# MUSEUM OF NEW MEXICO OFFICE OF ARCHAEOLOGICAL STUDIES

### ARCHAEOLOGICAL TESTING RESULTS FROM LA 77522 NEAR ROWE, NEW MEXICO

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## **ARCHAEOLOGY NOTES 46**

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#### ADMINISTRATIVE SUMMARY

Archaeological testing was completed between May 22 and May 26, 1990, at LA 77522 located on the northeast side of Interstate 25 on the Los Trigos Ranch (private land), near Rowe, San Miguel County, New Mexico. The area surrounding the site was used as a gravel and surfacing pit by the J. R. Hale Construction Company to resurface a segment of Interstate 25. The site area was included as part of the surfacing pit after coordination was completed with the State Historic Preservation Officer.

LA 77522 was recorded as a surficial lithic artifact scatter during the survey for Surfacing Pit 90-5-S (Nelson 1990). In the testing phase, this site was recorded, mapped, and tested by Office of Archaeological Studies, Museum of New Mexico, for the New Mexico State Highway and Transportation Department.

All surface materials were recorded during an in-field analysis. Temporally diagnostic lithic artifacts were point provenienced and collected for further analysis. Five 1-by-1-m test units were excavated in areas identified as lithic concentrations. No subsurface features were encountered and all cultural material was confined to the top soil levels. Testing exhausted the information potential of the site and no further archaeological work is recommended.

MNM Project No. 41.490 (Rowe Testing) NMSHTD Project No. IR-025-5(70)308

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#### INTRODUCTION

Between May 22 and May 26, 1990, the Office of Archaeological Studies conducted limited archaeological testing to evaluate the potential importance of a lithic artifact scatter (LA 77522) on the Los Trigos Ranch near Rowe, New Mexico. This site had been identified during a cultural resource survey of proposed Surfacing Pit 90-5-S (Nelson 1990). The pit would provide material for federally funded project IR-025-5(70)308 on I-25 in San Miguel County. The site was originally avoided by gravel operations. When it became apparent that the rock underlying LA 77522 was needed for the surfacing project, a decision was made to test the site. A nearby lithic scatter, LA 77521, was also identified during the initial survey but was avoided during gravel pit operations. Both of these sites are within a few miles of two large Classic period pueblos (Rowe Pueblo and Pecos Pueblo).

The archaeological testing was requested by William L. Taylor of the New Mexico State Highway and Transportation Department (NMSHTD). The Museum of New Mexico, Office of Archaeological Studies testing crew included Linda Mick-O'Hara (project supervisor), Susan M. Moga, Scott Geister, and Lewis Kimmelmann.

#### ENVIRONMENT

The project area is located in San Miguel County at milepost 311.3 on the northeast side of Interstate 25 (see Fig. 1) and is located in a geological unit known as the Rowe-Mora Basin. Soils of the Laporte-Rock Association (Hilley 1981) support a pinyon-juniper woodland.

#### <u>Climate</u>

Annual precipitation recorded at the Pecos Ranger Station is between 406 mm and 508 mm (16 to 20 inches) and averages 386.5 mm (15.22 inches) (McCrary 1983:4). The growing season of this semi-arid region extends from late May through the end of September (Tuan et al. 1973:87).

