

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED  
OMB No. 1004-0135  
Expires July 31, 1996

5. Lease Serial No.

NM 0424837

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA/Agreement, Name and/or N

Canada Ojitos Unit

8. Well Name and No.

18 (C-5)

9. API Well No.

30-039-20372

10. Field and Pool, or Exploratory Area

West Puerto Chiquito

11. County or Parish, State

Rio Arriba, New Mexico

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Benson-Montin-Greer Drilling Corp.

3a. Address

4900 College Blvd., Farmington, NM 87402

3b. Phone No. (include area code)

505-325-8874

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec. 5-T25N-R1E

900' FNL & 1700' FWL

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize <input type="checkbox"/> Deepen <input type="checkbox"/> Production (Start/Resume) <input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Reclamation <input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair <input type="checkbox"/> New Construction <input type="checkbox"/> Recomplete <input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans <input type="checkbox"/> Plug and Abandon <input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Convert to Injection <input type="checkbox"/> Plug Back <input type="checkbox"/> Water Disposal

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days Following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once Testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Benson-Montin-Greer Drilling proposes to convert the COU #18 (C-5) to a flowing gas producer instead of a injection well as follows: Remove packer set @ 4634' and flow well. We need to repair the road in order to get the rig onto location. A copy of DCA Technical Report No. 06-DCA-148 (Forest Service Report No. 2006-10-008) is enclosed for your review.

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

C

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Trudy Grubelnik

Title

Production Clerk

Signature

Date

May 5, 2006

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

Math Halbert

Title

PETE ENG

Date

5-25-06

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

BLM - FFO

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

NMOC



United States  
Department of  
Agriculture

Forest  
Service

Santa Fe National Forest

Cuba Ranger District  
P.O. Box 130  
Cuba, New Mexico 87013  
505-289-3264

File Code: 2820-2

Date: May 19, 2006

Mike Dimond  
President  
Benson-Montin-Greer Drilling Co.  
4900 College Blvd.  
Farmington, NM 87402

Dear Mr. Dimond:

The Cuba Ranger District is extremely dry, and we will be entering Stage II fire restrictions on Monday, May 22. Stage II prohibits the use of equipment powered by internal combustion engines between the hours of 10:00 AM and 9:00 PM, welding, and the use of motor vehicles off of Forest System roads.

We will exempt the engines on your pumps from this restriction, as long as they are equipped with a properly installed and maintained spark arrester listed in the National Wildfire Coordinating Group's Spark Arrester Guide (which can be found at [http://www.fs.fed.us/fire/prev\\_ed/spark/PDF\\_files/GP\\_SAG2004.pdf](http://www.fs.fed.us/fire/prev_ed/spark/PDF_files/GP_SAG2004.pdf)) and if the area around the exhaust outlet is cleared of vegetation. Our inspections have noted that a few of your engines have blown oil through the muffler and spark arrester, and those engines need to be repaired and the spark arresters replaced.

If you need to conduct any work, other than routine well checking, after 10:00 AM, you will need to notify us of what work is proposed, and the Cuba Ranger District will need to issue you a special authorization for that project.

We expect fire conditions to worsen, and additional restrictions and closures to occur, until the 'monsoon' rains occur, which is projected to occur in mid-July.

As part of our wildfire response package, we need a map, either paper or digital, accurately depicting the location of BMG's pipeline systems (particularly showing which side of the road it occurs on), indicating what type of line (steel, fiberglass, polyethylene, etc.) and what product is in each line. The map should also show all surface fixtures along the pipelines, and any abandoned pipelines. This will be a real asset, and potential lifesaver, if we deploy firefighters and equipment within the lease area.

In other matters:

- We have not received any soil test results from the Puerto Chiquito spill. In your letter of April 17, you stated you expected the test results within the week, and you would forward us a copy when you received them. We need these results as soon as possible, as both the Regional Office and the EPA have inquired about them.
- We have reviewed the Sundry Notice for the COU #18/C-5 well, and have supplied the Bureau of Land Management the following Conditions of Approval:



1. All surface disturbances must occur within the previously disturbed area. If any surface disturbance will occur outside of the previously disturbed area, additional environmental analysis may be required.
2. A pre-work walk through of the project must be held with Larry Gore, or if Larry is not available, by another Cuba District specialist.
3. Santa Fe National Forest, State, and County fire restrictions and closures must be complied with during the road work and on-site operations.
4. The Management Recommendations listed on page 13 of *A Cultural Resources Inventory of Benson-Montin-Greer Drilling Corporation's Existing Canada Ojitos Unit No. 18 (C-5) Well Pad and Access Road, Rio Arriba County, New Mexico (April 24, 2006)* must be implemented.

If you have questions about any of these matters, please contact Larry Gore at this office.

Sincerely,

STEVE F. ROMERO  
District Ranger

5X



# SAN JUAN COUNTY MUSEUM ASSOCIATION

Salmon Ruin Museum  
Division of Conservation Archaeology  
Heritage Park

2006 MAY 8 PM 8 26

APR 26 2006

RECEIVED  
CTO FARMINGTON NM

April 24, 2006

Mike Dimond  
Benson-Montin-Greer Drilling Corp.  
4900 College Blvd.  
Farmington, NM 87402

RE: The archaeological survey of BMG's existing COU No. 18 (C-5) well pad and access road.

Dear Mike:

Enclosed is a copy of DCA Technical Report No. 06-DCA-148 (Forest Service Report No. 2006-10-008), *The Cultural Resources Inventory of Benson-Montin-Greer Drilling Corporation's Existing Cañada Ojitos Unit No. 18 (C-5) Well Pad and Access Road, Rio Arriba County, New Mexico*. This report details the survey of a 200 foot by 200 foot existing well pad and associated 6,450 foot access road in advance of proposed maintenance work on the pad and along the access road. The project area is located in Rio Arriba County, New Mexico on land under the jurisdiction of the Santa Fe National Forest, Cuba Ranger District. A total of 23.76 acres was intensively inventoried.

