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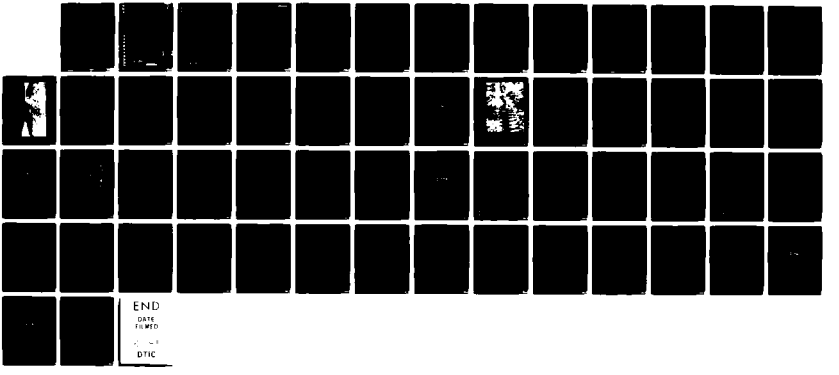

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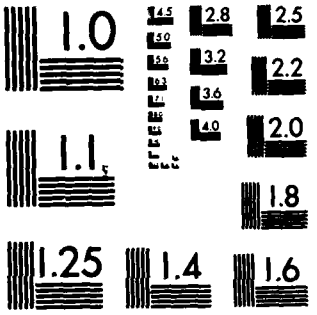

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# A CULTURAL RESOURCE SURVEY OF THE OFFENSE AREA OF THE LIVE FIRE MANEUVER RANGE, FORT IRWIN, CALIFORNIA

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RECON Regional Environmental Consultants
1084 Cudahy Place, Suite 204 San Diego, CA 92110 275-3732

# A CULTURAL RESOURCE SURVEY OF THE OFFENSE AREA OF THE LIVE FIRE MANEUVER RANGE, FORT IRWIN, CALIFORNIA

Prepared for

HERITAGE CONSERVATION AND RECREATION SERVICE
INTERAGENCY ARCHAEOLOGICAL SERVICES
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

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Prepared by

CHARLES S. BULL
PRINCIPAL INVESTIGATOR

RECON
Regional Environmental Consultants
1994 Cudahy Place Suite 204 San Diego, CA 92110 275-5722

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An on-foot survey of approximately 1,544 acres within the Fort Irwin Military Reservation resulted in the identification of two archaeological sites and 24 isolates finds. The sites, SBr-112 and SBr-4285 occur within a central six square kilometer area around No Name Playa. The survey was conducted and funded as part of a program of the United States Army for the development of a Live Fire Maneuver Range.

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ABSTRACT

In accordance with Purchase Order Number A52007(80), Regional Environmental Consultants (RECON) conducted an on-foot survey of approximately 1,544 acres within the Fort Irwin Military Reservation, San Bernardino County, California. The fieldwork required one week to complete and resulted in the identification of two archaeological sites and 24 isolated finds. The sites, SBr-112 and SBr-4285, both occur within the central core area, as did all but two of the isolated artifacts.

The survey was completed and funded as part of the program conducted by the United States Army for the development of a Live Fire Maneuver Range. The following report discusses the results of the cultural resource survey and outlines recommendations for mitigation of potential impacts that may occur as a result of the proposed training exercises.

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(continued)

# I. EXECUTIVE SUMMARY

## A. PROJECT DESCRIPTION AND RESULTS

In compliance with the National Historic Preservation Act, Executive Order 11593 and 36 CFR 800, the Interagency Archaeological Service (IAS) contracted with Regional Environmental Consultants (RECON) to conduct a cultural resource survey for the offense area of the live fire maneuver range at Fort Irwin, San Bernardino County, California. The project was funded by the United States Army, FORSCOM. The survey involved the examination of a large central area encompassing about 1,482 acres and 14 remote tank target locations, another 62 acres.

The on-foot examination required one week to complete and resulted in the identification of 2 archaeological sites and 24 isolated finds. The sites, SBr-112 and SBr-4285, both occur within the central area, as did all but two of the isolated finds.

SBr-112 is by far the largest site within the study area, covering approximately 79 acres. Cultural materials are not evenly or continuously distributed over the area. The site consists of a series of flaked lithic artifact concentrations of varying densities. Milling occurs only in one portion of the site.

