DW365, and 25DW366, each contained multiple features and debris associated with a pattern of events representing early land utilization, farming, and ranching strategies spanning the Expansion period (1890-1919) through the World War II-era (1940-1946). Historic homestead site's 25DW359 and 25DW370, each contained at least one feature and debris associated with early land utilization, farming, and ranching strategies from the Expansion period (1890-1919) through the World War II-era (1940-1946), but appear to represent short-



term occupations. Dugout site 25DW368 did not have associated diagnostic artifacts, but also appears to represent a short-term occupation that probably occurred between 1890 and the early 1900s. Historic cistern site's 25DW358 and 25DW364, and corral site 25DW367, contain features associated with ranching activities probably constructed by the inhabitants of the numerous homesteads recorded in the project area representing early land utilization and ranching strategies spanning the Expansion period (1890-1919) through the World War II-era (1940-1946). The remaining sites include one bridge and one quarry that could not temporally defined but also represents common historic land utilization strategies in the area.

By 1878, most of the Native American tribes who once inhabited the Nebraskan panhandle had been moved to reservations. Sustained settlement in the region began in the 1880s after the passing of Pre-emption, the Homestead Act of 1862, and the arrival of the Chicago and Northwestern Railroad and Fremont, Elkhorn & Missouri Valley (FE&MV) Railroad to Chadron in 1885. These early settlers who came to northwestern Nebraska typically selected home sites where they could build their dwellings from wood and stone, but often constructed temporary dugouts as a way to quick shelter. The ranchers that settled the area found thousands of acres of unsettled open range and good sources of water in local rivers such as the Niobrara and White River inhabiting open range ranches that were little more than outposts with simply constructed shelters for man and beast alike. By 1910, Nebraskan ranchers switched from open range ranching to "ranch farming," which was a more labor intensive operation that centered on the ranch itself and the much increased use of mechanization. Dry conditions and increased competition for land made homesteading and ranching difficult in northwestern Nebraska, resulting in numerous short-lived occupations throughout the area. Nonetheless, farming and ranching remains an important element of the regional economy today. The 17 historic sites assessed by ARCADIS during this undertaking all represent a pattern of events representing early land utilization and farming and ranching strategies spanning the Expansion period (1890-1919) through the World War II-era (1940-1946).

## 2. Confidence

ARCADIS archaeologists are very confident that the objectives of the inventory were met and have established where in the project area there is potential for subsurface cultural deposits as well as established archaeological potential, chronological range, integrity, and complexity at all sites assessed by ARCADIS during this undertaking. This conclusion is based on excellent field conditions, knowledgeable crew, agency consultations, background research, and current inventory results.

The greatest potential for stable intact sediment deposits occurs in the southern portion of the project area (Sections 18 S½, 19, 20, 29, and 30 T29N R50W). Across this lowland agricultural area, ARCADIS observed no exposed sandstone bedrock, and the sporadic occurrence of weathered sandstone gravels intermixed with loam and sand. ARCADIS examined cultivated fields (providing excellent visibility), drainage and road cuts, animal mounds (which were numerous), and disturbance from erosion, agriculture, livestock, and historic occupation, that did not reveal buried cultural materials. The project area included a major ridge system and the surrounding, foothills, uplands, lowlands, and drainages as well as transitions between these settings, providing many opportunities to observe sediments and rule out the occurrence of subsurface archaeological deposits.

## 3. Further Work

ARCADIS recommends all sites in the MEAUP not eligible for listing on the NRHP, thus no further work such as monitoring construction activities is recommended. ARCADIS does recommend avoiding historic



homestead site's 25DW00-242 and 25DW00-243. Due to the unknown occupancy status of homestead site 25DW00-242 and good condition of features recorded at this site, ARCADIS recommends Cameco Resources avoid all construction activities within 200 feet of the 25DW00-242 site boundary. Historic homestead site 25DW00-243 had numerous features and associated artifacts that, with further research beyond the scope of this undertaking, would reveal more complex and in-depth temporal contexts and spatial extents to provide meaningful data that would address more important research questions. ARCADIS recommends Cameco Resources avoid all construction activities within 200 feet of the 25DW00-243 site boundary.

#### 4. Data Recovery

ARCADIS recommends all sites in the MEAUP not eligible for listing on the NRHP, thus additional data recovery through excavation is not recommended. ARCADIS believes historic homestead site 25DW242 has features and artifacts that if fully examined would provide meaningful data that would address more important research questions.

Given these results and management practices, ARCADIS recommends a finding of **no adverse affect to historic properties** for construction of the proposed Cameco Resources Marsland Expansion Area Uranium Project. In the event that cultural resources are encountered during construction activities, work should be halted immediately. Archaeologists at the Nebraska State Historical Society and Nebraska State Historic Preservation Office must be notified and consulted before construction continues.



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ARCADIS

**XII. Attachment A**

Nebraska Archeological Site Survey Form



ARCADIS

**XII. Attachment B**

Personnel Vitas



## CURRICULUM VITAE

### Natalie J. Graves

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## I. EDUCATION

### Degrees

2006	M.A.	University of Oklahoma, Norman Thesis title, <i>Specialized Subsistence Economy at the Crandall Site (14RC420), A Little River Focus Site in Rice County, Kansas</i>	Anthropology
1999	B.A.	Boise State University, Boise, Idaho	Anthropology

### Grants

- 2004 Graduate Student Senate Conference Grant
- 2002 Graduate Student Senate Conference Grant
- 2000 Graduate Student Senate Conference Grant
- 2000 Graduate Student Senate Conference Grant
- 2000 Oklahoma Archeological Survey Conference Grant

## II. CURRENT EMPLOYMENT

09/09/06 to present    ARCADIS U.S., Inc.  
Serving as U.S. Cultural Resources Department Task Manager and Principal Investigator for an international company with more than 18,000 employees and more than \$3 billion in gross revenue.

## III. PROFESSIONAL EXPERIENCE

01/2007 to Present    Register of Professional Archaeologist - # 16255

### Permits Held (current)

Field Supervisor- BLM Lands Idaho-Upper Snake Field Office, Idaho Falls District, CRUP-ID # 36897

Field Supervisor- BLM Lands Idaho-Cottonwood Field Office, Coeur D'Alene District, CRUP-ID # 36830

Field Director Idaho National Laboratory Cultural Resource Investigations Permit

Principal Investigator - BLM Lands Wyoming

Principal Investigator - State Lands Wyoming



Principal Investigator - BLM Lands Colorado  
Principal Investigator - State Lands Colorado  
Project Director - USFS Region 2  
Principal Investigator - State Lands Oklahoma  
Field Supervisor - BLM North Dakota  
Principal Investigator - State North Dakota  
Field Supervisor - BLM Montana  
Field Supervisor - BLM South Dakota

## Technical Experience

### Colorado

08/09 to present	ARCADIS U.S., Inc. Doe Canyon East Federal Wells (Bill Barrett). Field Technician, coordinating crews (3 people) for approximately 47 acres of well and access construction. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. San Miguel County, Paradox Basin, Colorado.
08/09 to present	ARCADIS U.S., Inc. Medinah Federal Wells (Bill Barrett). Field Technician, coordinating crews (3 people) for approximately 24 acres of well and access construction. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. San Miguel County, Paradox Basin, Colorado.
08/09 to present	ARCADIS U.S., Inc. Torrey Pines Federal Wells (Bill Barrett). Field Technician, coordinating crews (3 people) for approximately 23.5 acres of well and access construction. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. San Miguel County, Paradox Basin, Colorado.
08/09 to 09/09	ARCADIS U.S., Inc. Grand Junction Airport Loop Pipeline (Public Service Co.). Field Technician, coordinating crews (2 people) for approximately 15 miles of well and access construction. Tasks included pre-field coordination, records check, survey, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: historic. Mesa County, Colorado.
11/08 to 02/09	ARCADIS U.S., Inc. Doe Canyon 3D Seismic (Bill Barrett). Field Technician, coordinating crews for approximately 2,730 acres of seismic exploration. Tasks included pre-field coordination, records check, survey, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Early Archaic San Pedro Middle Archaic, San Jose Middle Archaic, Late Archaic, Late Prehistoric, Basketmaker III, Pueblo II and III. Dolores County, Paradox Basin, Colorado.



## Idaho

10/2010 to present

ARCADIS U.S. Inc., Antelope to Goshen Transmission Line Maintenance Project Class III Cultural Resource Inventory in Shoshone County, Idaho (Rocky Mountain Power).

Field Director. Tasks included pre-field coordination, records check, survey, report preparation (Principal Author), management recommendations, follow-up, and quality assurance. Bingham and Butte Counties, Idaho.

5/2010 to present

ARCADIS U.S. Inc., Wallace Yard Site, Class III Cultural Resource Inventory in Shoshone County, Idaho (Union Pacific Railroad Company).

Field Supervisor. Tasks included pre-field coordination, records check, survey, report preparation (Principal Author), management recommendations, follow-up, and quality assurance. Consultation with Coeur D'Alene Tribe. Cultural resources encountered: historic period. Shoshone County, Idaho

5/2010 to present

ARCADIS U.S. Inc., Spur Lines Project, Class III Cultural Resource Inventory in Shoshone County, Idaho (Union Pacific Railroad Company).

Field Supervisor. Tasks included pre-field coordination, records check, survey, report preparation (Principal Author), management recommendations, follow-up, and quality assurance. Consultation with Coeur D'Alene Tribe. Cultural resources encountered: historic period. Shoshone County, Idaho

2/2009 to present

ARCADIS U.S., Inc. St. Maries Creosote Site Remediation, St. Maries, Idaho Historic Property Treatment Plan and Class I Report.

Co-Principal Investigator. Tasks included records check, historic research, report preparation, management recommendations, and quality assurance. Consultation with Coeur D'Alene Tribe. Cultural resources encountered: prehistoric village period and historic period. Benewah County, Idaho.

10/09 to  
1/10

ARCADIS U.S., Inc. Agrium Drilling (Agrium Conda Phosphate Ops.).

Co-Crew Chief, coordinating crews (5 people), supervising crews for approximately 3,800 acres of drilling development. Tasks included pre-field coordination, records check, survey, and quality assurance. Cultural resources encountered: two new historic sites and two isolated finds. Caribou County, Idaho.

10/09

ARCADIS U.S., Inc. P4 Production LLC (Monsanto Blackfoot Bridge Mine)

Field Crew for approximately 218 acres of block inventory. Tasks included pre-field coordination, survey, and quality assurance. Cultural resources encountered: 3 updated prehistoric and historic sites, including limited testing (1- 1m x1m test unit). Site types encountered include lithic scatters of unknown temporal association and one historic building foundation. Caribou County, Idaho.

8/98

Boise National Forest, Passport in Time, Heritage Program. Trinity Lakes Survey.



Volunteer Field Archaeologist. Pedestrian survey for seven days around the Trinity Lakes. Boise National Forest, Idaho.

- 6/98 Boise National Forest, Passport in Time, Heritage Program. Excavation at the Moores Spring site.  
Volunteer Field Archaeologist-seven days. Excavated a prehistoric camp site to learn excavation techniques and recording methods, identified cultural remains, and catalogued and analyzed artifacts in the field. Boise National Forest, Idaho.
- 8/97 to 5/99 Boise State University. McGraw Creek Site Analyses.  
Research Assistant. Analyzed and catalogued artifacts recovered by Idaho State University's Archaeological Field School conducted at the McGraw Creek site. McGraw Creek, Idaho.
- 1/97 to 5/97 Idaho State Historic Preservation Office. Records Maintenance.  
Internship, data entry cataloging and recording artifact descriptions into the Idaho State Historic Preservation Office database. Boise, Idaho.