One new archaeological site (AR-03-10-02-1817/LA 152875) and two isolated finds were recorded during the project. The site has been recommended as potentially eligible for inclusion on the National Register of Historic Places. Measures to protect the site have been recommended. Provided the site specific protective recommendations are implemented, archaeological clearance is recommended for Benson-Montin-Greer's existing Cañada Ojitos Unit No. 18 (C-5) well pad and access road in advance of proposed maintenance work. If you have questions, please feel free to contact me.

Sincerely,

  
Lyn Wharton  
DCA Projects Manager

Enclosure

cc: Mike Bremer, Santa Fe National Forest  
Tony Largaespada, Jemez Springs Ranger District

A Cultural Resources Inventory of  
Benson-Montin-Greer Drilling Corporation's Existing  
Cañada Ojitos Unit No. 18 (C-5) Well Pad and Access Road,  
Rio Arriba County, New Mexico

San Juan County Archaeological Research Center and Library  
DCA Report No. 06-DCA-148

Prepared by  
Leslie-lynn Sinkey  
Lee Cahenzli

Submitted by  
Larry L. Baker, Executive Director  
Salmon Ruin Museum, Division of Conservation Archaeology  
P. O. Box 125  
Bloomfield, New Mexico 87413  
(505) 632-2779

Santa Fe National Forest Survey Permit No. 2026-1

Submitted to  
Mike Bremer  
Santa Fe National Forest  
Santa Fe, New Mexico

Prepared for  
Mike Dimond  
Benson-Montin-Greer, Inc.  
Farmington, New Mexico

**FOREST SERVICE REPORT NO. 2006-10-008**  
**ARMS PROJECT/ACTIVITY NO. 99299**

April 24, 2006

## **ABSTRACT**

On April 11 and 12, 2006, the Division of Conservation Archaeology of the San Juan County Museum Association conducted the Class III archaeological resources inventory of Benson-Montin-Greer Drilling Corporation's existing Cañada Ojitos Unit No. 18 (C-5) well pad and access road. This report details the survey of a 200 foot by 200 foot existing well pad and associated 6,450 foot access road in advance of proposed maintenance work on the pad and along the access road. The project area is located in Rio Arriba County, New Mexico on land under the jurisdiction of the Santa Fe National Forest, Cuba Ranger District. A total of 23.76 acres was intensively inventoried.

One new archaeological site (AR-03-10-02-1817/LA 152875) and two isolated finds were recorded during the project. The site has been recommended as potentially eligible for inclusion on the National Register of Historic Places. Measures to protect the site have been recommended. Provided the site specific protective recommendations are implemented, archaeological clearance is recommended for the proposed maintenance work at Benson-Montin-Greer's existing Cañada Ojitos Unit No. 18 (C-5) well pad and access road.

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## APPENDICES

Appendix A	Nearby Sites Map (Agency Review only)
Appendix B	Santa Fe National Forest Isolated Find Forms (Agency Review only)
Appendix C	Laboratory of Anthropology Site Form (Agency Review only)

## INTRODUCTION

The cultural resources inventory for Benson-Montin-Greer Drilling Corporation's (BMG) existing Cañada Ojitos Unit (COU) No. 18 (C-5) well pad and access road in advance of proposed maintenance work was conducted on April 11 and 12, 2006, by the Division of Conservation Archaeology (DCA) of the San Juan County Museum Association. The cultural resource survey was conducted to identify historic properties that may be affected by the proposed project and to comply with Section 106 of the National Historic Preservation Act. The project area is located on lands within Rio Arriba County, New Mexico, which are under the jurisdiction of the Santa Fe National Forest, Cuba Ranger District. The Class III cultural resources inventory of the proposed access road was completed under the authority of Santa Fe National Forest Survey Permit No. 2026-1.

The project was undertaken at the request of Mike Dimond of BMG. The project was administered by Larry L. Baker, Executive Director, San Juan County Archaeological Research Center and Library, for DCA. The field work was conducted by Derek Pierce, Lee Cahenzli, and Leslie-lynn Sinkey. A map of the general project area is presented in Figure 1. Survey plats will be generated following review and acceptance of this report.

One new archaeological site (AR-03-10-02-1817/LA 152875) and two isolated finds were recorded during the survey. The site has been recommended as potentially eligible for inclusion on the National Register of Historic Places (NRHP). Details of the project, survey, cultural resources, and recommendations are included later in this report.

## DESCRIPTION OF UNDERTAKING

As a result of recent discussions between BMG and the Forest Service concerning proposed maintenance at the COU No. 18 (C-5) well pad, DCA has been requested to conduct the cultural resources inventory of the existing well site and access road in advance of proposed construction disturbance. The COU No. 18 (C-5) is currently functioning as a gas injection well that is proposed to be converted to a producing well. Maintenance activities may include limited brush clearing within the area necessary for production facilities and along the existing access road, blading of the road and pad using a rubber-tired backhoe or grader, and reentry of the well using heavy equipment. Vegetation removal will conform to the stipulations outlined in the well APD. The total area inspected was 23.76 acres.