SBr-4285 is a relatively small site which encompasses about 2,500 square meters. It includes an association of milling equipment, a scatter of flakes, and a possible hearth. It is located on the western edge of the study area.

Both SBr-112 and SBr-4285 are important for the understanding of prehistory in the California deserts. Information is only just emerging from cultural resources on Fort Irwin, and the sites described here are critical components of that data. Variation between desert lakes, both Pleistocene and Holocene, may be closely tied to changing environments and may serve as a key to the understanding of the Great Basin and desert lifeways. Intrasite variability may provide clues to differentiating between cultural groups known to have visited the area. Each of these topics will be discussed below.

No archaeological sites were found as a result of the examination of the target areas. The survey of the target positions encompassed an area with a radius of 75 meters with the target at the center. One site was recently recorded in the vicinity of targets 2 and 3 (SBr-4204). These two positions had isolated materials nearby but could lie at the edges of the recorded site.

## B. RECOMMENDATIONS

As a result of the present investigation, it is recommended that an area surrounding No Name Playa be avoided during the upcoming maneuvers. This area is 500 meters wide (north-south) and 2,000 meters long (east-west). By placing it off limits, it will be possible to postpone a detailed investigation of the resources. A program of investigation should, however, be designed and implemented at some future date.

The results of the investigations within the target areas indicate that no significant impacts would occur as a result of using the designated location as targets. It is possible, but as yet undetermined, that tank traffic in the area could have an adverse impact on recently recorded site SBr-4204. The present study did not survey outside of the established radius for target impacts; an assessment of transit impacts outside of these positions cannot, therefore, be made.

If the recommended area surrounding No Name Playa can be avoided, there will be no unmitigated significant impacts resulting from tank travel across the surveyed area or within the surveyed target locations.

## II. CULTURAL RESOURCE REVIEW

### A. PROJECT AREA DESCRIPTION

1. Location. The offense area of the live fire maneuver range is located at Fort Irwin, San Bernardino County, California. It consists of 2 main areas, a central block, and 14 remote tank target locations. The central area encompasses approximately 1,482 acres (6 square kilometers) with each target position being about 4.37 acres, or a total of 0.25 square kilometer.

The subject property is located approximately 26 kilometers northeast of Fort Irwin cantonment area and about 85 kilometers northeast of Barstow, California (Figures 1 and 2). It lies between the Avawatz and Granite mountains southeast of Drinkwater Lake and west of the Silurian Valley.

Graded roads cross the south-central portion of the main area west to east with primary access occurring from the main road through Fort Irwin, which passes approximately two kilometers west of the subject property.

2. Geology. The central 1,482-acre portion of the present project lies completely within a deposit of Quaternary alluvium (Smith and Ellis 1953). There is a Quaternary lake deposit in the south-central portion of the property known variably as No Name Playa, Kitten Flat, or Bernstein Lake. For present purposes, this dry lake bed will be referred to as No Name Playa.

The geologic base for the various tank targets is presented in Table 1. These areas tend to be located in positions which provide broad, sweeping views.

The No Name Playa area is relatively flat with only a slight slope to the north and south from the central drainage. Photograph 1 shows the general topographic setting of the project area. The Granite Mountains lie to the west and south, an unnamed series of hills are to the immediate northeast, and the Avawatz Mountains lie further east.

Geologic formations in the immediate vicinity of the subject parcel include Mesozoic granitic rocks to the west and south, Pleistocene nonmarine sedimentary deposits to the north, and Pliocene-Pleistocene nonmarine sedimentary deposits to the southeast. At a greater distance, but within six kilometers of the project boundaries, are Jurassic-Triassic metavolcanic rocks, Tertiary intrusive (hypabyssal), and possibly Cenozoic volcanics. Several of the tank target locations occur quite near these metavolcanic rocks.