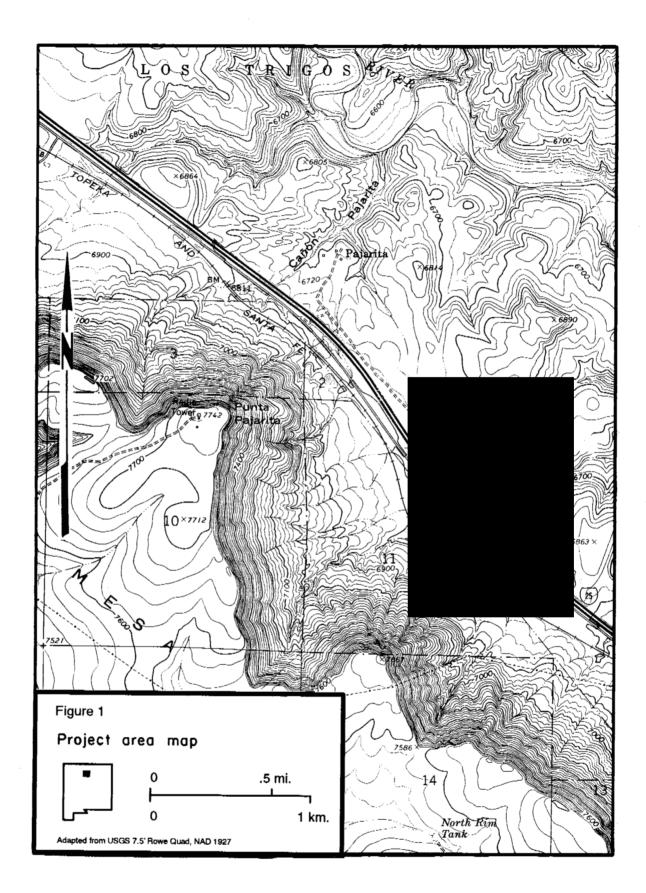
#### Vegetation

This area is also a transitional zone between the Southern Rocky Mountain province and the Sacramento section of the Basin and Range province (Fenneman 1931). Flora include ponderosa pines (*Pinus ponderosa*), cottonwood (*Populus* spp.), willow (*Salix* spp.), salt cedar (*Tamarix chinensis*), and cattail (*Typha angustifolia*), which are found on the banks of Glorieta Creek. Sand dropseed (*Sporobolus cryptandrus*), blue gramma (*Bouteloua gracilis*), wheatgrass (*Agropyron smithii*), and rice grass (*Oryzopsis* spp.) grow on the floodplains. The hills support scrub oak (*Quercus* spp.), gooseberry (*Ribes* spp.), various cacti (*Opuntia* spp.), yucca (*Yucca* spp.), mountain mahogany (*Cercocarpus* spp.), and tansy mustard (*Descurainia pinnata*) (abstracted from Zamora 1990).

#### <u>Fauna</u>

#### Mammals

Prime game species in the area include Antilocapra americana (pronghorn) and Odocoileus sp. (deer). Also present are members of the family Felidae that include Felis concolor (mountain lion), Lynx rufus (bobcat), and the family Procyonidae (weasel and raccoon). In addition, Ursus americanus (black bear), Canis latrans (coyote), and Vulpes vulpes (red fox) are found in the area. Members of the family Cricetidae (mice, rats, lemmings, and voles), and members of the family Sciuridae (squirrels, chipmunks, prairie dogs, and gophers) have been frequently sighted in the area. Sylvilagus sp. (cottontail) and Lepus americanus (jackrabbit) are abundant in the Rowe area as they are throughout most of the state.



#### Avifauna

The variety of avifauna in the area include *Parulidae* (warblers), *Troglodytidae* (wrens), *Piciformes* (woodpecker), *Fringillidae* (sparrows, finches, buntings, and grosbeaks), *Thraupidae* (tanagers), *Icteridae* (orioles), *Paridae* (titmice and chickadees), *Corvidae* (jays and crows), *Accipitridae* (hawks), *Meleagris gallopavo* (turkey), and *Trochilidae* (hummingbirds) (Ligon 1961).

#### Fish

Only a minimal number of aquatic species have been recorded in the vicinity recently: Oncorhynchus mykiss (rainbow trout), Salmo trutta (brown trout), Ctenopharyngodon idella (grass carp), and Pimephales promelas (fathead minnow).

#### CULTURAL OVERVIEW

The history of humankind in the upper Rio Grande Valley dates from the Archaic period (2000 B.C. to A.D. 400 or 600). There is no major evidence of Paleoindian activity and only a few isolated Paleoindian projectile points have been found (Stuart and Gauthier 1981).