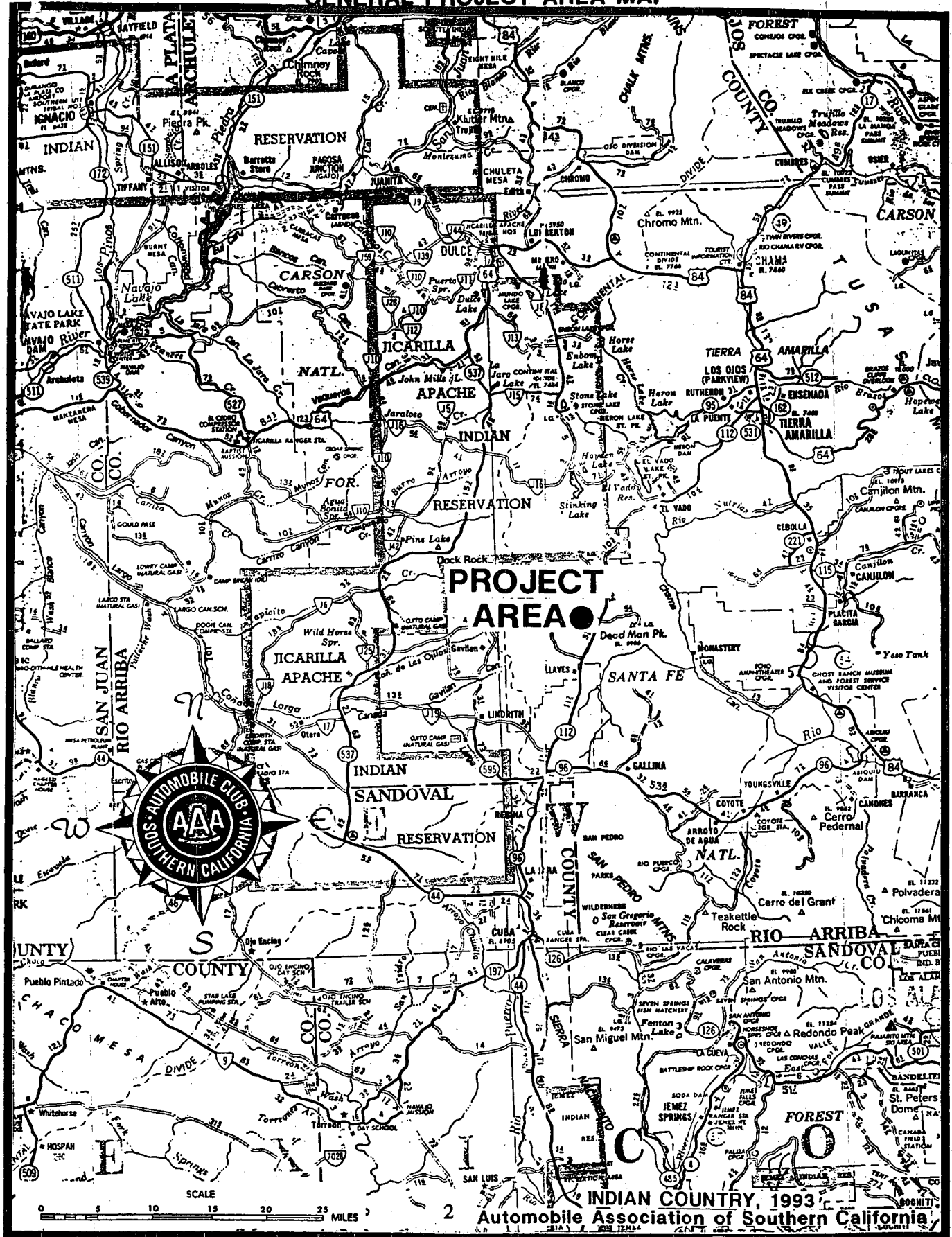
## PROJECT LOCATION AND DESCRIPTION

### **BMG's Existing COU No. 18 (C-5) Well Pad and Access Road Legal Description (Figure 2)**

Well Pad: NW 1/4 of NW 1/4 of Section 5  
T.25 N., R. 1 E., NMPM

Access Road: SW 1/4 of SW 1/4 of Section 4  
E 1/2 of Section 5  
T.25 N., R.1 E., NMPM  
Rio Arriba County, New Mexico