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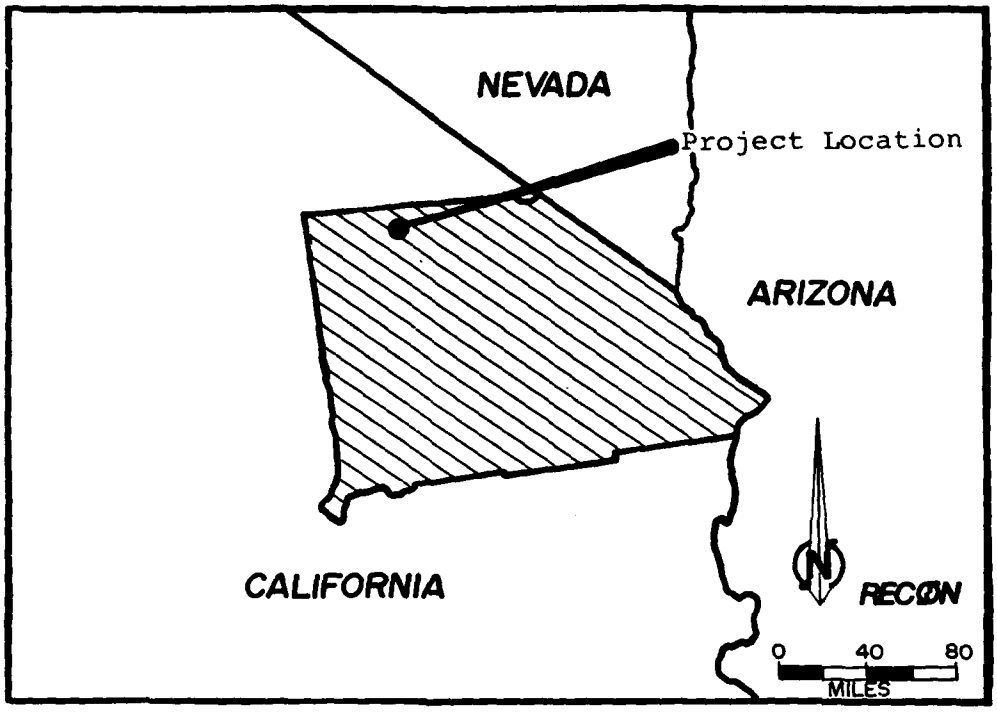


Figure 1. The location of the area surveyed relative to the County of San Bernardino is indicated above.

FIGURE 2
(Please refer to Attachment 3)

TABLE 1
(Please refer to Attachment 3)

Photograph 1. This picture shows the general setting of No Name Playa. It is taken from the west-central portion of the project looking east. Archaeological site SBr-112 extends from the foreground to the near left of the photo. (Note vehicle impacts.)

No Name Playa has a central drainage that trends west-east and exits the valley area in the southeast corner. The drainage extends through the Red Pass Lake Basin area and ultimately ends in the Amargosa River on the east side of the Avawatz Mountains. It will be apparent in the discussion of the survey results that this drainage is of critical importance to the aboriginal occupation of the valley area.

3. Biology. The offense area of the Fort Irwin project is within the western portion of the Mojave Desert province. The vegetation in the project area is characteristic of this province and falls within the creosote brush scrub plant community. The dominant species in the project area is Creosote Brush (Larrea tridentata). The surrounding hills and mountains support a different plant mixture but remain within the creosote brush scrub community.

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B. SURVEY METHODS

1. General Activities. The cultural resource survey of the offense area of the live fire maneuver range at Fort Irwin involved the on-foot survey of about 1,543 acres, the completion of a limited subsurface test, and the evaluation of potential paleontological materials. In addition to the field investigation, records of the San Bernardino County Museum were examined.

The on-foot survey of the project area was approached in two separate ways. One involved the large central area and the other involved the remote tank targets.

2. Central Area. In this area, transects were surveyed north and south with the southern road serving as a reference boundary. Transect widths were approximately 20 meters, with the distance between surveyors being somewhat less in areas of highly dense material and slightly greater in the relatively void northern segments.

Problems with the collection of information within the central segment were the accurate plotting of recovered information and the precise determination of location. Location procedures were done by referencing all identified resources into two topographic features which could be unambiguously identified on reference maps. In addition, items were plotted in relation to two arbitrary locations, which were in turn referenced to three major topographic reference points, with the use of a transit. In this manner, three or four points were established for each identified specimen or assemblage. The absence of topographic features within the project area, combined with the large scale of the available maps, required this plotting procedure.