The majority of Archaic sites are lithic artifact scatters lacking temporally diagnostic artifacts. This paucity of diagnostic materials presents a major problem for archaeologists. Because of the problems defining time periods in the upper Rio Grande, nonceramic sites have been assigned to the Archaic period (Seaman 1982).

The Early Development period spans A.D. 600 to 900. These sites are evident by a few pithouse depressions, located near water sources, and low frequency scatters of brown wares or plain gray sherds. Little is known of this period, which is void of above-ground structural sites.

The Late Developmental period (A.D. 900 to 1200) is characterized by an expanding population and a more regionally restricted settlement pattern. There was an increase in architectural components and site size (Anschuetz 1984; Cordell 1984).

Pithouses were still in use in the Tesuque Valley area at this time, but above-ground rectilinear structures with storage facilities became more prevalent. The average pueblo consisted of 10 to 12 rooms with 1 to 4 pit structures. Large communities of 100 rooms with great kivas measuring 25.5 m in diameter have also been documented (Wendorf and Reed 1955:142).

Ceramics of the Late Developmental period may correlate with the Pueblo II and early Pueblo III periods in the San Juan Basin. This sequence begins with the appearance of Red Mesa Black-on-white and the introduction of Kwahe'e Black-on-white around A.D. 1100 (Anschuetz 1984). Other artifacts manufactured during this period included chipped axes, mauls, stone and clay pipes, turquoise beads and pendants, shell bracelets, manos, metates, bone awls, and small projectile points with diagonal corner or lateral notches (Wendorf and Reed 1955).

The Coalition period (A.D. 1200 to 1325) is noted for its substantial population growth and year-round agricultural settlements. Villages consist of numerous pithouses and small masonry structures located on high ridges with terraced, rock-bordered grid-gardens marking the hillsides. The size of communities ranged between 13 and 30 rooms, but sites with up to 200 rooms have been recorded (Anschuetz 1984; Cordell 1984). Construction techniques varied according to environmental settings and temporal placement. Both adobe and stone masonry occur in all settings, but stone masonry predominates in the wet highlands and adobe in lower and drier regions.

The convenient chronological marker for this period is the switch from mineral paints to organic paints on black-on-white ceramics. This change in pigment, found in the Northern Rio Grande area, is attributed to the shift from the San Juan mineral paints of the Chaco and Mesa Verde areas to the organic paints of the Western Anasazi (Wendorf and Reed 1955:144).

In addition to the locally made Santa Fe Black-on-white pottery, intrusive wares included St. Johns Polychrome, Upper Gila Corrugated, Tularosa Black-on-white, Gallina Black-on-white, and Chupadero Black-on-white.

Slab metates and the full-grooved axes were now present in the lithic assemblages. Slablined floors, firepits, deflectors, and ventilators have been noted in rooms built during the latter part of the Coalition period (Wendorf and Reed 1955:145).

The possible influx of immigrants from the Mesa Verde/San Juan Basin region into the Rio Grande Valley has been a topic of discussion among researchers. Mesa Verde/San Juan Region ceramic decorations clearly influenced Rio Grande pottery styles around the same time that the San Juan area was abandoned (A.D. 1300) (Wendorf and Reed 1955). Though some would disagree, this and the introduction of masonry architecture into the area provide substantial evidence to support an immigration from the San Juan region.

The Classic period (A.D. 1325 to 1600) is characterized by Wendorf and Reed (1955:153) as a "time of general cultural florescence." Cultural materials reached an apex, pipes and axes were elaborately decorated, vessel forms were numerous, and carved bone tools, stone effigies, and mural paintings flourished.

Adobe and stone masonry construction continued during this period, but communities were built near more reliable water sources, and many of the late Coalition sites were abandoned (Anschuetz 1984).