#### **Montana**

- 05/09 to 05/09 ARCADIS U.S., Inc. Cottonwood 3D Seismic (NFR Energy).  
Field Supervisor, for approximately 10 miles of linear seismic exploration. Tasks included pre-field coordination, records check, report preparation, follow-up, and quality assurance. Cultural resources encountered unknown prehistoric stone circles. Hill County, Montana.
- 01/08 to 12/09 ARCADIS U.S., Inc. East Helena Smelter Demolition (ASARCO).  
Field Supervisor, for historic photo-documentation. Tasks included records check, historic research, report preparation, management recommendations, and quality assurance. Cultural resources encountered: historic period. Lewis and Clark County, Montana.

#### **Nebraska**

- 10/10 to present ARCADIS U.S., Inc. Marsland Uranium Mine (Cameco Resources).  
Principal Investigator and Field Director for 4,500 acre cultural resource inventory. Tasks included pre-field coordination, records check, survey, report preparation (Principal Author), management recommendations, follow-up, and quality assurance. Dawes County, Nebraska.

#### **Oklahoma (selected projects)**

- 03/10 to present ARCADIS U.S., Inc. Goodwell Wind Farm (Duke Energy).  
Principal Investigator, Due Diligence Phase I, development of transmission line and wind turbines project. Tasks included records check, report preparation (Co-Author), management recommendations, follow-up, and quality assurance. Texas County, Oklahoma and Hansford and Sherman Counties, Texas.



- 11/07      ARCADIS U.S., Inc. Foss Reservoir 3-D Seismic (Global Geophysical Services).  
Principal Investigator, coordinating crews (10 people) for survey of approximately 7,000 acres of linear seismic exploration. Tasks included pre-field coordination, records check, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered unknown prehistoric, historic dugouts. Custer County, Oklahoma.
- 09/07 to      ARCADIS U.S., Inc. Taloga Wind Farm (Edison Mission).  
12/09      Principal Investigator, coordinating crews (10 people) for survey of approximately 766 acres of transmission line and wind farm development. Tasks included pre-field coordination, records check, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered unknown prehistoric, historic farmsteads. Dewey County, Oklahoma.
- 7/06      Cojeen Archaeological Services. Terracon, Inc.  
Field Director, for pedestrian survey in Beaver and Cimarron Counties. Tasks included pre-field coordination, records check, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Beaver and Cimarron Counties, Oklahoma.
- 6/06      Cojeen Archaeological Services. Chesapeake Operating, Inc.  
Field Director for small-scale cultural resources monitoring of one federal well and access road. Tasks included planning logistics for 100% survey and heavy equipment soil removal, fieldwork, and report preparation (Contributing Author). Cultural resources encountered: none. Woods and Major County, Oklahoma.
- 2/06 to 6/06      Cojeen Archaeological Services. Samson 3-D seismic survey.  
Crew Chief supervising 14 other archaeologists for 25 square mile project on USFS land. Planned logistics for 100% survey and shovel testing with 15 meter spaced transects, supervised fieldwork, analyzed results, and made recommendations for NRHP inclusion in final report. Cultural resources encountered: Middle and Late Archaic, Woodland, and Late Prehistoric Complexes; Historic homesteads/farmsteads. Roger Mills County, Oklahoma.
- 1/06      Cojeen Archaeological Services. Delaware Casino.  
Served as Field Director for pedestrian survey in Lincoln County. Tasks included planning logistics for 100% survey and shovel testing, supervising fieldwork, and report preparation (Contributing Author). Cultural resources encountered: none. Lincoln County, Oklahoma.
- 1/06      Cojeen Archaeological Services. Chickasaw Hospital.  
Served as Field Director for pedestrian survey in Pontotoc County. Tasks included planning logistics for 100% survey and shovel testing, supervising fieldwork, and report preparation (Contributing Author). Cultural resources encountered: Unknown prehistoric lithic scatters. Pontotoc County, Oklahoma.



- 10/05 Cojeen Archaeological Services. Frontline GeoServices Proposed Woods Creek 2D Seismic Line.  
Field Technician for 10 miles of linear survey and shovel testing on USFS land. Tasks included survey and testing. Cultural resources encountered: Unknown Prehistoric lithic scatters and burned rock features. LeFlore County, Oklahoma.
- 9/05 Benham Companies Incorporated. City of Ardmore Water System Improvements. Crew Chief for survey and shovel testing one square mile project. Tasks included budget estimates, planning logistics, making NRHP recommendations, and report preparation (Contributing Author). Cultural resources encountered: None. Carter County, Oklahoma.
- 6/05 to 7/05 University of Oklahoma. Excavation at Certain Site.  
Crew Chief supervising eight crewmembers. Excavated features, collected samples, prepared site map, and supervised fieldwork. Cultural resources encountered: Middle and Late Archaic Complexes. Beckham County, Oklahoma.
- 3/05 to 4/05 Gonzalez, Tate, and Iruegas, Inc., Testing of Five Archaeological Sites at Camp Gruber, Oklahoma.  
Served as Crew Chief supervising three crewmembers for Phase II testing of multiple prehistoric and historic sites to assess their significance for National Register status. Cultural resources encountered: Woodland and Late Prehistoric Complexes and Historic homesteads/farmsteads. Muskogee County, Oklahoma.
- 11/04 Lopez Garcia Group. Camp Gruber, Oklahoma.  
Field Technician for pedestrian survey and shovel testing at Camp Gruber. Cultural resources encountered: Unknown prehistoric lithic scatters and historic homesteads/farmsteads. Muskogee County, Oklahoma.
- 9/04 University of Oklahoma. Excavation at Rattlesnake Slough site.  
Graduate Assistant. Excavated features, collected samples, and prepared a site map. Cultural resources encountered: Late Paleo-Indian Complex. Greer County, Oklahoma.
- 8/04 Cojeen Archaeological Services. Archeological Testing at Archeological Site 34GR197.  
Field Technician for site testing. Tasks included excavating features, collecting samples, and analyzing results. Cultural resources encountered: Unknown Prehistoric lithic scatters. Greer County, Oklahoma.
- 6/04 to 7/04 University of Oklahoma. Excavation of Jake Bluff site.  
Crew Chief supervising 12 crewmembers. Excavated features, collected samples, prepared site map, supervised fieldwork, and analyzed results. Cultural resources encountered: Folsom and Clovis Complexes. Harper County, Oklahoma.
- 11/02 to 8/03 Archeological and Environmental Consultants, L.L.C..



Lab Director responsible for cataloging hundreds of prehistoric and historic artifacts excavated from multiple sites located in southwestern Arkansas and southeastern Oklahoma. Archeological and Environmental Consultants, L.L.C., Austin, Texas.

- 9/03 to 10/03 University of Oklahoma. Phase II Testing at Four Sites in Harper County. Graduate Assistant. Excavated features, collected samples, prepared site maps, and analyzed results. Cultural resources encountered: Two Archaic camp sites, One Woodland camp site, and One Plains Village Complex site. Harper County, Oklahoma.
- 6/03 to 7/03 University of Oklahoma. Excavation of Jake Bluff and Certain Sites. Field Technician. Excavated features, collected samples, prepared site map, and analyzed results. Cultural resources encountered: Archaic, Folsom and Clovis Complexes. Harper and Beckham Counties, Oklahoma.
- 3/03 to 5/03 University of Oklahoma. Hale Site Analysis. Graduate Assistant. Analyzed the faunal materials from the Hale Historic Bison Kill site. Texas County, Oklahoma.
- 10/02 to 1/06 Oklahoma Department of Transportation (ODOT). Served as Archaeologist I for hundreds of pedestrian surveys and archaeological excavations across Oklahoma. Section 106 and NEPA training seminars. Assisted in planning logistics for 100% survey and shovel testing, supervised fieldwork, and conducted Phase II testing. Cultural resources encountered: Middle and Late Archaic, Woodland, Late Prehistoric, and Plains Village Complexes; and Historic homesteads/farmsteads. Oklahoma Department of Transportation, Oklahoma Archeological Survey; Norman, Oklahoma.
- 7/02 University of Oklahoma. Excavation at Jake Bluff site and Certain site. Graduate Assistant. Excavated features, collected samples, prepared site map, and supervised fieldwork. Cultural resources encountered: Archaic, Folsom, and Clovis Complexes. Harper and Beckham Counties, Oklahoma.
- 1/02 University of Oklahoma. Cache Creek Burial. Graduate Assistant. Helped locate and excavate a human and dog burial found eroding from a cut-bank along Cache Creek. Cultural resources encountered: Late Archaic complex. Cotton County, Oklahoma.
- 6/00 to 8/02 University of Oklahoma. Community Assistant Program Graduate Assistant. Tasks included determining cultural resource potential for projects submitted to the State Archaeologist for Section 106 review, pedestrian survey and shovel testing small city and state projects across Oklahoma. Cultural resources encountered: Archaic, Woodland, Late Prehistoric, and Plains Village Complexes; and Historic homestead/ farmsteads. Oklahoma Archeological Survey, Norman, Oklahoma.
- 6/01 to 7/01 University of Oklahoma. Excavation of Jake Bluff site.



Graduate Assistant. Excavated features, collected samples, prepared site map, and analyzed results. Cultural resources encountered: Folsom Complex. Harper County, Oklahoma.

5/01 University of Oklahoma. Excavation at Hale Site.  
Graduate Assistant. Excavated features, collected samples, and prepared site map. Cultural resources encountered: Historic buffalo traders camp. Harper County, Oklahoma.

8/00 University of Oklahoma. Excavation at Odessa Yates site.  
Crew Chief supervising 20-25 crew members for excavation. Excavated features, collected samples, prepared site map, and submitted descriptions of materials collected. Cultural resources encountered: Plains Village Complex. Beaver County, Oklahoma.

6/00 to 7/00 University of Oklahoma. Excavation of Certain Site.  
Field Technician. Excavated features, collected samples, prepared site map, and analyzed results. Cultural resources encountered: Middle and Late Archaic Complexes. Beckham County, Oklahoma.

10/99 to 7/00 University of Oklahoma. Oklahoma Archeological Survey Laboratory.  
Laboratory Assistant. Identified and catalogued archaeological materials from archaeological sites representing all time periods from sites found across Oklahoma. Norman, Oklahoma.

8/99 to 2/00 Cojeen Archaeological Services. Mitigation at the Duke Site.  
Field Technician for Phase II site testing at the Duke Site. Cultural resources encountered: pit houses, hearths, human remains, lithics, animal bone, and pottery at a Wichita Village. McClain County, Oklahoma.

8/99 to 12/99 University of Oklahoma. Chisholm Trail Museum.  
Graduate Assistant. Along with two other graduate students, we analyzed over three thousand prehistoric cultural artifacts to be displayed in a museum exhibit that we designed and built for the City of Kingfisher. Kingfisher, Oklahoma.

## Texas

03/10 to present ARCADIS U.S., Inc. Goodwell Wind Farm (Duke Energy).  
Principal Investigator, Due Diligence Cultural and Historical Review for development of transmission line and wind turbines project. Tasks included records check, report preparation (Co-Author), management recommendations, follow-up, and quality assurance. Texas County, Oklahoma and Hansford and Sherman Counties, Texas.

7/05 to 9/05 Cojeen Archaeological Services. Archeological Survey of the Cholla Petroleum, Inc. Proposed PK Under The Hill # 2 and # 3 Wells and Access.