# GENERAL PROJECT AREA MAP

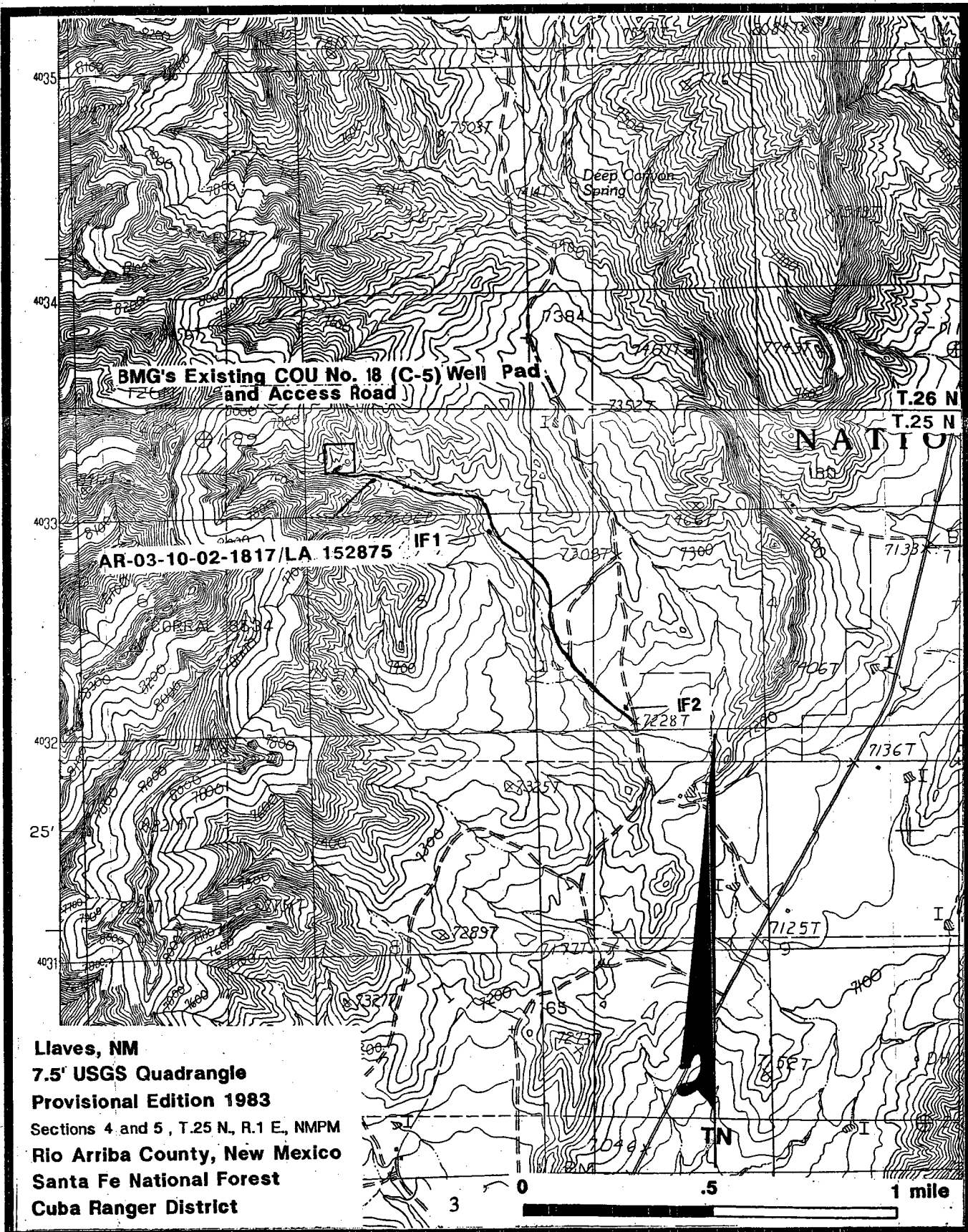


Report No. 06-DCA-148

FS Report 2006-10-008

Figure 1. Map of the general project area.

## VICINITY MAP



**Report No. 06-DCA-148**

**FS Report 2006-10-008**

Figure 2. Vicinity map showing the location of the existing COU No. 18 (C-5) well pad and access road in relation to the cultural resources.

## BMG's Existing COU No. 18 (C-5) Well Pad and Access Road - *continued*

Map References: Llaves, New Mexico  
7.5' USGS Quadrangle  
Provisional Edition 1983

Land Jurisdiction: Santa Fe National Forest, Cuba Ranger District

### Area of Effect:

Well Pad: 200 ft. x 200 ft. (.92 acre)  
Access Road: 6,450 ft. x 50 ft. (7.40 acres)  
**Total Area of Effect: 8.32 acres**

### Area Surveyed (Area of Effect and Cultural Buffer Zone):

Well Pad: 300 ft. x 300 ft. (2.07 acres) \*  
Access Road: 6,300 ft. x 150 ft. (21.69 acres) \*\*  
**Total Area Surveyed: 23.76 acres**

\* The well pad is active and has been disturbed within a 200 foot by 200 foot area. A 50 foot construction zone and 100 foot cultural buffer were inspected on each side of the existing pad.

\*\* The existing access road right-of-way overlaps the 150 foot construction zone/cultural buffer. The surveyed access length has been adjusted to avoid acreage duplication.

## SYNOPTIC CULTURAL HISTORY OF THE REGION

### The Paleoindian Period

Based on Plains models, the Paleoindian period (ca. 10,000-6500 B.C.) has been characterized as the interval when the area was utilized by highly mobile bands relying heavily on big game hunting, although more diversified foraging/collecting strategies may have been employed (Stuart and Gauthier 1981). Judge (1982) defined three types of sites: campsites, where a wide range of cooking and processing activities occurred; rearmament sites, where tool refurbishing occurred, usually in elevated settings where game movements could be monitored; and kill sites, where large game animals were killed and butchered. The Paleoindian period is made up of a series of complexes identified by point styles including Clovis, Folsom, Plainview, Agate Basin, Firstview, Cody, and Jay styles. Stuart and Gauthier (1981) and Wait (1981) have indicated that the Jay point style is completely Paleoindian; however, Irwin-Williams (1973, 1979) has stated that the Jay point style is an Archaic tradition. Although Jay materials are common in the San Juan Basin, other artifacts specifically associated with the Paleoindian period are rare and suggest that the area was probably only sporadically occupied during this time (Langenfeld et al. 1986).

Paleoindian sites are comparatively rare in northwestern New Mexico (Judge 1982). Therefore, it is not surprising that the only evidence of Paleoindian usage of the region is restricted to a few isolated projectile points. The region, containing the San Juan River and its major tributaries, was undoubtedly utilized, at least as a travel corridor, by Paleoindian groups. Recent evidence from the large Paleoindian Cattleguard kill/campsite, in the San Luis Valley, Colorado, indicates the presence of Washington Pass chert from northwestern New Mexico in considerable quantities (Timothy Kearns, personal communication 1989).

## The Archaic Period

The Archaic period (5500-500 B.C.) is characterized by increased dependence on a wide variety of plant and animal resources. The cultural/temporal framework applicable to the region is the Oshara phase sequence developed by Irwin-Williams (1973). In terms of subsistence history, Donaldson (1983:28) states that

the Jay (5500-4800 B.C.), Bajada (4800-3200 B.C.), and the San Jose (3200-1800 B.C.) phases all include a hunting and gathering based subsistence strategy with an increasing dependence on foraging through time. Primitive agriculture was then supposedly added to the subsistence pattern during the Armijo phase (1800-800 B.C.), which developed into a transitional or Basketmaker II, En Medio phase (800 B.C.-A.D. 400).

Within the past decade a number of Archaic subsistence models have been developed from a series of archaeological projects conducted within the central portion of the San Juan Basin. These models generally characterize the Archaic adaptation as one involving seasonal migration timed by the maturation and availability of specific native plants within spatially differentiated vegetative zones (Elyea and Hogan 1983; Hogan 1985, 1986). In Hogan's (1986) model, the lower elevation grass-shrublands were utilized for serial foraging during the spring-fall interval and the pinyon-juniper uplands were utilized for hunting, perhaps from semipermanent basecamps, during the late fall-early spring portion of the year. The latter portion of this annual cycle would involve use of the northwestern New Mexico region, but this aspect of the model has not been adequately tested.