During the beginning of the Classic period, locally manufactured red-slipped and glazedecorated ceramics (Glaze A wares) made an appearance, although their origins are still unclear. It is assumed that this glaze technology diffused from the Zuni and Little Colorado areas and, once accepted by the Rio Grande peoples, it spread rapidly throughout the region (Anschuetz 1984). Only a few areas retained their black-on-white tradition. The corrugated culinary pottery of the Coalition period was still in existence, but Classic period potters tended to smear the exterior corrugation and finish it with a micaceous wash (Wendorf and Reed 1955:151).

Population fluctuated only slightly during this period even though sites were abandoned, either through warfare or severe drought. Future resettlement concentrated around primary resource areas in the Santa Fe and Rio Grande river valleys.

A permanent European settlement was established in 1598 marking the beginning of the Historic period (A.D. 1600 to present) in the Rio Grande region. Missions were established and resulted in increased control by the Spanish over the indigenous populations.

In the Pecos area, Glaze V (Glaze E) decoration predominated when the Spanish arrived. Wendorf and Reed (1955:154) acknowledge that Spanish oppression was reflected in modifications of the glaze-decorated ceramics: "the designs were simplified and there was a decline in the quality of the slip."

Eventually, the glaze decoration was abandoned at Pecos and only black ware, red ware, and a heavily striated plain ware were produced. A diversity of ceramics have also been recorded in the remaining regions of the Northern Rio Grande.

The Spaniards directly contributed to cultural change in the indigenous populations. The introduction of metal tools, new grains, and domestic animals altered their diets and subsistence activities (Wendorf and Reed 1955). The use of the horse increased their hunting territory and frequency of contact with non-Puebloan groups.

Eventually, Spanish oppression and disease forced many Puebloan groups to flee their homelands. After the Pueblo Revolt of 1680 the native populations resettled in communities that approximated their present-day locations (Wendorf and Reed 1955:158).

#### TESTING PROCEDURES

Testing at LA 77522 was performed between May 22 and May 25, 1990. The entire site was resurveyed for artifact concentrations and apparent surface modification (Fig. 2). All surface materials were flagged. Diagnostic materials that could provide information on temporal assignment or cultural affiliation of the site were point provenienced and collected; all other materials were recorded during an in-field analysis organized within a 5-by-5-m grid system that was established over the entire site. Five test pits were located in the concentrations. All test pits were 1-by-1-m units established within the grid system. Excavation in these units proceeded in 10-cm levels until a sterile level was encountered. An auger test was placed in the center of each unit below the sterile level to determine whether there was any cultural fill below that level. All fill was screened through ¼-inch wire mesh and artifacts recovered from test pits were collected for laboratory analysis. Upon completion, all test pits were backfilled. Twelve auger tests were placed within the concentrations and in each quadrant of the site.

#### **Testing Results**

LA 77522 was recorded by Nelson (1990) during a survey of the area prior to the reuse of the surfacing pit near by. The site is a low- to medium-density lithic artifact scatter with three main concentration areas. The general site area averaged between five and seven artifacts for each 5-m square. The site lies on a north-facing slope and all artifact concentrations were within drainage areas that ran through the site. One projectile point with a broken tip (an En Medio point), one projectile point base, one projectile point tip (see Fig. 3), five scraper fragments, and four reworked obsidian flakes were collected from the concentration areas during in-field analysis. During site mapping, all of the collected artifacts were point provenienced.

Four lithic artifacts were recovered from Test Pit 1, Concentration One, a core fragment and a crinoid stem bead (Fig. 3d) from Level 1, and two lithic artifacts from Levels 2 and 3. An ash stain was uncovered in the southeast corner of this test pit in Levels 2 and 3 and several pieces of charcoal were collected. The stain was roughly oval in shape and the soil underlying it was the same reddish brown caliche-filled matrix that occurred throughout the rest of the test pit at that level. The ash stain and charcoal appear to have been the product of a previous tree burn in the area. Augering was done around the test pit to confirm that no subsurface features were present.

Test Pit 2, also in Concentration One, produced ten flakes in the first two levels. Level 3 was the same reddish brown caliche-filled matrix as encountered in Test Pit 1. No subsurface features were encountered and artifacts appeared randomly distributed within this 1-by-1.