Crew Chief for survey and shovel testing well pads and access road (20 acres of block survey). Planned logistics, survey, testing, recommendations for NRHP inclusion, and report preparation (Contributing Author). Cultural resources encountered: None. Palo Pinto County, Texas.

7/05 Gonzalez, Tate, and Iruegas, Inc. Testing at Six Archaeological Sites in Maverick County, Texas.  
Field Technician for Phase II testing of multiple prehistoric sites to assess their significance for National Register status. Cultural Resources encountered: Paleo-Indian and Archaic camp and quarry sites. Maverick County, Texas

## Utah

09/07 to 01/09 ARCADIS U.S., Inc. Utah Transmission Lines (PacifiCorp).  
Crew Chief, coordinating crews (5 to 15 people for approximately 400 miles of transmission line for vegetation management. Tasks included pre-field coordination, records check, lab analysis, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: historic irrigation ditches, historic roads and trails, historic debris, rock art, house pits, Emery Gray pottery (Fremont), thermal features, manos/metates, Early Archaic projectile points, Late Archaic projectile points, Anasazi. Juab, Carbon, Emery, Sevier, Piute, Garfield, Iron, Washington, and San Juan Counties, Utah.

## Wyoming

09/2010 to present ARCADIS U.S., Inc. True Oil Federal Wells  
Principal Investigator, coordinating crew (3 people), supervising crews for approximately 100 acres for one conventional wells. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Principal Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Late Archaic-Late Prehistoric Period, Expansion Period Historic-World War II Period. Natrona County, Powder River Basin, Wyoming

09/2010 to present ARCADIS U.S., Inc. Footer Replacement Project (PacifiCorp).  
Principal Investigator, coordinating crew (1 person), supervising crew for approximately 10 acres of anchor replacement construction. Tasks included pre-field coordination, records check, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Historic-Expansion Period trails. Lincoln County, Overthrust Belt, Wyoming.

08/10 to present ARCADIS U.S., Inc. Thunder Basin Coal Company.  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 3,000 acres of scoria mine project. Tasks included pre-field coordination, records check, survey, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Historic Period cairns, inscriptions, homestead and Late Archaic to Late Prehistoric stone circle sites, cairns, and lithic scatters. Campbell County, Powder River Basin, Wyoming.



05/2010 to present	<p>ARCADIS U.S., Inc. Trend Exploration I, LLC. Principal Investigator, coordinating crew (1 person), supervising crews for approximately 103 acres for seven coal bed methane wells. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Unknown Prehistoric Period. Campbell County, Powder River Basin, Wyoming</p>
05/2010 to present	<p>ARCADIS U.S., Inc. True Oil Federal Wells Principal Investigator, coordinating crew (1 person), supervising crews for approximately 100 acres for two conventional wells. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic-World War II Period. Crook and Campbell Counties, Powder River Basin, Wyoming</p>
04/2010 to present	<p>ARCADIS U.S., Inc. True Oil Federal Well Principal Investigator, coordinating crew (1 person), supervising crews for approximately 40 acres for one conventional well. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic-World War II Period. Crook County, Powder River Basin, Wyoming.</p>
04/2010 to present	<p>ARCADIS U.S., Inc. True Oil Federal Well Principal Investigator, coordinating crew (1 person), supervising crews for approximately 60 acres for one conventional well. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Campbell County, Powder River Basin, Wyoming.</p>
03/2010 to present	<p>ARCADIS U.S., Inc. True Oil Federal Well Principal Investigator, coordinating crew (1 person), supervising crews for approximately 57 acres for one conventional well. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Crook County, Powder River Basin, Wyoming.</p>
03/2010 to present	<p>ARCADIS U.S., Inc. Trend Exploration I Well. Principal Investigator, coordinating crew (1 person), supervising crews for approximately 20 acres for one coal bed methane well. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Campbell County, Powder River Basin, Wyoming.</p>



- 11/09 to 3/2009      ARCADIS U.S., Inc. Hartzog Draw POD (Williams).  
Principal Investigator, coordinating crews (3 people), supervising crews for approximately 1,253 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.
- 09/09 to 10/09      ARCADIS U.S., Inc. Anchor Replacement Project (PacifiCorp).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 30 acres of anchor replacement construction. Tasks included pre-field coordination, records check, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Late Prehistoric, Archaic. Lincoln County, Overthrust Belt, Wyoming.
- 09/09 to present      ARCADIS U.S., Inc. Rock Springs Road Transmission Line (PacifiCorp).  
Principal Investigator, coordinating crews (5 people), supervising crews for approximately 60 miles of transmission line right-of-way. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic (trails, debris), Late Prehistoric, Archaic. Sweetwater and Fremont Counties, Wyoming Basin, Wyoming.
- 04/09 to present      ARCADIS U.S., Inc. Jonah 3D Seismic (Global Geophysical Services).  
Principal Investigator, coordinating crews (5 to 10 people), supervising crews for approximately 14,400 acres of seismic exploration. Tasks included pre-field coordination, records check, survey, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Archaic, Late Paleoindian. Sublette County, Upper Green River Basin, Wyoming.
- 03/09 to present      ARCADIS U.S., Inc. Pumpkin Buttes I POD (Williams).  
Principal Investigator, coordinating crews (3 to 7 people), supervising crews for approximately 2,560 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic, Paleoindian. Campbell County, Powder River Basin, Wyoming.
- 10/08 to present      ARCADIS U.S., Inc. Wormwood II POD (Williams).  
Principal Investigator, coordinating crews (3 to 7 people), supervising crews for approximately 3,120 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.



- 08/08 to present      ARCADIS U.S., Inc. Trend Exploration I Wells.  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 11 wells and associated access. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.
- 08/08 to present      ARCADIS U.S., Inc. Table Mountain II and III PODs (Anadarko).  
Principal Investigator coordinating crews (3 to 15 people), supervising crews for approximately 25,800 acres of coal bed methane plans of development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered to date: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Johnson and Campbell Counties, Powder River Basin, Wyoming.
- 08/08 to present      ARCADIS U.S., Inc. Dry Willow III, IV, V PODs (Anadarko).  
Principal Investigator supervising crews (6 to 15 people) for natural gas well pads, pipelines, and access roads (20 section block survey). Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered to date: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Campbell County, Powder River Basin, Wyoming.
- 05/09      ARCADIS U.S., Inc. Grady 36 Pipeline right-of-way (Resolute).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 640 acres of coal bed methane development. Tasks included pre-field coordination, records check, survey, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.
- 05/09      ARCADIS U.S., Inc. True Oil Federal Wells.  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 30 acres of coal bed methane development. Tasks included pre-field coordination, records check, survey, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.
- 02/09 to 04/09      ARCADIS U.S., Inc. Thunder Basin Coal Mine.  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 2,400 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Senior Author), management recommendations, follow-up, and quality assurance.



Cultural resources encountered: Historic Period, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.

- 02/09 to 04/09      ARCADIS U.S., Inc. Brinkerhoff Federal POD (Marathon).  
Principal Investigator. Tasks included pre-field coordination, records check, report preparation (Contributing Author), and quality assurance. Cultural resources encountered: unknown prehistoric. Sheridan County, Powder River Basin, Wyoming.
- 02/09      ARCADIS U.S., Inc. Permit to Mine Willow Creek Area (Black Hills Bentonite).  
Principal Investigator. Tasks included pre-field coordination, records check, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Johnson County, Powder River Basin, Wyoming.
- 02/09      ARCADIS U.S., Inc. Termo Federal Well.  
Principal Investigator. Tasks included pre-field coordination, records check, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Campbell County, Powder River Basin, Wyoming.
- 01/09      ARCADIS U.S., Inc. Burgess 13 Federal POD (Marathon).  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 25 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. Sheridan County, Powder River Basin, Wyoming.
- 09/08 to 01/09      ARCADIS U.S., Inc. Cedar Draw Unit III POD (Williams).  
Principal Investigator, coordinating crews (3 to 10 people), supervising crews for approximately 3,315 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Campbell County, Powder River Basin, Wyoming.
- 09/08 to 12/08      ARCADIS U.S., Inc. Bridger Butte Guyed Wire (Mountain Wind).  
Principal Investigator. Tasks included records check, report preparation, quality assurance. Cultural resources encountered: none. Uinta County, Wyoming.
- 06/08 to 10/08      ARCADIS U.S., Inc. True Oil Federal Wells.  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 100 acres of coal bed methane development. Tasks included pre-field coordination, records check, survey, testing, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.



06/08 to 07/08	ARCADIS U.S., Inc. True Oil Federal Wells. Crew Chief, coordinating crews (3 to 5 people), crews for approximately 40 acres of coal bed methane development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Contributing Author), management recommendations, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.
06/08	ARCADIS U.S., Inc. Meier Siding Project (Union Pacific). Crew Chief, coordinating crews (2 people), for approximately 27 acres of mine development. Tasks included pre-field coordination, records check, follow-up, and quality assurance. Cultural resources encountered: none. Goshen County, Goshen Hole, Wyoming.
05/08	ARCADIS U.S., Inc. Leonardite Drilling Project (Black Hills Bentonite). Crew Chief, coordinating crews (2 people), for 27 acres of mine development. Tasks included pre-field coordination, records check, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. Converse County, Powder River Basin, Wyoming.
05/08 to 06/08	ARCADIS U.S., Inc. Painted Hills Unit (Anadarko). Crew Chief, for approximately 20 acres of coal bed methane plan of development. Tasks included setting records check, report preparation, and quality assurance. Cultural resources encountered: none. Fremont County, Wind River Basin, Wyoming.
03/08 to 10/09	ARCADIS U.S., Inc. Kingwood III POD (Williams). Crew Chief, coordinating crews (3 to 10 people), supervising crews for approximately 4,354 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic. Campbell County, Powder River Basin, Wyoming.
03/08 to 09/08	ARCADIS U.S., Inc. 12 Mile Ranch Wind Farm (PacifiCorp). Crew Chief, for approximately 60 acres of wind farm development. Tasks included records check, report preparation, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Albany County, Northern Laramie Structural Basin, Wyoming.
12/07to 01/08	ARCADIS U.S., Inc. Pine Gulch (Anadarko). Crew Chief, cultural resource monitoring for well and access development. Tasks included records check, report preparation (Contributing Author), follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. Converse County, Powder River Basin, Wyoming.
11/07to	ARCADIS U.S., Inc. Salt Creek VI POD (Anadarko).



- 12/07 Crew Chief, coordinating crews (2 people) for survey of approximately 10 acres and testing for well and access development. Tasks included pre-field coordination, records check, report preparation (Contributing Author), management recommendations, and quality assurance. Cultural resources encountered: unknown prehistoric. Natrona County, Powder River Basin, Wyoming.
- 08/07 to 06/08 ARCADIS U.S., Inc. JAB Uranium Exploration (Uranium One).  
Crew Chief for cultural resource survey and testing for uranium development. Tasks included pre-field coordination, records check, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Paleoindian, Late Archaic, Late Prehistoric. Sweetwater County, Great Divide Basin, Wyoming.
- 08/07 ARCADIS U.S., Inc. Bass-Kurth Access and Water right-of-way (Black Diamond)  
Crew Chief, supervising crews for approximately 15 acres of pipeline. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation, and quality assurance. Cultural resources encountered: Expansion Period Historic trails. Johnson County, Powder River Basin, Wyoming.
- 07/07 to 10/09 ARCADIS U.S., Inc. West Bear POD (Williams).  
Crew Chief, coordinating crews (3 to 7 people), supervising crews for approximately 3,400 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, report preparation (Contributing Author), management recommendations, and quality assurance. Cultural resources encountered: Late Prehistoric lithic scatters. Johnson County, Powder River Basin, Wyoming.
- 07/07 to 10/07 ARCADIS U.S., Inc. Wormwood III POD (Williams).  
Crew Chief, coordinating crews (3 to 11 people), supervising crews for approximately 1,400 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.
- 07/07 to 09/07 ARCADIS U.S., Inc. Kingsbury IV POD (Williams).  
Crew Chief, coordinating crews (3 to 11 people), supervising crews for approximately 3,800 acres of coal bed methane plan of development. Tasks included pre-field coordination, records check, survey, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.
- 05/07 to 06/07 ARCADIS U.S., Inc. Red Point 3D Seismic (Bill Barrett).  
Crew Chief, coordinating crews (6 people), supervising crews for approximately 3,127 acres of seismic exploration. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered:

Goshen, unknown cairns, Expansion Period Historic. Park County, Bighorn Basin, Wyoming.