Irwin-Williams (1973) notes that in the Arroyo Cuervo area and the San Juan Basin, Archaic campsites are situated in canyon heads located near water and the resources of three distinct, productive microhabitats. These microhabitats include canyon rims, canyon bottoms, and springs. Resources available in these clustered microhabitats include wild grasses, cactus, amaranth, juniper, pinyon, and rushes. Considering the locality of these large campsites in areas of diverse plant resources, it is probable that plant procurement was more important than hunting (Cordell 1984). In this same vein, Irwin-Williams (1973) suggests that limited activity sites located in nearby upland and mountain areas were used as hunting camps. Tool assemblages of Archaic sites, however, indicate a mixed hunting and gathering economy (Judge 1982).

## The Puebloan Period

The Puebloan Period (A.D. 600-1540) in north-central New Mexico is characterized by two contemporaneous cultural traditions, the eastern Anasazi Tradition along the lower Chama and Rio Grande drainages and the Gallina Tradition in the mountains to the north and west. The Anasazi occupation of the upper Rio Grande is well documented after A.D. 1200. Large rectangular masonry pueblos were constructed and new styles of ceramics were introduced, some of which bear a strong resemblance in terms of design style to ceramic styles found in the San Juan Basin and Mesa Verde regions. Tsiping Ruin, which dates between the late 1200s and the early 1300s, is characteristic of Rio Grande Anasazi architectural style. The pueblo has more than 300 rooms, although probably not all of them were in use simultaneously (Smiley et al. 1953). The nearby mountains would have served as hunting areas. Populations in the Rio Grande area appear to increase through time until the coming of the Spanish in A.D. 1540.

The proposed project is situated within the area known as Largo-Gallina. The Gallina Tradition or cultural phase (A.D. 1100-1300) was initially defined in 1937 by Frank C. Hibben. Hibben's excavations in the Cerrito Ruins group along the Gallina River revealed unique architecture and material culture traits (Hibben 1938). Contemporaneous with Hibben's work was H.P. Mera's research conducted on the western side of the Continental Divide in north-central New Mexico. Mera's investigations culminated with the definition of the Largo cultural phase (Mera 1938). The material culture, masonry, and architecture of the Largo so matched that previously described as Gallina by Hibben, that the two cultures were merged into the Largo-Gallina phase, now commonly referred to as simply Gallina.

The Gallina culture is characterized by unique forms of architecture, settlement and subsistence patterns, and material culture in comparison to nearby contemporaneous cultures. Distinctive attributes include large single house units associated with contemporary pithouses and agricultural terracing. The thick-walled masonry houses, rectangular in plan, are found individually and in small groups. The standardized interior features of the house units include a north-south orientation of a fire pit and other features. Walls are routinely heavily plastered, with some containing murals. The floors are often flagged with thin sandstone slabs.

Artifacts distinctive to the Gallina phase include tri-notched axes, clay pipes with flared, bell-shaped bowls, semi-lanceolate knives, and large basalt arrow shaft straighteners with notched crests. Ceramics generally indicate a paddle-and-anvil construction technique and include both plain and carbon-painted vessels. Vessel shapes include large decorative, narrow-necked ollas, small bowls, and double-handled jars.

The Gallina culture is thought to have had its origins in the upper San Juan drainage of northwestern New Mexico and southern Colorado and to be the result of migration (Ford et al. 1972). This hypothesis is based on the abandonment of the more northerly portions of the eastern San Juan drainage in the A.D. 900s, the proximity of the two areas, presumed similarities between ceramic decorative styles of the Rosa-Piedra phase of the upper San Juan to those of Gallina Black-on-gray, and the use of semi-subterranean rectangular rooms by both groups. While a relationship between the Rosa-Piedra and Gallina is assumed, it is still inadequately demonstrated.

### The Historic Period

The historic period in New Mexico begins with the arrival of Coronado in A.D. 1540, however, northern New Mexico did not experience the full impact of Spanish culture until the establishment of Spanish settlements by Juan de Oñate. Initial Spanish settlement in the Chama area involved a land grant to Bartolome Trujillo in A.D. 1794, which was located on both sides of the Chama River and extending as far as Arroyo de Abiquiu (Salazar 1976). Due to Indian raiding, the settlers of this grant petitioned to allow them to resettle in more populated areas. Utes and Comanches were well known in this area, and there is archaeological evidence that early Navajo were living and perhaps keeping sheep in the Piedra Lumbre Valley (Schaafsma 1979).

Settlers returned to the area in A.D. 1750, reestablishing themselves in the area currently known as Abiquiu. The church at Santa Rosa de Lima de Abiquiu and associated community, which originated in A.D. 1740 on the south side of the Chama River, continued until A.D. 1900 and remains as a ruin surrounded by the rubble of the original settlement (Salazar 1976). The community at Abiquiu became a trade center, and areas to the west served as hunting territory.

## AREA ENVIRONMENT AND CURRENT CULTURAL SETTING

The project begins on a gently sloping forested plain about 2.5 miles (4.0 km) north of Llaves. The access road begins at Forest Road 5 and extends west, entering a narrow unnamed canyon that increases in elevation. The well pad is located at the western end of the project area. New Mexico Highway 112 borders the project area to the east, Deep Canyon Spring to the north, and Spring Canyon to the west and south. The project is in a transitional woodland-forest vegetative zone with an overstory of Douglas fir and ponderosa pine in the higher elevations and juniper and oak brush on the plain. Understory vegetation includes sagebrush, raspberry, holly, yarrow, rabbitbrush, mountain mahogany, gilia, tansy mustard, snakeweed, and various grasses including grama, galleta, Indian rice, and cheat. Sediments are sandy silt.