The fieldwork on the subject property required a total of 28.5 person-days. Three person-days were used surveying tank target locations, 4 person-days were expended in subsurface testing, and 21.5 person-days were used to survey the central 1,482 acres. This provides a survey rate of about 69 acres per person per day for the main area and 20 acres per day for the target sitings. The target positions required an inordinate amount of time because of the travel required between each location and the time necessary for relocating target points.

In addition to the on-foot field survey, limited subsurface investigation was also conducted. This work involved the excavation of two standard one- by one-meter test units and a single small unit covering 2,500 square centimeters. The large units were excavated to provide a preliminary understanding of the potential for subsurface components at the two recorded

sites, and the small unit was completed to evaluate the potential that a rock alignment was culturally produced. Postholes excavated in the bottom of the test units extended the examination to an even greater depth.

Information gained from the excavated units was supplemented with data observed in rodent holes, tank tracks, and, in one case, a well to further evaluate subsurface potential.

3. Tank Targets. For presentation purposes and data recording, tank target locations were assigned arbitrary numbers. Items found in the survey area around the targets were referenced by angle and distance to the specific target position.

The survey of the target locations involved the examination of an area encompassed by a circle with a radius of 75 meters and the focus being the target location. Transects were surveyed from the center and concentrically around the target point.

C. SURVEY RESULTS

1. General. As a result of the procedures described above, 2 prehistoric archaeological sites were identified along with 24 isolated finds. One of the two sites had been previously recorded, although the actual extent had not been determined.

Differentiating between the two main resources is somewhat arbitrary. The entire area surrounding the playa has a broad scatter of prehistoric cultural material. The definition of two sites within this area is based upon a reasonable spatial separation between the two resources.

2. SBr-112 (SBCM-3369). This is the largest archaeological site in the vicinity of No Name Playa. It was originally recorded in 1946 by A. Mohr who described the site as ". . . a small surface site on playa--marked by large quantities of flakes" (Mohr 1946). He estimated the area to be about 200 by 100 feet (Attachment 1).

The site was also described by Alsoszatai-Petheo in a brief report on a walkover by Kaldenberg, Barling, and Alsoszatai-Petheo, as follows:

> This site is a composite of several loci of activity all around a small, unnamed playa. Archaeological materials were found scattered with occasional concentrations approximately 25 to 75 meters from the playa edge. Most of the artifacts were made of chalcedony (sometimes cherty in quality) and some basalt. Aside from both primary and secondary flakes and debitage, the site produced a core/end chopping tool, a mano, several small scrapers, a cutting implement, modified flakes and ten sherds of Tizon Brown (sic) pottery. The chopping tool (made of chalcedony) showed a combination of hard-hammer percussion and pressure retouch with clear evidence of battering on its basal edge (Alsoszatai-Petheo ND:11).

He continued to indicate that most of the material appeared to be concentrated along the northern edge of the playa, although he noted some items along the southern border (Alsoszatai-Petheo ND:12).

The present survey indicated that, indeed, the site surrounds the playa, with the heaviest and most continous concentration apparently occurring at the eastern end. The great majority of cultural material is confined within an area approximately 300 meters east of the eastern terminus of the playa and 200 meters north of the lake bed (Figure 3).

FIGURE 3
(Please refer to Attachment 3)

The site encompasses over 79 acres, or 320,000 square meters, but is not continuous throughout its extent. It has a minimum elevation of 959 meters (3,146 feet above mean sea level [MSL]) with no apparent subsurface component.

As discussed in previous reports about SBr-112, the site consists of a series of concentrations of flaked lithic material. Ground stone artifacts were found in one location, but the great majority of artifacts were flaked stone. The site at large has literally thousands of flakes and pieces of debitage with a scattering of cores, blades/blanks, scrapers, and projectile points. These items occur in concentrations from as few as ten to as many as several hundred.

Stone materials represented include chalcedony, chert, basalt, and andesite. Chalcedony is by far the dominant material type, with basalts and andesites occurring only rarely.

The site has been heuristically divided into two components or loci. These are referred to as SBr-112A and SBr-112B and cover approximately 33,000 and 57,000 square meters, respectively. While each area represents an apparent association of concentrations, it would be a mistake to assume increased homogeneity, either temporally or culturally, within either area or to consider the distributions to be continuous or uniform.