05/07 to 07/08      ARCADIS U.S., Inc. Table Mountain II, III, IV PODs (Anadarko).  
Crew Chief supervising crews (3 to 15 people) for approximately 25,800 acres of coal bed methane plans of development. Tasks included pre-field coordination, survey, testing, lab analysis, report preparation (Contributing Author). Cultural resources encountered to date: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Johnson and Campbell Counties, Powder River Basin, Wyoming.

05/07 to 07/08      ARCADIS U.S., Inc. Dry Willow IV, V PODs (Anadarko).  
Crew Chief supervising crews (6 to 15 people) for natural gas well pads, pipelines, and access roads (20 section block survey). Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered to date: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Campbell County, Powder River Basin, Wyoming.

03/07 to 07/08      ARCADIS U.S., Inc. Trend Exploration I Wells.  
Crew Chief, coordinating crews (3 to 5 people), supervising crews for approximately 10 wells and associated access. Tasks included pre-field coordination, records check, survey, testing, lab analysis, report preparation (Contributing Author), management recommendations, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.

01/07 to 09/08      ARCADIS U.S., Inc. Pappy Draw Testing (EnCana).  
Crew Chief, for evaluative testing of seven sites along a pipeline. Tasks included report preparation (Contributing Author), management recommendations, and quality assurance. Cultural resources encountered: Middle Archaic to Late Prehistoric house-pits, thermal features, cultural deposits, and activity areas. Fremont County, Wind River Basin, Wyoming.

01/07      ARCADIS U.S., Inc. Triangle Unit North construction monitoring (Citation).  
Field Technician for the monitoring of pipeline construction. Tasks included monitoring. No cultural resources were encountered. Campbell County, Powder River Basin, Wyoming.

12/06 to 05/07      ARCADIS U.S., Inc. Table Mountain II, III, IV PODs (Anadarko).  
Field Technician for approximately 25,800 acres of coal bed methane plans of development. Tasks included survey, testing, and lab analysis. Cultural resources encountered to date: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Johnson and Campbell Counties, Powder River Basin, Wyoming.

12/06      ARCADIS U.S., Inc. Horse Creek North added facilities (Winsor Energy).



Field Technician for pipeline construction and access road (15 acres of linear survey). Tasks included survey. No cultural resources were encountered. Campbell County, Powder River Basin, Wyoming.

09/06 to 05/07      ARCADIS U.S., Inc. Dry Willow III POD (Anadarko).  
Field Technician for natural gas well pads, pipelines, and access roads (12 section block survey). Tasks included survey, testing, and lab analysis. Cultural resources encountered to date: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Campbell County, Powder River Basin, Wyoming.

### **Teaching Experience**

8/01 to 12/01      University of Oklahoma. Teaching Assistant.  
Introduction to Biological Anthropology (under Dr. Lesley Rankin-Hill). Tasks included grading tests and other various assignments, meeting with students, and producing handouts, reviews, and student progress evaluations.

8/01 to 12/01      University of Oklahoma. Teaching Assistant.  
Introduction to Archaeology (under Dr. Richard Pailles). Tasks included grading tests and other various assignments, meeting with students, and producing handouts, reviews, and student progress evaluations.

1/98 to 5/98      Boise State University. Community Education Project.  
Prepared and presented a hands-on presentation about Idaho's Great Basin Rock Art to several Boise elementary first grade classes. Boise, Idaho.

### **IV. PUBLICATIONS**

2008      Protohistoric Bison Hunting in the Central Plains: A Study of Faunal Remains from the Crandall Site (14RC420). Plains Anthropologist Memoir 40 208 (53):531-550.

### **V. UNPUBLISHED REPORTS**

2005 to Present      Author for reports on all projects listed in the above "Technical Experience"

### **VI. PAPERS/POSTERS PRESENTED**

2007      Unique Late Paleoindian sites in the Powder River Basin, Wyoming. Poster presented at the 64<sup>th</sup> Plains Anthropological Conference, October 10, 2007, Rapid City, South Dakota.

2006      Specialized Subsistence at the Crandall Site. A Little River Focus Site in Rice County, Kansas. Presented at the 63<sup>rd</sup> Plains Anthropological Conference, November 9, 2006, Topeka, Kansas.

- 2004 Protohistoric Bison Procurement Strategies at the Crandall Site, Kansas. Presented at the 62<sup>nd</sup> Plains Anthropological Conference, October 15, 2004, Billings, Montana.
- 2001 Co-Author, The Jake Bluff Bison antiquus Processing Feature and Adjacent Arroyo. Presented at the 59<sup>th</sup> Plains Anthropological Conference, November 2, 2001, Lincoln, Nebraska.
- 2001 Co-Author, The Prehistory of Kingfisher County: The Chisholm Trail Museum Make-over. Presented at the 43<sup>rd</sup> Caddo Conference and 23<sup>rd</sup> Flint Hills Conference, March 16, 2001, Norman, Oklahoma.
- 2000 Comparing Late Prehistoric Subsistence Strategies in the Oklahoma Panhandle. Presented at the Joint Midwest Archaeological and Plains Anthropological Conference, November 12, 2000, St. Paul, Minnesota.

## VII. ADDITIONAL TRAINING

- 04/16/2009 Cultural Consultant Workshop (BLM, Rock Springs Field Office).  
This training discussed examples of preferred ways of field reporting. In addition, this training discussed how to systematically identify, describe, and analyze visual impacts to cultural resources.
- 09/30/08 Wyoming SHPO Historic Architecture Training (Laramie, Wyoming).  
This training provides an introduction to finding, identifying, and describing historic architecture.
- 03/07/08 Wyoming SHPO Historic Context Training (Sheridan, Wyoming).  
This training provides an introduction to finding, identifying, and describing historic cultural resources in a large contextual setting.
- 2008 Archaeology Contractor Meeting (BLM, Buffalo Field Office).  
This training discussed what happens to cultural reports once they are sent to the BLM, the new Wyoming BLM permit conditions, better ways to prepare and provide cultural inventory project report maps, common cultural report requests and issues, and the extent of BLM responsibility over actions occurring on non-federal lands.
- 2007 BLM/SHPO, Contractor, and Operators Meeting (Casper, Wyoming)  
Discussed BLM and SHPO protocol for processing cultural resource reports.



**CURRICULUM VITAE**  
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**I. EDUCATION**

Degrees

2010	Ph.D.	University of Oklahoma, Norman Dissertation title, <i>Resource Structure and Human Mobility During the Late Pleistocene on the US Southern Plains.</i>	Anthropology
2002	M.A.	University of Wyoming, Laramie Thesis title, <i>Determining the Origins of Mammoth Sites: An Examination of Carnivore Use, Weathering, Bone Representation, and Age Profiles.</i>	Anthropology
2000	B.A.	University of Oklahoma, Norman Cum Laud	Anthropology
1996-1998		Stephen F. Austin State University, Nacogdoches	Engineering

Academic Honors

- Phi Kappa Phi Honor Society – Initiated Spring 2002
- George C. Frison Arts and Sciences Scholarship – UW 2000
- New Graduate Student Scholarship – UW 2000
- Golden Key National Honor Society – Initiated Fall 1999
- Gamma Beta Phi National Honor Society – Initiated Spring 1999
- Phi Eta Sigma National Honor Society – Initiated Spring 1997

Grants

- 2005 National Science Foundation Grant 0535599 “Doctoral Dissertation Research: Investigating Resource Structure and Human Mobility During the Late Pleistocene on the US Southern Plains” (Leland Bement and Adam Graves co-pi’s).
- 2004 Morris and Lucille Opler Research Award.
- 2004 Graduate Student Senate Conference Grant.
- 2001 Paul Stock Foundation Grant-In-Aid Scholarship.
- 1998 Undergraduate Research Opportunities Grant.

**II. CURRENT EMPLOYMENT**

08/09/06 to present      ARCADIS U.S., Inc.  
Serving as Certified Project Manager, U.S. Cultural Resources Department Manager, and Principal Investigator for an international company with more than 18,000 employees and more than \$3 billion in gross revenue.

### III. PROFESSIONAL EXPERIENCE

#### Permits Held (current)

Principal Investigator - BLM Lands Wyoming  
Principal Investigator - State Lands Wyoming  
Principal Investigator - BLM Lands Colorado  
Principal Investigator - State Lands Colorado  
Principal Investigator - USFS Region 2  
Principal Investigator - All Lands Oklahoma  
Principal Investigator - Bureau of Reclamation Great Plains Region  
Principal Investigator - All Lands Idaho  
Field Supervisor - BLM North Dakota  
Field Supervisor - State North Dakota  
Field Supervisor - Indian Lands North Dakota  
Field Supervisor - BLM Montana  
Field Supervisor - Indian Lands Montana  
Field Supervisor - BLM South Dakota  
Field Supervisor - Indian Lands South Dakota  
Register of Professional Archaeologist - # 16254

#### Technical Experience

##### Wyoming

09/09 to present	ARCADIS U.S., Inc. Anchor Replacement Project (PacifiCorp). Principal Investigator, coordinating crews (2 people), supervising crews for approximately 30 acres of anchor replacement construction. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (contributing author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Late Prehistoric, Archaic. Lincoln County, Overthrust Belt, Wyoming.
09/09 to present	ARCADIS U.S., Inc. Rock Springs Road Transmission Line (PacifiCorp). Principal Investigator, coordinating crews (5 people), supervising crews for approximately 60 miles of transmission line right-of-way. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic (trails, debris), Late Prehistoric, Archaic. Sweetwater and Fremont Counties, Wyoming Basin, Wyoming.
04/09 to present	ARCADIS U.S., Inc. Jonah 3D Seismic (Global Geophysical Services). Principal Investigator, coordinating crews (5 to 10 people), supervising crews for approximately 14,400 acres of seismic exploration. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Archaic, Late Paleoindian. Sublette County, Upper Green River Basin, Wyoming.