Modern disturbances to the general project area have been minimal. Disturbances noted were several modern hearths and trash, limited erosion and surface disturbance resulting from livestock use of the area, and the construction and use of Forest Service Road 5 as well as two-track roads.

Prehistorically, native flora and fauna was used for food, clothing, and select types of tool manufacture. Local non-food resources include sandstone and cobbles for building material and tools, clay for ceramics and construction material, and trees for building materials and fuel. Currently, the region is used for a variety of activities. Oil and gas traction remains active in the area. The construction of numerous roads for energy resources development as well as for recreation has made the area readily accessible.

## EXISTING DATA REVIEW

Searching existing records is essential in any cultural resource management undertaking in order to determine what portions of an area have been previously inspected and what sites, if any, have been identified. On April 10, records searches of the previously recorded site records at DCA and the Laboratory of Anthropology/ARMS NMCRIS data base were completed. Also consulted were copies of base maps previously provided to DCA by the Forest Service. The records searches were completed prior to the initiation of the field work. The locations of previously recorded sites are illustrated on the Nearby Sites Map and ARMS Mapserver map in Appendix A.

Numerous years of both cultural resource management and research projects conducted in the Largo-Gallina region have resulted in the identification of hundreds of archaeological sites. These sites represent Archaic, Anasazi, Navajo, Hispanic, and Anglo/Euro-American occupations as well as sites for which no cultural affiliation could be determined. Site types range from simple artifact scatters and limited activity areas to long term habitations.

The results of the file searches indicate there are 21 previously recorded sites within a 1-mile radius of the project area, two (AR-03-10-02-627/LA 23424 and AR-03-10-02-1106/LA 25258) of which are within .25 mile. Both sites are outside the area of proposed well and road maintenance/improvement construction activities. Notable among the survey projects previously conducted in the area are the survey of the Mud Springs Timber Sale Roads conducted by the Forest Service in 1981 (Smith 1981) and the Cuba District north road end closure/maintenance survey conducted by Archaeological Research and Exploration in 1984 (Rhodes 1984).

## **Traditional Cultural Properties**

In June of 1999, the National Park Service issued *National Register Bulletin 38*, entitled "Guidelines for Evaluating and Documenting Traditional Cultural Properties". The bulletin defines a "traditional cultural property" as a property "that is eligible for inclusion on the National Register because of beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1990).

The Docket 229 (Navajo) Plaintiff's Exhibit No. 687 map (Van Valkenburgh 1974) was consulted prior to the commencement of this project. The closest sacred place is *Sisnateel* (Wide Belt Mesa), located to the west of the project area. There are no known traditional cultural places within 500 feet of the proposed project.

## **FIELD METHODS**

The survey was conducted on April 11 and 12, 2006 by Derek Pierce, Lee Cahenzli, and Leslie-lynn Sinkey. The project areas were not staked prior to the inventory, however, they were delineated in the field by BMG staff. Generally, the well pad project area was defined by vegetation changes and previous disturbance associated with the construction of the well. The existing access road centerline was utilized to define the project centerline. The inventory was conducted using straight line pedestrian transects spaced at intervals of 10 m (30 ft).

Due to the level of previous disturbance and presence of well equipment, the 200 foot by 200 foot existing pad was not inventoried. Instead, a 50 foot construction zone and 100 foot cultural buffer were inspected on each side of the disturbance. The area of inventory for the access road included a 50 foot right-of-way with a 50 foot cultural buffer on each side for a total corridor width of 150 feet. As the access route overlaps the area inventoried for the well pad, only 6,300 feet of the route required new Class III inventory.

The isolated finds were plotted on the USGS 7.5' topographic map and Santa Fe Forest isolate recordation forms were completed (Appendix B). The location of the isolates was marked using a Garmin 12XL hand-held GPS unit. The new archaeological site was plotted on the USGS 7.5' topographic map. The site boundaries were determined by marking artifacts and features with pin flags. Boundaries were measured using 30 m and 100 m tapes. The site tag was marked using the GPS unit. Site recordation required the completion of a Museum of New Mexico, Laboratory of Anthropology Archaeological Site Record Form, drafting of a sketch map showing site boundaries and features, in-field artifact analysis, and photographing the site. Site and isolated find definitions applied to cultural resources comply with standards set forth in the *United States Department of Agriculture, Forest Service Cultural Resources Handbook* (FSH 2309.24).

## **CULTURAL RESOURCE FINDINGS**

One new archaeological site and two isolated finds were recorded during the archaeological inventory. The location of the cultural resources in relation to the project area is shown in Figure 2. Additional data has been submitted on Laboratory of Anthropology/ARMS Site Record Forms, which are included in Appendix C of this report.

Site Number: AR-03-10-02-1817/LA 152875 (Figure 3)

Site Type: Rock Alignment of Unknown Age

**Description:**

Site AR-03-10-02-1817/LA 152875 consists of a partially buried alignment of cobbles (Feature 1) of unknown cultural affiliation. The site measures 13 m by 9 m and is located at the base of a low rise, adjacent to a wash, the course of which has been altered slightly by modern construction. Due to this alteration, erosion has begun to affect the site. The site is in a forested vegetative setting with an overstory of ponderosa pine, juniper, and oakbrush and an understory of sagebrush, grama grass, compositae family members, Indian rice grass. A small copse of oakbrush has grown up in the midst of the site. Evaluation of site condition was not possible due to the amount of leaf litter/forest duff that currently covers the alignment.