Test Pits 3 and 4 were placed in the second concentration area. Test Pit 3 produced two flakes from Level 1 and one flake from level 2. Level 3 was sterile and the auger test produced no other cultural remains. Test Pit 4 produced a hammerstone and one flake from Level 1.

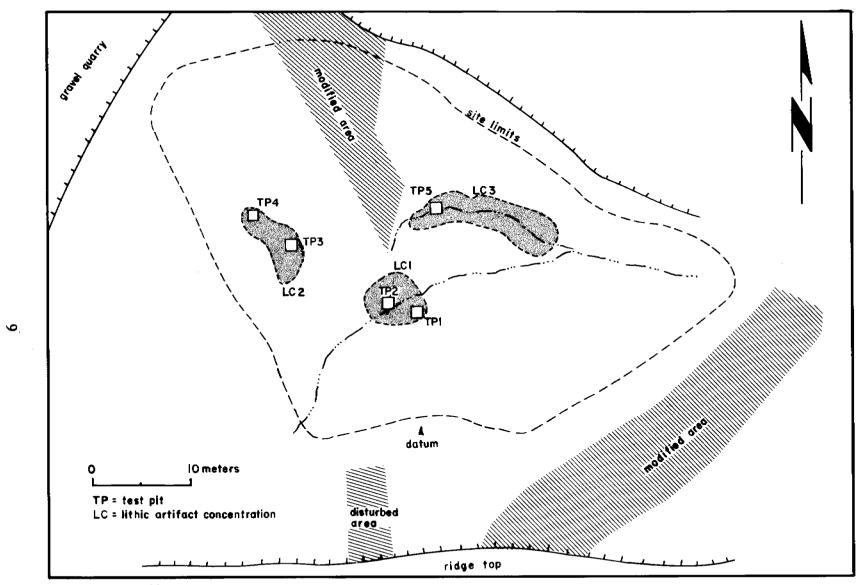


Figure 2. LA 77522 site map.

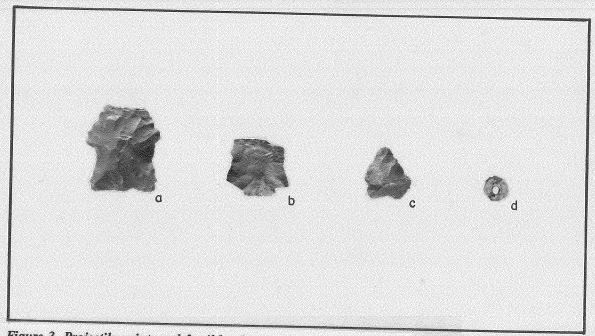


Figure 3. Projectile points and fossil bead recovered from LA 77522.

Test Pit 5 was placed in the third concentration/wash area. This was a drainage area downslope from Concentration One. All artifacts were probably washed in from that concentration. One lithic artifact was recovered from Level 1. Level 2 encountered caliche nodules and bedrock, and was sterile.

LA 77522 appears to be a surficial lithic artifact scatter. The projectile point fragments and scrapers recovered from the surface of this site indicate a long period of use for this site area, however no subsurface features were observed and sterile matrix was encountered in all test pits within 20 cm of the surface. The upper soils in the area are disturbed by a number of drainages running through the site. Therefore, the testing of LA 77522 appears to have recovered all important information from the site. It is unlikely that this site will yield further important information on the local prehistory and no further cultural resource studies are recommended at this site.

#### ANALYTIC METHODS

In-field analysis was performed on all nondiagnostic lithic artifacts found on the surface. These artifacts, which were initially flagged, were subjected to an in-field analysis within a 5-by-5-m grid system established over the entire site. Analytical attributes recorded included artifact type, material type, texture, percentage of cortex present, platform type, core portion, alterations, and dimensions.

All temporally and culturally diagnostic artifacts were collected and brought to the Office of Archaeological Studies for analysis. Attributes recorded included material type, material quality, morphology, function, percentage of dorsal cortex, flake portion, platform type and lipping, thermal alterations, wear patterns, edge angle, and dimensions.