03/09 to present	<p>ARCADIS U.S., Inc. Pumpkin Buttes I POD (Williams). Principal Investigator, coordinating crews (3 to 7 people), supervising crews for approximately 2,560 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.</p>
10/08 to present	<p>ARCADIS U.S., Inc. Wormwood II POD (Williams). Principal Investigator, coordinating crews (3 to 7 people), supervising crews for approximately 3,120 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.</p>
03/07 to present	<p>ARCADIS U.S., Inc. Trend Exploration I Wells. Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 21 wells and associated access. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.</p>
12/06 to present	<p>ARCADIS U.S., Inc. Table Mountain I, II, III, IV PODs (Anadarko). Principal Investigator, coordinating crews (3 to 15 people), supervising crews for approximately 25,800 acres of coalbed methane plans of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered to date: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Johnson and Campbell Counties, Powder River Basin, Wyoming.</p>
11/06 to present	<p>ARCADIS U.S., Inc. Dry Willow IV, V PODs (Anadarko). Principal Investigator supervising crews (6 to 15 people) for natural gas well pads, pipelines, and access roads (20 section block survey). Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered to date: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Campbell County, Powder River Basin, Wyoming.</p>
11/09 to 12/09	<p>ARCADIS U.S., Inc. Hartzog Draw POD (Williams). Principal Investigator, coordinating crews (3 people), supervising crews for approximately 1,253 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (contributing author), management recommendations, follow-up, and quality assurance. Cultural resources encountered:</p>

Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.

- 05/09      ARCADIS U.S., Inc. Grady 36 Pipeline right-of-way (Resolute).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 640 acres of coal bed methane development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.
- 05/09      ARCADIS U.S., Inc. True Oil Federal Wells.  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 30 acres of coal bed methane development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.
- 02/09 to  
04/09      ARCADIS U.S., Inc. Thunder Basin Coal Mine.  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 2,400 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: Historic Period, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.
- 02/09 to  
04/09      ARCADIS U.S., Inc. Brinkerhoff Federal POD (Marathon).  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 68 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. Sheridan County, Powder River Basin, Wyoming.
- 02/09      ARCADIS U.S., Inc. Permit to Mine Willow Creek Area (Black Hills Bentonite).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 28 acres of mine development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Johnson County, Powder River Basin, Wyoming.
- 02/09      ARCADIS U.S., Inc. Termo Federal Well.  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 16.5 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Campbell County, Powder River Basin, Wyoming.
- 01/09      ARCADIS U.S., Inc. Burgess 13 Federal POD (Marathon).



- Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 25 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. Sheridan County, Powder River Basin, Wyoming.
- 03/08 to 10/09      ARCADIS U.S., Inc. Kingwood III POD (Williams).  
Principal Investigator, coordinating crews (3 to 10 people), supervising crews for approximately 4,354 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic. Campbell County, Powder River Basin, Wyoming.
- 07/07 to 10/09      ARCADIS U.S., Inc. West Bear POD (Williams).  
Principal Investigator, coordinating crews (3 to 7 people), supervising crews for approximately 1,400 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Late Prehistoric lithic scatters. Johnson County, Powder River Basin, Wyoming.
- 09/08 to 01/09      ARCADIS U.S., Inc. Cedar Draw Unit III POD (Williams).  
Principal Investigator, coordinating crews (3 to 10 people), supervising crews for approximately 3,315 acres of coalbed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic, Middle Archaic, Early Archaic, Late Paleoindian. Campbell County, Powder River Basin, Wyoming.
- 09/08 to 12/08      ARCADIS U.S., Inc. Bridger Butte Guyed Wire (Mountain Wind).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 10 acres of guyed wire construction. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Uinta County, Wyoming.
- 06/08      ARCADIS U.S., Inc. Meier Siding Project (Union Pacific).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 27 acres of mine development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Goshen County, Goshen Hole, Wyoming.
- 05/08      ARCADIS U.S., Inc. Leonardite Drilling Project (Black Hills Bentonite).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 27 acres of mine development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS,

report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. Converse County, Powder River Basin, Wyoming.

- 05/08 to 06/08      ARCADIS U.S., Inc. Painted Hills Unit (Anadarko).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 20 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Fremont County, Wind River Basin, Wyoming.
- 06/08 to 10/08      ARCADIS U.S., Inc. True Oil Federal Wells.  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 50 acres of coal bed methane development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Campbell County, Powder River Basin, Wyoming.
- 03/08 to 09/08      ARCADIS U.S., Inc. 12 Mile Ranch Wind Farm (PacifiCorp).  
Principal Investigator, coordinating crews (3 to 5 people), supervising crews for approximately 60 acres of wind farm development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, unknown prehistoric. Albany County, Northern Laramie Structural Basin, Wyoming.
- 08/07to 06/08      ARCADIS U.S., Inc. JAB Uranium Exploration (Uranium One).  
Principal Investigator, coordinating crews (5 people), supervising crews for cultural resource survey and testing for uranium development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Paleoindian, Late Archaic, Late Prehistoric. Sweetwater County, Great Divide Basin, Wyoming.
- 12/07to 01/08      ARCADIS U.S., Inc. Pine Gulch (Anadarko).  
Principal Investigator, coordinating crews (2 people), supervising crews for cultural resource monitoring for well and access development. Tasks included setting budget parameters, pre-field coordination, records check, monitoring, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. Converse County, Powder River Basin, Wyoming.
- 11/07to 12/07      ARCADIS U.S., Inc. Salt Creek VI POD (Anadarko).  
Principal Investigator, coordinating crews (2 people), supervising crews for survey of approximately 10 acres and testing for well and access development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. Natrona County, Powder River Basin, Wyoming.



08/07      ARCADIS U.S., Inc. Bass-Kurth Access and Water right-of-way (Black Diamond)  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 15 acres of pipeline. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic trails. Johnson County, Powder River Basin, Wyoming.

07/07 to      ARCADIS U.S., Inc. Kingsbury IV POD (Williams).  
09/07      Principal Investigator, coordinating crews (3 to 11 people), supervising crews for approximately 3,800 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.

07/07 to      ARCADIS U.S., Inc. Wormwood III POD (Williams).  
10/07      Principal Investigator, coordinating crews (3 to 11 people), supervising crews for approximately 1,400 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Expansion Period Historic, Late Prehistoric, Late Archaic. Campbell County, Powder River Basin, Wyoming.

01/07 to      ARCADIS U.S., Inc. Pappy Draw Testing (EnCana).  
09/08      Principal Investigator, coordinating multiple crews, supervising crews for evaluative testing of seven sites along a pipeline. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, Giddings probing, soil analysis, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Middle Archaic to Late Prehistoric house-pits, thermal features, cultural deposits, and activity areas. Fremont County, Wind River Basin, Wyoming.

05/07 to      ARCADIS U.S., Inc. Red Point 3D Seismic (Bill Barrett).  
06/07      Principal Investigator, coordinating crews (6 people), supervising crews for approximately 3,127 acres of seismic exploration. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: Goshen, unknown cairns, Expansion Period Historic. Park County, Bighorn Basin, Wyoming.

06/07 to      ARCADIS U.S., Inc. Padlock Ranch (Windsor Energy)  
07/07      Principal Investigator, coordinating crews (3 people), supervising crews for approximately 90 acres of coal bed methane plan of development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (contributing author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Sheridan County, Powder River Basin, Wyoming.

- 01/07 ARCADIS U.S., Inc. Triangle Unit North construction monitoring (Citation). Project Archaeologist supervising a one person crew for the monitoring of pipeline construction. Tasks included budget estimates, planning logistics, client and agency coordination, and report compilation (senior author). No cultural resources were encountered. Campbell County, Powder River Basin, Wyoming.
- 12/06 ARCADIS U.S., Inc. Horse Creek North added facilities (Winsor Energy). Project Archaeologist supervising crew (2 people) for pipeline construction and access road (15 acres of linear survey). Tasks included budget estimates, planning logistics, and maintaining client and agency contacts. Served as senior author for final report. No cultural resources were encountered. Campbell County, Powder River Basin, Wyoming.
- 12/06 ARCADIS U.S., Inc. Sigma Tau added facilities (Anadarko). Staff Archaeologist overseeing the completion of a small linear survey. Tasks included performing a Class I background and file search and client consultation. I concluded that no survey was required for the project thus no cultural resources were encountered. Johnson County, Powder River Basin, Wyoming.
- 12/06 ARCADIS U.S., Inc. Paul's Draw 3-D seismic survey (Trend). Staff Archaeologist supervising crews (3 to 6 people) for 320 acres of linear survey. Cultural resources encountered: one small lithic scatter. Campbell County, Powder River Basin, Wyoming.
- 8/06 to 11/06 ARCADIS U.S., Inc. Dry Willow III POD (Anadarko). Served as Staff Archaeologist supervising crews (3 to 8 people) for natural gas well pads, pipelines, and access roads (12 section block survey). Tasks included recording sites, making NRHP recommendations, and contributing to final report (co-author). Cultural resources encountered: historic homesteads, lithic scatters, prehistoric camps (hearths and FCR scatters). Campbell County, Powder River Basin, Wyoming.
- 6/01 to 7/01 George C. Frison Institute. Survey of Paint Rock Canyon. Crew supervisor under the direction of Dr. Marcel Kornfeld during a backcountry rockshelter survey in the Bighorn Mountains of Wyoming. Supervised fieldwork, excavated features, collected samples, prepared site maps, and analyzed results. Cultural resources encountered: Unassigned prehistoric rockshelters and lithic scatters. Bighorn County, Wyoming.
- 5/01 to 6/01 George C. Frison Institute. Excavation at Hell Gap site. Crew supervisor under the direction of Dr. Marcel Kornfeld. Supervised fieldwork, mapped the region using total mapping station, surveyed, excavated features, monitored trenching activity, collected samples, prepared site maps, and analyzed results. Cultural resources encountered: Frederick and Lusk Complexes. Goshen County, Wyoming.
- 8/00 to 5/01 George C. Frison Institute. Crew Chief/Lab supervisor under Drs. Marcel Kornfeld, Mary Lou Larsen, and George Frison. Distributing work among employees and volunteers; identifying and cataloguing archaeological material; writing site reports using computer applications (Excel, Access, Surfer, SPSS).



8/00 to 12/00 Rick Reider Soil Lab, Laramie, WY.  
Lab Assistant. Conducting soil analyses (sodium, pH, electrical conductivity, particle size) on Hell Gap, Agate Basin, Krmpotich, Finley, and Barger Gulch paleoindian sites in Wyoming and Colorado.

5/00 to 6/00 George C. Frison Institute. Excavation at Agate Basin site.  
Crew chief. Surveyed excavated features, monitored trenching activity, collected samples, prepared site maps, analyzed results, co-authored final report. Cultural resources encountered: Agate Basin and Folsom Complexes. Niobrara County, Wyoming.

6/00 to 7/00 George C. Frison Institute. Excavation at Krmpotich site.  
Crew Chief. Surveyed excavated features, monitored trenching activity, collected samples, prepared site maps, analyzed results, co-authored final report. Cultural resources encountered: Agate Basin and Folsom Complexes. Sweetwater County, Wyoming.

#### California

01/09 to 11/09 ARCADIS U.S., Inc. Ft. Bragg Lumber Mill (Georgia-Pacific).  
Co-Principal Investigator, coordinating crews (2 people), supervising crews for cultural monitoring of mill demolition. Tasks included setting budget parameters, pre-field coordination, records check, monitoring, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: Historic Period. Mendocino County, California.

#### Colorado

08/09 to present ARCADIS U.S., Inc. Doe Canyon East Federal Wells (Bill Barrett).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 47 acres of well and access construction. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. San Miguel County, Paradox Basin, Colorado.

08/09 to present ARCADIS U.S., Inc. Medinah Federal Wells (Bill Barrett).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 24 acres of well and access construction. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. San Miguel County, Paradox Basin, Colorado.

08/09 to present ARCADIS U.S., Inc. Torrey Pines Federal Wells (Bill Barrett).  
Principal Investigator, coordinating crews (2 people), supervising crews for approximately 23.5 acres of well and access construction. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: unknown prehistoric. San Miguel County, Paradox Basin, Colorado.