Only the north face of Feature 1 is visible. The visible portion is 30 cm high and consists of a roughly square alignment of about 25 piled rocks in a 5.1 m by 3.2 m area (Figure 4). The rocks within the alignment are rounded and stream worn. No artifacts were observed on the site. They may have been removed by alluvial action or remain hidden beneath dense oak leaves and forest duff. A trowel test (TT1) placed near the feature revealed approximately 4 cm of decayed organic debris overlying at least 11 cm of coarse sand, which is likely an overbank alluvial deposit from a nearby wash. Additional aligned rocks were noted within the trowel test suggesting the feature may be at least two, and possibly more courses deep. The cobbles which comprise the feature are notably different from the more tabular pieces of sandstone eroding down the slope behind the site suggesting Feature 1 may be part of a roomblock. Based on surface evidence alone, however, this cannot be stated with certainty.

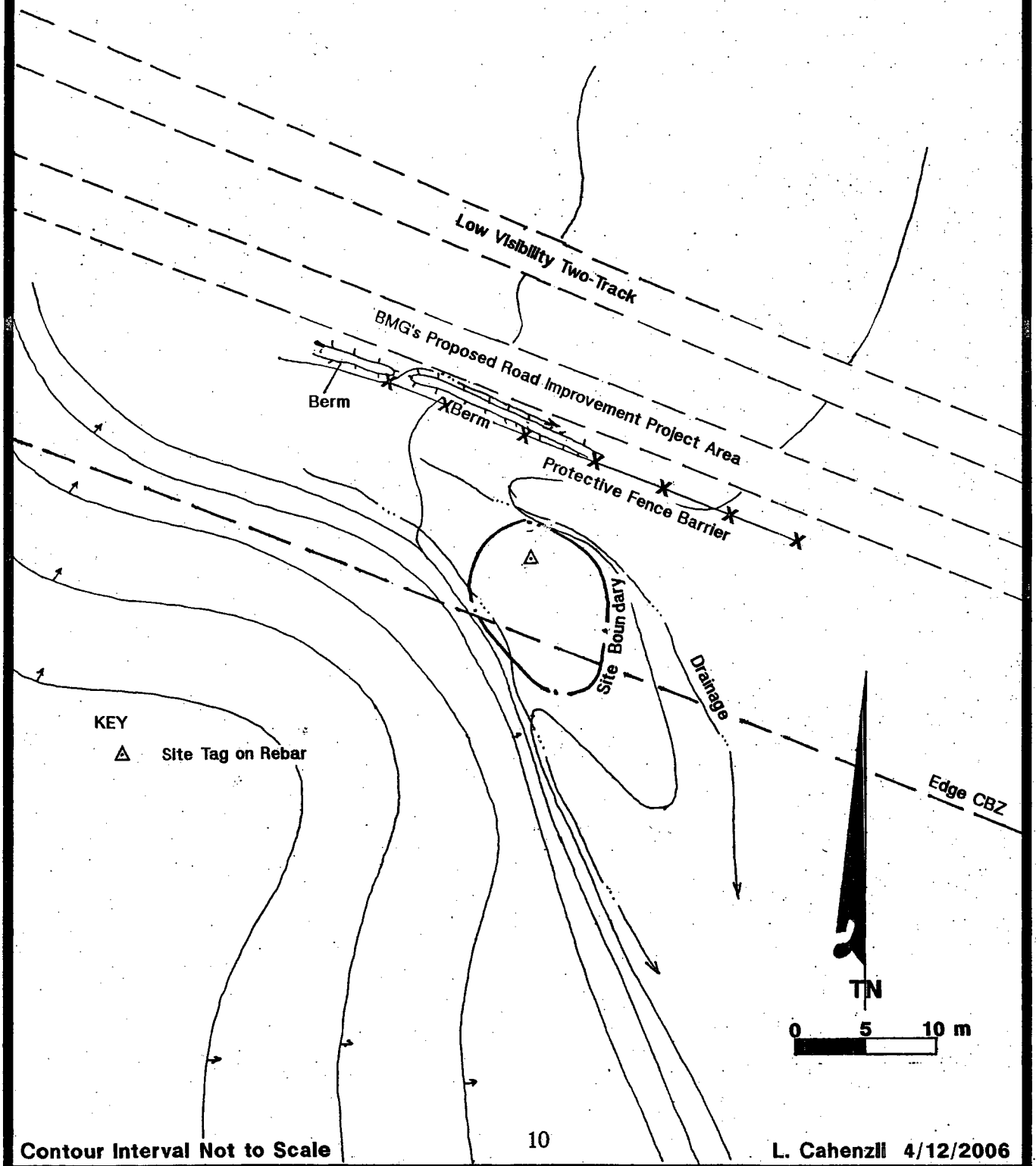
Site AR-03-10-02-1817/LA 152875 is an isolated rock alignment of unknown cultural affiliation. Based on the presence of previously recorded Anasazi Pueblo II-Pueblo III habitation sites (LA 23424, LA 23426, LA 23428) in the general area, it is likely that the site dates to this same time period. Based on the results of limited trowel testing and the depositional environment, the site has the potential to yield subsurface cultural material and possibly additional features. Further testing would be required, however, to determine the degree of the site's subsurface preservation and cultural affiliation.

**Isolated Finds**

Two isolated finds (IFs) were recorded during the inventory (see Figure 2). Both isolates were discovered in relatively flat locations. Vegetation in the vicinity of the isolates was characterized by forest species including ponderosa pine, Douglas fir, oak brush, sagebrush, and various grasses and forbs. An intensive inspection of the area surrounding each isolate was conducted to insure no additional artifacts or potential features were in proximity. Santa Fe National Forest Isolated Find Forms with locational data are included in Appendix B.

IF1 is a historic trash dump that likely dates to the early 1950s, based on the makers marks on bottles and jars and the presence of several hole-in-top milk cans. Trash items include a pint Kerr canning jar, 3 "Duraglass" jars, the bottom of clear drinking glass; 2 Karo syrup bottles, 2 clear glass food jars, an enameled steel dish pan, a lard can, 11 milk cans, including hole-in-top, a rectangular, key-wind opened food can, a large sanitary can, 35 medium sanitary cans, and an aluminum beverage can.