To provide a better overall look at the lithic artifact assemblage from LA 77522, the analysis that follows looks at the in-field analysis in combination with the lithic artifacts analyzed in the laboratory. The combination of the in-field analysis with that of the collected artifacts will provide a better idea of the diversity of artifact and material types occurring at LA 77522.

#### Lithic Artifact Analysis

A total of 131 lithic artifacts were analyzed from the testing phase at LA 77522. Eightyone lithic artifacts were analyzed and left uncollected on the surface of LA 77522. Fifty artifacts were collected from the site surface and from subsurface excavations; only seventeen of these were surface discoveries. The lithic artifacts collected from the site surface were thought to be diagnostic or representative of the entire site assemblage.

There were 27 tools identified in the assemblage (Table 1). The diagnostic lithic artifacts included only one projectile point, an En Medio projectile point dating from the Basketmaker II period (A.D. 0-400). The En Medio point was made of fine-grained chert, measuring 23 mm by 20 mm by 6 mm with three bidirectional edges (Fig. 3). The base of a medium to large projectile point made of chalcedony and a small projectile point tip made of basalt were also recovered (Fig. 3). The base fragment is morphologically similar to the base of the En Medio point found. Another formal tool was a quartzite hammerstone probably used for some core reduction along with battering and grinding as indicated by the wear pattern on one end of the tool and one slightly ground side. Nine scraper fragments and three biface fragments were also recovered. (Five of the scraper fragments were part of the collected surface assemblage.) These were all fairly thin, finely worked tool fragments that lacked any apparent cortex. The majority of these tools were either proximal or distal fragments and appear to have been broken during use. These scrapers and bifaces were general-purpose tools that could have been used for activities such as vegetal food processing or butchering. There were also twelve utilized flakes included in this category. Edge wear on these expedient tools varied from a few to numerous bifacial flakes along with a few items exhibiting crushed edges. This variation in edge wear, however, appeared to be consistent with use of these flakes as cutting instruments.

TOOLS	FREQUENCY	PERCENT
Utilized Flake	12	44.4
End Scraper	2	7.4
End/Side Scraper	5	18.5
Side Scraper	2	7.4
Biface	2	7.4
Projectile Point Fragments	2	7.4
En Medio Point (Basketmaker II)	1	3.7
Hammerstone	1	3.7
TOTAL	27	<u>99.9</u>

 Table 1. Tools Recovered from LA 77522

#### Table 2. LA 77522 Lithic Material Types

MATERIAL TYPE	FREQUENCY	PERCENT
Chert	82	63.0
Chalcedony	17	13.0
Clastic Chert	7	5.3
Obsidian	4	3.1
Quartzite	18	13.7
Basalt	1	0.8
Quartzitic Sandstone	1	0.8
Rhyolite	1	0.8
TOTAL	131	100.0

The tools were predominately made of chert; the scrapers and bifaces exhibited the most variability in material type. Scrapers were made of chert, chalcedony, and obsidian. Table 2 presents a summary of the raw materials types present in the lithic assemblage from LA 77522. The dominant raw material type was chert with moderate amounts of chalcedony and quartzite and a few obsidian, basalt, and quartzitic sandstone lithic artifacts.

Most of the raw materials used at this site were obtained locally. Limestone outcrops in the area contain numerous chert nodules, and quartzites are readily available as well. The few pieces of obsidian were probably imported from a source such as the Jemez Mountains.

The selection of these fine-grained materials for reduction allowed for the production of tools with sharp cutting edges. These tools--bifaces, scrapers, and projectile points--along with the utilized flakes could be associated with a hunting tool kit related to faunal processing activities. Bifaces, as mentioned above, could have played a role in plant procurement and processing but the proximity of this lithic scatter to large pueblos in the area suggests the use of the site as a logistical hunting and collecting locale, at least during Puebloan times.