08/09 to 09/09	ARCADIS U.S., Inc. Grand Junction Airport Loop Pipeline (Public Service Co.). Co-Principal Investigator, coordinating crews (2 people), supervising crews for approximately 15 miles of well and access construction. Tasks included setting budget parameters, pre-field coordination, records check, survey, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: historic. Mesa County, Colorado.
11/08 to 02/09	ARCADIS U.S., Inc. Doe Canyon 3D Seismic (Bill Barrett). Principal Investigator, coordinating crews (8 people), supervising crews for approximately 2,730 acres of seismic exploration. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: Early Archaic San Pedro Middle Archaic, San Jose Middle Archaic, Late Archaic, Late Prehistoric, Basketmaker III, Pueblo II and III. Dolores County, Paradox Basin, Colorado.
09/08 to 10/08	ARCADIS U.S., Inc. Kawchack and Smith Federal Wells (St. Mary Land & Expl.). Principal Investigator, coordinating crews (2 people), supervising crews for approximately 96 acres of well and access construction. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Moffat County, Wyoming Basin, Colorado.
7/03 to 8/03	Southern Methodist University. Excavation of Mountaineer site. Field technician. Surveyed, excavated features, collected samples, and prepared site map. Cultural resources encountered: Folsom Complex. Gunnison County, Colorado.
Idaho	
10/09 to 12/09	ARCADIS U.S., Inc. Monsanto Blackfoot Bridge Mine (P4 Production). Co-Principal Investigator, coordinating crews (5 people), supervising crews for approximately 2,000 acres of mine development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (contributing author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: historic. Caribou County, Idaho.
10/09 to 12/09	ARCADIS U.S., Inc. Agrium Drilling (Agrium Conda Phosphate Ops.). Co-Principal Investigator, coordinating crews (5 people), supervising crews for approximately 3,800 acres of drilling development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (contributing author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: none. Caribou County, Idaho.
Kansas	
01/10 to present	ARCADIS U.S., Inc. Ft. Leavenworth Remediation (COE).



Principal Investigator for construction monitoring during hazardous material removal. Tasks included setting budget parameters, pre-field coordination, records check, photo-documentation, GIS, report preparation (Co Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: historic period. Leavenworth County, Kansas.

## Montana

01/08 to 12/09 ARCADIS U.S., Inc. East Helena Smelter Demolition (ASARCO).  
Co-Principal Investigator for historic photo-documentation. Tasks included setting budget parameters, pre-field coordination, records check, photo-documentation, historic research, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: historic period. Lewis and Clark County, Montana.

05/09 to 05/09 ARCADIS U.S., Inc. Cottonwood 3D Seismic (NFR Energy).  
Co-Principal Investigator, and sole crewmember for approximately 10 miles of linear seismic exploration. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered unknown prehistoric stone circles. Hill County, Montana.

## Oklahoma (selected projects)

09/07 to 12/09 ARCADIS U.S., Inc. Taloga Wind Farm (Edison Mission).  
Principal Investigator, coordinating crews (10 people), supervising crews for survey of approximately 766 acres of transmission line and wind farm development. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered unknown prehistoric, historic farmsteads. Dewey County, Oklahoma.

11/07 ARCADIS U.S., Inc. Foss Reservoir 3-D Seismic (Global Geophysical Services).  
Principal Investigator, coordinating crews (10 people), supervising crews for survey of approximately 7,000 acres of linear seismic exploration. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Senior Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered unknown prehistoric, historic dugouts. Custer County, Oklahoma.

2/06 to 6/06 Cojeen Archaeological Services. Samson 3-D seismic survey.  
Co-Principal Investigator supervising 14 other archaeologists for 25 square mile project on USFS land. Planned logistics for 100% survey and shovel testing with 15 meter spaced transects, supervised fieldwork, analyzed results, and made recommendations for NRIHP inclusion in final report. Cultural resources encountered: Middle and Late Archaic, Woodland, and Late Prehistoric Complexes; Historic homesteads/farmsteads. Roger Mills County, Oklahoma.

8/05 to 3/06 University of Oklahoma. Pedestrian survey of Sand and Buffalo creeks.

- Co-Principal Investigator for 4 mile survey and shovel testing project on private land for the State Historical Society. Tasks included budget estimates, planned logistics, supervised fieldwork, analyzed results, and made recommendations for NRHP inclusion in final report. Cultural resources encountered: Woodland and Late Prehistoric Complexes; Historic homesteads. Harper County, Oklahoma.
- 9/05 Benham Companies Incorporated. City of Ardmore Water System Improvements. Project Archaeologist supervising 1 other archaeologist for survey and shovel testing 1 square mile project. Tasks included budget estimates, planning logistics, making NRHP recommendations, and serving as senior author for final report. Cultural resources encountered: None. Carter County, Oklahoma.
- 7/05 to 9/05 Cojeen Archaeological Services. Archeological Survey of the Cholla Petroleum, Inc. Proposed PK Under The Hill # 2 and # 3 Wells and Access. Project Archaeologist supervising crew for survey and shovel testing well pads and access road (20 acres of block survey). Planned logistics, supervised fieldwork, analyzed results, and made recommendations for NRHP inclusion in final report. Cultural resources encountered: None. Palo Pinto County, Texas.
- 10/05 Cojeen Archaeological Services. Frontline GeoServices Proposed Woods Creek 2D Seismic Line. Project Archaeologist supervising crew for 10 miles of linear survey and shovel testing on USFS land. Planned logistics, supervised fieldwork, analyzed results, and made recommendations for NRHP inclusion in final report. Cultural resources encountered: Unknown Prehistoric lithic scatters and burned rock features. LeFlore County, Oklahoma.
- 8/04 Cojeen Archaeological Services. Archeological Testing at Archeological Site 34GR197. Project Archaeologist supervising 7 crewmembers for site testing. Excavated features, collected samples, prepared site map, supervised fieldwork, analyzed results, and made recommendations for NRHP inclusion in final report. Cultural resources encountered: Unknown Prehistoric lithic scatters. Greer County, Oklahoma.
- 6/04 to 7/04 University of Oklahoma. Excavation of Jake Bluff site. Crew Chief supervising 12 crewmembers. Excavated features, collected samples, prepared site map, supervised fieldwork, and analyzed results. Cultural resources encountered: Folsom and Clovis Complexes. Harper County, Oklahoma.
- 6/02 to 7/02 Oklahoma Archeological Survey. Graduate Assistant. Tasks included updating state sites database under the supervision of Robert Brooks, State Archaeologist.
- 01/00 University of Oklahoma Field Technician. Arroyo survey under the supervision of Dr. Leland Bement. Tasks included survey and shovel testing. Cultural resources encountered: none. Beckham County, Oklahoma.
- 8/1999 Cojeen Archaeological Services. Mitigation at the Duke Site (Duke Energy). Crew Chief supervising 9 crewmembers for excavation. Excavated features, collected samples, prepared site map, and submitted descriptions of materials



collected. Additional duties included laboratory analysis, identification, and curation of artifacts. Cultural resources encountered: pithouses, hearths, human remains, lithics, animal bone, pottery at a Wichita camp. McClain County, Oklahoma.

#### Texas

- 03/10 to present ARCADIS U.S., Inc. Goodwell Wind Farm (Duke Energy).  
Principal Investigator, whose tasks will comprise coordinating and supervising crews for survey of approximately 15.5 miles of transmission line and 133 wind turbines. Tasks will include setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation, management recommendations, follow-up, and quality assurance. Hansford County, Texas.
- 01/09 to 08/09 ARCADIS U.S., Inc. Ft. Bliss EA (U.S. Army).  
Served as the technical expert making contributions to the overall quality of the cultural resources chapters in the EA.
- 01/05 to 12/05 Geo-Marine Incorporated. Site testing  
Field Technician. Excavated features, collected samples, and prepared site map. Cultural resources encountered: Unknown Prehistoric fire-cracked rock features. Tarrant County, Texas.
- 7/05 Gonzalez, Tate, and Iruegas, Inc. Archaeological Testing at Six Archaeological Sites. Field Archaeologist for Phase II testing of multiple prehistoric sites to assess their significance for National Register status. Cultural Resources encountered: Paleo-Indian and Archaic camp and quarry sites. Maverick County, Texas
- 6/03 to 7/03 Southern Methodist University. Excavation of Hot Tubb site.  
Field technician. Excavated features, collected samples, and prepared site map. Cultural resources encountered: Folsom Complex. Crane County, Texas.

#### Utah

- 09/07 to 01/09 ARCADIS U.S., Inc. Utah Transmission Lines (PacifiCorp).  
Co-Principal Investigator, coordinating crews (5 to 15 people), supervising crews for approximately 400 miles of transmission line for vegetation management. Tasks included setting budget parameters, pre-field coordination, records check, survey, testing, lab analysis, GIS, report preparation (Author), management recommendations, follow-up, and quality assurance. Cultural resources encountered: historic irrigation ditches, historic roads and trails, historic debris, rock art, house pits, Emery Gray pottery (Fremont), thermal features, manos/metates, Early Archaic projectile points, Late Archaic projectile points, Anasazi. Juab, Carbon, Emery, Sevier, Piute, Garfield, Iron, Washington, and San Juan Counties, Utah.

#### Teaching experience

- 1/04 to 5/05 University of Oklahoma. Stand-Alone Teaching.  
ANTH 1413 Great Discoveries in Archaeology. Introduces students to the accomplishments of ancient civilizations around the world. A brief overview of archaeological methods and research and of the precursors of civilizations. Concentrates on major civilizations of the world including Mesopotamia, Europe,

Egypt, sub-Saharan Africa, India, China, Southeast Asia, Mesoamerica, South America, and the North American Midwest.

- 1/03 to 12/03 University of Oklahoma. Teaching Assistant.  
ANTH 1413 Great Discoveries in Archaeology (under Drs. Thomas Pluckhahn and Lisa Lecount).
- 8/02 to 12/02 University of Oklahoma. Teaching Assistant.  
ANTH 1613 Indians of Oklahoma (under Dr. Robert Fields). A general introduction to the traditional cultures and current condition of the 38 diverse Native American groups now resident in Oklahoma.
- 8/01 to 12/01 University of Wyoming. Teaching Assistant.  
ANTH 1300 Introduction to Archaeology (under Dr. Matt G. Hill). Explores ways in which prehistoric material remains can provide an understanding of the cultural way of life. General background in archaeological method and theory is used to examine case studies from throughout the world, based on themes such as ceramic technology and artistry development, growth of early civilizations and North American prehistory.
- 1/01 to 5/01 University of Wyoming. Teaching Assistant.  
ANTH 4110 Zooarchaeology I (under Dr. Marcel Kornfeld). An introductory level seminar in the archaeological analysis of faunal materials. Emphasis is on the identification and curation of bones from archaeological and Late Pleistocene paleontological contexts, including their use in the interpretation of prehistoric and historic human behavior, the investigation of paleoenvironmental conditions and paleoecological relationships and problem-oriented taphonomic research.

#### IV. PUBLICATIONS

- 2006 The JS Cache: An Early Paleoindian Tool Cache from the Oklahoma Panhandle. *Current Research in the Pleistocene* 23:103-105.
- 2001 (with Kornfeld, Frison, Haynes, and Lorentzen) Preliminary report on the 2000 season excavation of the Agate Basin site. *George C. Frison Institute of Archaeology and Anthropology, Technical Report No. 19a*, Department of Anthropology, University of Wyoming.
- 2001 (with Kornfeld, Lorentzen, and Frison) Preliminary report on the 2000 season excavation of the Krmpotich site. *George C. Frison Institute of Archaeology and Anthropology, Technical Report No. 19b*, Department of Anthropology, University of Wyoming.