AR-03-10-02-1817  
LA 152875

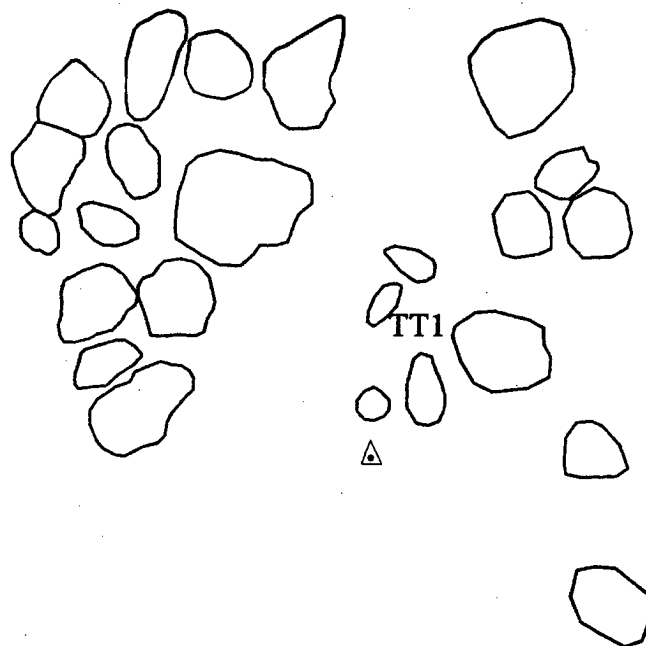


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Figure 3. Plan map of site AR-03-10-02-1817/LA 152875.

### Feature 1: Rock Alignment



**Key**  
△ Site Tag on Rebar  
13 Z  
333319 E  
4033173 N  
TT1 Trowel Test



0 1 M

L. Cahenzli 4/12/2006

Figure 4. Plan map of Feature 1 at site AR-03-10-02-1817/LA 152875.

IF2 consists of two pieces of debitage within a 23 m radius including 1) a purple quartzite secondary flake with 10 percent cortex, cortical platform, and feather termination (3.0 x 1.5 x .4 cm); and 2) a white chert tertiary flake with faceted platform and hinge termination (2.0 x 3.4 x .7 cm).

## **EVALUATION OF SIGNIFICANCE**

Evaluation of eligibility to the National Register of Historic Places (36 CFR 60) is important for the current and future management of cultural resources. The eligibility status relates to cultural resource significance, which consequently provides guidance with respect to the treatment of properties relative to proposed actions. Thus, appropriate recommendations can be made in consideration of both the resource and proposed action.

The evaluation of cultural resources for eligibility to the National Register is composed of three parts; 1) an assessment of integrity, 2) a consideration of eligibility criteria and exceptions, and 3) a consideration of the 50-year guideline. The assessment of integrity, according to Federal regulation (36 CFR 60.4), entails "objects that possess integrity of location, design, setting, materials, workmanship, feeling and association" and

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4)

The 50-year guideline simply states that sites less than 50 years in age are not considered eligible for the National Register (36 CFR 60.4). Seven exceptions to the above regulations may be applied, however, these rarely apply to prehistoric and/or historic cultural resources and are not reproduced here.

### **Eligibility Recommendations**

#### **AR-03-10-02-1817/LA 152875: NRHP Eligible**

Site AR-03-10-02-1817/LA 152875 retains integrity of location, setting, and materials. The qualities of integrity of workmanship, association, feeling, and design are not present on the surface of the site, but may remain buried. The site does not meet criteria a, b, or c. It appears to meet criterion d based on its potential to yield buried cultural deposits, which could assist in determining the site's age and cultural affiliation. The site most likely meets the 50-year guideline and is recommended as a property which is potentially eligible for inclusion on the NRHP.

### IF1 and IF2: Not NRHP Eligible

Thorough in-field recordation of the isolates was conducted. The isolates do not retain any of the qualities of integrity (location, association, materials, setting, feeling, workmanship, and design) as cited in 36 CFR 60.4, nor do they meet criteria a through d. The research potential of the isolates has been exhausted through their recordation and point-plotting. The isolates are recommended as not eligible for inclusion on the NRHP.

### **Determination of Effect**

The northern AR-03-10-02-1817/LA 152875 site boundary is located 11 m south of the southern edge of disturbance for the existing access road. The site is within the cultural buffer. A determination of No Effect is recommended with construction stipulations.

### **MANAGEMENT RECOMMENDATIONS**

The isolated finds are located in the cultural buffer for the existing access road. The isolates have been thoroughly recorded in the field and point-plotted, which has exhausted their research potential. The isolates have been recommended as not eligible for inclusion on the NRHP. No further work is recommended with regard to the isolated occurrences.

The northern AR-03-10-02-1817/LA 152875 site boundary is located 11 m south of the southern edge of disturbance for the existing access road. The site is within the cultural buffer. It is recommended that road improvement/maintenance be allowed to proceed with the following stipulations:

- 1) A protective barrier fence should be erected along the southern right-of-way edge on the south side of a small earthen berm as shown in Figure 3. The fence should begin 50 feet east of the site boundary and extend past the western site boundary another 50 feet.
- 2) All road work should be maintained on the north side of the protective fence.
- 3) An archaeological monitor should be present during all road improvement construction along the protective fence. Should any cultural material be identified, construction should be temporarily halted pending consultation with the Forest Service archaeologist.

Due to the depositional environment of the project area, it is possible that important cultural remains may lie buried beneath the surface. It is therefore recommended that construction workers be advised of this possibility, and should any cultural remains be encountered, their operations should be suspended and a qualified archaeologist contacted immediately.

Based on observations made in the field and an in-depth literature review, the proposed well pad and access road improvement work should have No Effect on any historic properties. Archaeological clearance is recommended for BMG's proposed maintenance/improvement work at the existing COU No. 18 (C-5) well pad and access road.

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