ARTIFACT MORPHOLOGY	FREQUENCY	PERCENT
Angular Debris	24	18.3
Core Flake	78	59.5
Biface Flake	8	6.1
Cores	8	6.1
Unifaces	8	6.1
Bifaces	4	3.1
Cobble Tool	1	.8
TOTAL	131	100.0

Table 3. Artifact Morphology at LA 77522

 Table 4. Percent of Cortex Present on Lithic Assemblage from LA 77522

CORTEX	FREQUENCY	PERCENT
0	71	54.2
1-25%	34	26.1
26-50%	21	16.0
51-75%	2	1.5
76-100%	3	2.3
TOTAL	131	100

Core flakes and angular debris are the most frequently occurring morphological types in this sample (see Table 3). There were eight chert cores recovered from this site and yet seventyeight utilized flakes recovered during testing fall within the core-flake category. This would indicate that although some primary reduction was taking place at this site, a number of these expedient core-flakes may have been brought to the site during day trips from the nearby pueblos for hunting, gathering, or both.

The fact that 105 items (87.2 percent of the sample) in this assemblage have no or only a small amount of cortex (Table 4) is interesting in light of the amount of core-flakes. It is possible that cortical flakes were taken off the cores at another location and that cores or larger core-flakes were then brought to this location to produce flakes as expedient tools to be used in animal processing activities.

The five test pits produced minor amounts of lithic artifacts and the churned soil context would indicate that even these artifacts were probably from surface wash. Test Pit 1 yielded six lithic artifacts, a core fragment, and a bead made from a fossil crinoid stem (Fig. 3d). The bead was a complete piece of heishi that was recovered from Level 1. Test Pit 2 produced ten lithic artifacts, Test Pit 3, three lithic artifacts, Test Pit 4, one lithic artifact and one hammerstone, and Test Pit 5, only one lithic artifact. All artifacts were recovered from the first two levels of each test pit and the soil matrix was a continuous reddish silty loam with washed gravels in both levels.

Analysis of the lithic artifact assemblage suggests the transport of core-flakes and core reduction activities along with the production of expedient flakes. These flakes may have been used to augment hunting and processing tool kits that were brought to the site. The cores recovered exhibited little cortex present and may have been brought to the site for the express purpose of producing such flakes in the advent of a successful hunt.

#### **Discussion and Conclusions**

LA 77522 is a low density lithic artifact scatter that is surficial in nature. The lithic materials were primarily recovered from concentrations in wash areas that occur throughout the site. All artifacts were recovered from the first two levels of each test pit and the soil matrix appear mixed throughout. The projectile point and projectile point fragments suggest a long period of use for this area or the reuse of larger more 'Archaic-looking' points by Puebloan period hunting parties. The small amount of cortex present on flakes, the occurrence of well-reduced cores, and the presence of utilized core-flakes indicates that cores and core-flakes may have been brought to this location from a nearby habitation site expressly to make flake tools as they were needed. Moore (1991:26), using Kelly's (1988) criteria for lithic assemblages, indicates that a preponderance of expediently produced core-flakes and a lack of biface debitage suggests that the site was occupied by a sedentary rather than a mobile population.

The location of the site on a north-facing slope when the prevailing winds are from the northeast, and the recovery of projectile points, scrapers, and utilized flakes suggest that this was a hunting site. The artifacts may be the result of projectiles broken during hunting and the production of expedient tools for the butchering of animals taken. This area may have been repeatedly used as a hunting overlook for animals coming to drink from the nearby seep. The En Medio projectile point recovered from this site may have been deposited during an Archaic occupation of the area or may be present as a result of Puebloan reuse of Archaic points. Though Archaic use of the site is unclear, the occupants of Rowe Pueblo or Pecos Pueblo, both of which are located within a day's walk from this location and may have used this location sporadically over a considerable period of time.

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#### RECOMMENDATIONS

Testing at LA 77522 demonstrated that this was a surficial lithic scatter. We believe that testing has exhausted the information potential of this locality. No further archaeological work is recommended at this site.

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