#### V. UNPUBLISHED REPORTS

- 2004 to present Co-Author for reports on all projects listed in the above "Technical Experience" section.
- 2006 Gypped! Pedestrian Survey of Sand and Buffalo Creeks, Harper County, Oklahoma. Oklahoma Archeological Survey Report, University of Oklahoma, Norman.



- 2004 Adam Graves, Leland Bement, and John Landsdown. Preliminary results of elemental analysis of bison teeth. On file at the Oklahoma Archeological Survey, University of Oklahoma, Norman.
- 2003 Adam Graves, Leland Bement, and George Morgan. Preliminary results of strontium analysis of bison teeth. On file at the Oklahoma Archeological Survey, University of Oklahoma, Norman.

## VI. PAPERS PRESENTED

- 2007 Guest lecturer for the Bureau of Land Management's SHPO, Contractor, and Operators Meeting. Discussed recent trends in survey methods in the Powder River Basin Wyoming, and new discoveries based on a concentrated effort to identify potentially eligible sites in buried settings that have largely gone undocumented.
- 2006 Modern Trace Element Distribution and its Implications for Ancient Bison Movement. Paper presented at the 64<sup>th</sup> Plains Anthropological Conference, Topeka, Kansas.
- 2005 Climate, Grasses, Bison, and Humans on the U.S. Southern Plains during the Early Paleoindian Occupation (11,900 – 10,200 B.P.). Poster presented at the 70<sup>th</sup> Meeting of the Society for American Archaeology, Salt Lake City, Utah.
- 2004 Varney, R.A., Brian Carter, Adam Graves, and Leland Bement. Archaeoclimate Modeling and the Paleoenvironmental Record on the Southern High Plains: The Bull Creek Site, Beaver County, Oklahoma. Paper presented at the 62<sup>nd</sup> Plains Anthropological Conference, Billings, Montana.
- 2004 Bison Dentistry: Look What a Quick Yank and a Laser Can Do. Paper presented at the 62<sup>nd</sup> Plains Anthropological Conference, Billings, Montana.
- 2002 Determining the Origins of Mammoth Sites: an Examination of Carnivore Use, Weathering, Bone Representation, and Age Profiles. Paper presented at the 60<sup>th</sup> Plains Anthropological Conference, Oklahoma City, Oklahoma.
- 2001 A Preliminary Report of the 2000 Investigations at Agate Basin Site, Wyoming: Faunal Analysis. Paper presented at the 59<sup>th</sup> Plains Anthropological Conference, Lincoln, Nebraska.
- 2001 A Preliminary Report of the 2000 Investigations at Agate Basin, Wyoming: Faunal Analysis. Paper presented at the Wyoming Archaeological Society Spring Meeting, Laramie, Wyoming.
- 2000 Marcel Kornfeld, Nicole Waguespack, Todd Surovell, James Mayer, Adam Graves, and George Frison. Krmptich Site: Folsom Investigations in SW Wyoming. Poster presented at the 58<sup>th</sup> Plains Anthropological Conference, St. Paul, Minnesota.
- 1999 Trace Element Analysis to Determine Bison Movement. Paper presented at the University of Oklahoma Undergraduate Research Day.

## VII. ADDITIONAL TRAINING

40-hour HAZWOPER (current)

- 04/16/2009 Cultural Consultant Workshop (BLM, Rock Springs Field Office).  
This training discussed examples of preferred ways of field reporting. In addition, this training discussed how to systematically identify, describe, and analyze visual impacts to cultural resources.
- 01/08 to  
05/08 Certified Project Management Training (University of California Los Angeles).  
This course integrates project management theory with practical approaches to establish a fundamental knowledge base to use in a contemporary dynamic business environment. Project management concepts are explored from planning and selection through all aspects of the project life cycle. Practical techniques are developed to organize and control non-routine activities in order to properly manage and schedule quality, budget, and performance objectives.
- 09/30/08 Wyoming SHPO Historic Architecture Training (Laramie, Wyoming).  
This training provides an introduction to finding, identifying, and describing historic architecture.
- 03/07/08 Wyoming SHPO Historic Context Training (Sheridan, Wyoming).  
This training provides an introduction to finding, identifying, and describing historic cultural resources in a large contextual setting.
- 2008 Archaeology Contractor Meeting (BLM, Buffalo Field Office).  
This training discussed what happens to cultural reports once they are sent to the BLM, the new Wyoming BLM permit conditions, better ways to prepare and provide cultural inventory project report maps, common cultural report requests and issues, and the extent of BLM responsibility over actions occurring on non-federal lands.
- 2007 BLM/SHPO, Contractor, and Operators Meeting (Casper, Wyoming)  
Discussed BLM and SHPO protocol for processing cultural resource reports.

## VIII. REFERENCES

- Dr. Leland Bement Email: lbement@ou.edu  
Oklahoma Archaeological Survey, University of Oklahoma, Norman
- Dr. Susan Vehik Email: svehik@ou.edu  
Department of Anthropology, University of Oklahoma, Norman
- Dr. Marcel Kornfeld Email: anpro1@uwo.edu  
Department of Anthropology, University of Wyoming, Laramie
- Dr. Robert Kelly Email: RLKelly@uwo.edu  
Department of Anthropology, University of Wyoming, Laramie
- Christopher Cojeen, MA Email: cojeen@telepath.com  
Cojeen Archaeological Services, Norman, Oklahoma



*Curriculum Vitae*

**Ashley Howder**

166 W. Foote St. Buffalo, WY 82834

812.887.1329

Ashley.Howder@ARCADIS-US.com

**I. Educational Background**

2008	B.A.	Indiana University, Bloomington	Anthropology
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**II. Professional Experience**

**Cultural Resource Management—Private Contract Firms**

***Wyoming***

- |           |  |
|-----------|--|
| 4/2011    | Converse County<br>ARCADIS U.S., Inc.: SM Energy Company contracted ARCADIS to conduct a Class III cultural resource inventory of the proposed Bridger Federal 1-23H Well and Access project. <ul style="list-style-type: none"><li>• Field Director</li><li>• Report Author</li></ul>   |
| 4/2011    | Converse County<br>ARCADIS U.S., Inc.: True Oil LLC. contracted ARCADIS to conduct a Class III cultural resource inventory of the proposed Martin Federal Well #33-3 and Access project. <ul style="list-style-type: none"><li>• Field Director</li><li>• Report Author</li></ul>  |
| 4/2011    | Converse County<br>ARCADIS U.S., Inc.: SM Energy Company contracted ARCADIS to conduct a Class III cultural resource inventory of the proposed Discovery Federal 1-35H Well and Access project. <ul style="list-style-type: none"><li>• Field Director</li><li>• Report Author</li></ul>   |
| 3/2011    | Johnson County<br>ARCADIS U.S., Inc.: Williams Production RMP Company contracted ARCADIS to conduct a Class III cultural resource inventory of the proposed Vista WMP Sundry project. <ul style="list-style-type: none"><li>• Field Director</li><li>• Report Co-Author</li></ul>  |
| 7-10/2010 | Campbell County<br>ARCADIS U.S., Inc.: Thunder Basin Coal Company contracted ARCADIS to conduct a Class III cultural resource inventory of the proposed Scoria Mine project. <ul style="list-style-type: none"><li>• Crew Chief</li><li>• Report Co-Author</li></ul>   |
| 3/2010    | Campbell County<br>ARCADIS U.S., Inc.: Because several of ARCADIS' projects are located within two miles of the Pumpkin Buttes Traditional Cultural Property boundary, ARCADIS performed ten visual contrast rating assessments from the tops of North Butte and South Butte to determine the visual impact rating. <ul style="list-style-type: none"><li>• VCR Assessment Worksheets Author</li><li>• Field Technician: performed visual contrast assessment and prepared VCR forms</li><li>• GIS Technician: completed KOP location maps</li></ul> |

- 3/2010 Crook County  
*ARCADIS U.S., Inc.*: True Oil, LLC. contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Davis Federal 42-18 Well and Access.
- Report Co-Author
  - Field Technician: performed block and linear survey
  - GIS Technician: completed project map
- 3/2010 Campbell County  
*ARCADIS U.S., Inc.*: Trend Exploration I, LLC. contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Federal Well #34-8 and access in the Powder River Basin.
- Report Co-Author
  - Field Technician: performed block and linear survey
  - GIS Technician: completed project map
- 12/2009-4/2010 Campbell & Johnson Counties  
*ARCADIS U.S., Inc.*: Anadarko Petroleum Corporation contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Table Mountain Phase II Plan of Development.
- Report Co-Author
  - Field Technician: performed block and linear survey, including field site recordation, site form completion, pre-field coordination, records check, and contributed to eligibility and management/avoidance recommendations for inclusion in final report
- 11/2009 Campbell County  
*ARCADIS U.S., Inc.*: Trend Exploration I LLC contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory for the proposed Trend Exploration I LLC Federal Wells #22-8A and #33-38 Well Pad construction and access in the Powder River Basin.
- Report Co-Author
  - Field Technician: performed block and linear survey; pre-field coordination and records check
  - GIS Technician: prepared project map
- 11/2009 Johnson and Campbell Counties  
*ARCADIS U.S., Inc.*: Williams Production RMT Company contracted ARCADIS U.S., Inc. for completion of a Class III cultural resource inventory and report production for the Hartzog Draw Federal Plan of Development in the Powder River Basin.
- Report Author: including mitigation/avoidance recommendations
  - Pre-Field Coordination: including records checks for additional survey area
  - Preparation of all Wyoming Cultural Properties Forms (field-recorded prior to my project involvement) for submittal to BLM
- 10/2009-11/2009 Sweetwater and Fremont Counties  
*ARCADIS U.S., Inc.*: PacifiCorp contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory and impact assessment of exiting grading for the PacifiCorp Rock Springs Road ROW Project. Cultural resources encountered: 19 new prehistoric and historic sites, 23 previously recorded prehistoric and historic sites requiring update, and 15 isolated resources in 34.5 miles (1,209 acres) of linear survey in the Green River Basin. Cultural resource types include Early Archaic, Middle Archaic (one Yonkee series projectile point), Late Archaic and Late Prehistoric open camps, lithic scatters, intact surface and subsurface hearth features, historic debris scatters, historic trails (variations of the Oregon, Mormon, Emigrant, and Pony Express Trails and the Rock Springs Road), and South Pass (National Historic Landmark).
- Report Co-Author



- Co-Crew Chief: logistical planning and fieldwork co-supervision, including pre-field coordination, records check, survey and site recordation, completion of all Wyoming Cultural Properties Forms, contributed to eligibility and management recommendations for inclusion in final report
- Curation and cataloguing of collected artifacts using UWAR standards

9/2009-  
10/2009

Sublette

ARCADIS U.S., Inc.: Global Geophysical Services contracted ARCADIS U.S., Inc. to conduct archaeological monitoring of the proposed Global Jonah 3D Seismic Plan of Development in the Green River Basin.

- Crew Chief (Special Permit, BLM PFO)
- Archaeological monitor during seismic cable placement

3/2009-  
10/2009

Sublette and Fremont Counties

ARCADIS U.S., Inc.: Global Geophysical Services contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Global Jonah 3D Seismic Plan of Development in the Green River Basin. Cultural resources encountered: 96 new sites, 38 previously recorded sites, and 312 isolated finds in 108,800 acres of linear survey. Cultural periods encountered include the full range of temporal periods, from Paleo-Indian to historic, and include lithic scatters, open camps, lithic reduction and processing locals, several prehistoric cairns, and historic debris scatters. Temporally-linked diagnostic artifacts encountered include Rose Spring series corner-notched projectile points, Pinto series square-shouldered projectile points, Elko Series corner-notched and eared projectile points, and artifact linked to the McKean complex.

- Report Co-Author
- Co-Crew Chief: logistical planning and fieldwork co-supervision under the supervision of N. Graves (approximately 60% of the project), including pre-field coordination
- Field Technician: performed survey and site recordation and mapping when field crews were lead by N. Graves (approximately 40% of the project)
- Preparation of Wyoming Cultural Properties Forms, including site recordation, completion of forms, and eligibility and management recommendations for inclusion in final report
- Curation and cataloguing of several hundred collected artifacts using UWAR standards

12/2008-  
4/2009,  
2/2010  
Ongoing

Campbell County

ARCADIS U.S., Inc.: Williams Productions RMT Company contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Pumpkin Buttes Phase 1 Plan of Development in the Powder River Basin.

- Report Co-Author: (in progress)
- Co-Crew Chief: logistical planning and fieldwork co-supervision
- Preparation of Wyoming Cultural Properties Forms, including site recordation and mapping, completion of forms, plan view drawings, and eligibility and management recommendations for inclusion in final report

11/2008-  
3/2009,  
1/2010

Campbell County

ARCADIS U.S., Inc.: Williams Productions RMT Company contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Wormwood Phase 2 Plan of Development in the Powder River Basin

- Report Co-Author
- Co-Crew Chief: logistical planning and fieldwork co-supervision, including pre-field coordination, site recordation, eligibility/management recommendations for inclusion in final report

- 2/2009      Campbell County  
*ARCADIS U.S., Inc.:* Thunder Basin Coal Company contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed West Coal Creek LBA in the Powder River Basin.
- Report Co-Author
  - Co-Crew Chief: logistical planning and fieldwork co-supervision, including pre-field coordination, site recordation, eligibility/management recommendations for inclusion in final report
- 7/2008-  
1/2009      Campbell and Johnson Counties  
*ARCADIS U.S., Inc.:* Anadarko Petroleum Corporation contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Dry Willow V Plan of Development in the Powder River Basin.
- Report Co-Author
  - Field Technician: performed survey and site recordation and mapping, including eligibility and management recommendations for inclusion in final report
- 8-10/2008      Campbell County  
*ARCADIS U.S., Inc.:* Williams Production RMT Company contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Cedar Draw 3 Plan of Development in the Powder River Basin.
- Report Co-Author
  - Field Technician: performed survey and site recordation and mapping, including eligibility and management recommendations for inclusion in final report

## **Colorado**

- 9/2009      Mesa County  
*ARCADIS U.S. Inc.:* Public Service Company of Colorado contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Grand Junction Airport Loop Pipeline project in western Colorado.
- Field Technician: performed survey and site recordation and mapping, including eligibility recommendations for inclusion in final report
- 9/2008      Moffat County  
*ARCADIS U.S. Inc.:* St. Mary Land & Exploration Company contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Kawchack Federal and Smith Federal Wells.
- Report Author
  - Field Technician: performed survey and pre-field coordination
- 11/2008-  
2/2009      Dolores County  
*ARCADIS U.S. Inc.:* Bill Barrett Corporation contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Doe Canyon 3D Seismic Prospect.
- Report Co-Author
  - Field Technician: performed survey and site recordation and mapping, including eligibility and management recommendations for inclusion in final report



## **Idaho**

- 10/2010 Bingham and Butte Counties  
*ARCADIS U.S., Inc.*: PacifiCorp-Rocky Mountain Power contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Antelope to Goshen Transmission Line Maintenance Project.
- Field Technician
- 5/2010 Shoshone County  
*ARCADIS U.S. Inc.*: Union Pacific Railroad Company contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the Wallace Yard Site.
- Field Technician
- 5/2010 Shoshone County  
*ARCADIS U.S. Inc.*: Union Pacific Railroad Company contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Spur Lines Project.
- Field Technician
- 10/2009 Caribou County  
*ARCADIS U.S. Inc.*: P4 Production LLC contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Monsanto Blackfoot Bridge Mine project in southeast Idaho.
- Co-Crew Chief: logistical planning and field supervision
- 10/2009 Caribou County  
*ARCADIS U.S. Inc.*: Agruim Conda Phosphate Operations contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory of the proposed Agrium Husky 1 and North Dry Ridge Exploration Drilling Plan project in southeast Idaho.
- Co-Crew Chief: logistical planning and field supervision

## **Oklahoma**

- 2/2009-  
4/2009 Dewey County
- ARCADIS U.S., Inc.*: Edison Mission Energy contracted ARCADIS U.S., Inc. to complete a Class III cultural resource inventory for the proposed Taloga Wind Farm Project in west-central Oklahoma. Cultural resources encountered: 5 new historic sites and 5 isolated finds during 766 acres of combination block and linear survey. Site types encountered include historic debris and trash dumps, cemeteries with potential historic significance, and historic structures.
- Report Co-Author
  - Co-Crew Chief: logistical planning and fieldwork co-supervision, including recording sites and preparing Wyoming Cultural Properties Forms and eligibility and management recommendations

## **Utah**

- 10/2008-  
3/2009 San Juan County  
*ARCADIS U.S., Inc.*: PacifiCorp contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory for vegetation management of the existing PacifiCorp Pinto-Abajo 138kV Transmission Line in southeast Utah.
- Report Author
- 10/2008-  
3/2009 San Juan County

ARCADIS U.S., Inc.: PacifiCorp contracted ARCADIS U.S., Inc. to conduct a Class III cultural resource inventory for vegetation management of the existing PacifiCorp Pinto-Abajo 69kV Transmission Line in southeast Utah.

- Report Author

## Academically Funded—Individual and Group Research

### Wyoming

6/2008-8/2008 Teton, Park, Sublette, Fremont, and Hot Springs Counties  
*Indiana University Archaeological Field School.* Recordation of high elevation Shoshone sheep traps and associated occupational areas in the Greater Yellowstone Ecosystem. Sites included extensive post-forest burn analysis of known and newly discovered sheep traps to assess the impacts of fire to these cultural resources, and to better document post-fire exposed artifacts and domestic areas near known sheep traps. Special emphasis was placed on issues of Shoshone association to sheep traps and how future documentation of these connections can help date and expand understanding of these unique sites, both pre- and post-burn. Analysis of such sites included the documentation and mapping of newly discovered wickiups, osteological processing sites, associated cairns and blinds, and domestic occupations, and sourcing and curation of obsidian tools, steatite vessel fragments and Intermountain ware ceramics.

- Served as Staff Archaeologist. Duties included:
  - Support for field directors
  - Preparation of site surveys, GPS work, mapping, field planning, logistical planning of students, camp supplies, field supplies, etc.
  - Leading small-scale survey groups and oversaw student work, primarily in the Absaroka and Wind River Ranges

5/2007-7/2007 Teton, Park, Sublette, Fremont, and Hot Springs Counties  
*Indiana University Archaeological Field School.* Recordation of high elevation Shoshone sheep traps and associated occupational areas in the Greater Yellowstone Ecosystem. Sites included extensive post-forest burn analysis of known and newly discovered sheep traps to assess the impacts of fire to these cultural resources, and to better document post-fire exposed artifacts and domestic areas near known sheep traps. Special emphasis was placed on issues of Shoshone association to sheep traps and how future documentation of these connections can help date and expand understanding of these unique sites, both pre- and post-burn. Analysis of such sites included the documentation and mapping of newly discovered wickiups, osteological processing sites, associated cairns and blinds, and domestic occupations, and sourcing and curation of obsidian tools, steatite vessel fragments and Intermountain ware ceramics.

- Served as Staff Archaeologist. Duties included:
  - Support for field directors
  - Preparation of site surveys, GPS work, mapping, field planning, logistical planning of students, camp supplies, field supplies, etc.
  - Leading small-scale survey groups and oversaw student work, primarily in the Bridger-Teton National Forest.

### Montana

5/2007 Bighorn County

*Indiana University Archaeological Field School.* Extensive recordation of stone circle occupational sites in Bighorn Canyon National Recreation Area, including collaborative studies with the Crow tribal members and students from Little Bighorn College, the local Crow tribal college, to explore the historical and social landscapes of the Greater Yellowstone Ecosystem along Bighorn Canyon and the significant Bad Pass Trail. Mapping of stone circles, or “tipi rings,” using several methods, including hand mapping and survey—grade GPS to obtain a better understanding of how these domestic sites relate to the greater social landscape of the area. Limited evaluative testing and sourcing of obsidian was also performed.



- Served as Staff Archaeologist. Duties included:
  - Support for field directors
  - Preparation of site surveys, GPS work, mapping, field planning, logistical planning of students, camp supplies, field supplies, etc.
  - Leading small-scale survey groups and oversaw student work in Bighorn Canyon National Recreation Area.

### III. Publications

### IV. Unpublished Reports

4/2011	<i>Report Author:</i> Class III Cultural Resource Inventory, SM Energy Company Bridger Federal 1-23H Well and Access
4/2011	<i>Report Author:</i> Class III Cultural Resource Inventory, True Oil LLC. Martin Federal Well #33-3 and Access
4/2011	<i>Report Author:</i> Class III Cultural Resource Inventory, SM Energy Co. Discovery Federal 1-35H Well and Access
3/2011	<i>Report Co-Author:</i> Class III Cultural Resource Inventory, Williams Production RMP Co. Vista WMP Sundry
11/2010	<i>Report Co-Author:</i> Class III Cultural Resource Inventory, Thunder Basin Coal Company Scoria Mine Project
3/2010	<i>Report Co-Author:</i> Class III Cultural Resource Inventory, True Oil, LLC. Davis Federal #42-18 Well and Access
12/2009-4/2010	<i>Report Co-Author:</i> Class III Cultural Resource Inventory, Anadarko Petroleum Corporation Table Mountain II Plan of Development
11/2009	<i>Report Co-Author:</i> Class III Cultural Resource Inventory Report, Trend Exploration I LLC Federal Wells #22-8A and #33-38 Well Pads
11/2009	<i>Report Author:</i> Class III Cultural Resource Inventory Report, Hartzog Draw Federal Plan of Development
10-11/2009	<i>Report Co-Author:</i> Class III Cultural Resource Inventory Report, Rock Springs Road ROW Project
3-9/2009	<i>Report Co-Author:</i> Class III Cultural Resource Inventory Report, Global Jonah Seismic
12/2008-4/2009	<i>Report Co-Author:</i> Class III Cultural Resource Inventory Report, Pumpkin Buttes Phase 1 Plan of Development
10/2008-3/2009	<i>Report Author:</i> Class III Cultural Resource Inventory Report, PacifiCorp Pinto-Abajo 138kV Transmission Line
10/2008-3/2009	<i>Report Author:</i> Class III Cultural Resource Inventory Report, PacifiCorp Pinto-Abajo 69kV Transmission Lines
2/2009	<i>Report Co-Author:</i> Class III Cultural Resource Inventory Report, West Coal Creek LBA
9/2008	<i>Report Author:</i> Class III Cultural Resource Inventory Report, Kawchack Federal and Smith Federal