In addition to the limited ground stone artifacts, a single projectile point was found near SBr-112A. This Rose Spring/Eastgate series point (Figure 4) is typically associated with a milling period occupation. It has also been variously included in Rogers 1939 assessment of the Amargosa II assemblage as Late Mohave Desert points (Rogers 1939).

Other than the single projectile point, no diagnostic artifacts were identified. A careful, comparative analysis of materials found at SBr-112 may aid in providing a greater range of diagnostics and, thus, help overcome this limitation.

There has been historic disturbance to the site in the past. This disturbance has been primarily limited to tracked vehicles crisscrossing the site. Photograph 2 shows the type of damage typical to the archaeological site. This track, running east-west, cuts across a small flake concentration within SBr-112A. The damage to the area is most significant when a tracked vehicle turns within the site area. Turning can accentuate the damage and result in substantial displacement and breakage of artifacts.

There are two other elements of historic disturbance to the site: a series of graded roads and an excavated well. The well is of particular interest because it provides a sidewall of lake deposit for a depth of approximately 10 to 15 feet.

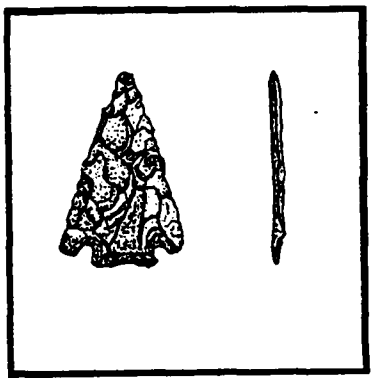

Figure 4. Isolate #15--Rose Spring/Eastgate series projectile point. Scale = 1:1.


Photograph 2. This picture shows types of damage which have occurred to SBr-112.

Unfortunately, adequate safety equipment was not available to permit the survey team to enter the well and face-down the sides for preparation of a detailed stratigraphic record. A distant examination of the sidewalls does provide some information to combine with the results of the limited test program.

The well itself has a sloped opening with an angle of approximately 45 degrees leading to the vertical shaft, which is about 10 feet deep. The total depth of the well is approximately 15 feet. The walls of the well did not show any major change in the stratigraphy of the lake bed in which it was located. Wash from the surface has clouded the sides of the well, however, and any interpretation must be done with caution. It appears, however, that the deposition is homogeneous for at least the first few meters of deposition.

The limited testing of this site consisted of the excavation of a one- by one-meter test unit at locus B and a small 50- by 50-centimeter unit adjacent to a potential feature at locus A. All soil was passed through a one-eighth-inch mesh screen. Information from these two units was augmented by examination of the deep well and rodent burrows which are scattered throughout the area.

The standard test unit was dug to a depth of 30 centimeters. The soil was consistent throughout the limited depth of this unit and had a Munsell soil color of 10YR 6/4. Artifacts were found on the surface and in the first 10 centimeters, but nothing was recovered below the 10-centimeter level (Table 2).

The second, smaller unit was placed adjacent to a series of rocks partially exposed on the surface of the dry lake near the southern edge of locus A. This unit was excavated to evaluate whether or not the rock feature was a cultural or natural phenomenon. No artifacts, charcoal, or ecofacts were found in this unit, and no indication of cultural origin was established for the rock association.

The presence of artifacts within the first ten centimeters of the one- by one-meter test unit apparently indicates only a limited subsurface component. It is quite possible that this element is the result of historic disturbance in the area and the result of recent burying of primarily surface materials. There is no reason to believe that there is not a similar thin cap of subsurface items at other places in the No Name Playa area and that, similarly, their occurrence is predominately a secondary deposition. Of course, the sample taken from this site is not sufficient to negate the existence of a significant subsurface element at SBr-112. It does support surface observations and information collected elsewhere in the Fort Irwin area (Gordon, IAS, 8/10/80).

TABLE 2
ARTIFACTS FROM SBr-112
UNIT 1

| Level | Item Count | Description | Weight |
|---|---|---|---|
| Surface | 1 | Sheet metal fragment | 3.2 grams |
| 0 to 10 centimeters | 1 | Chalcedony scraper 7 cm x 6.5 cm x 2.6 cm | 164.6 grams |
| | 1 | Metavolcanic flake | 6.6 grams |
| | 32 | Chert flakes | 47.5 grams |
| | 146 | Chalcedony flakes | 169.9 grams |
| Below 10 centimeters | -- | -- | -- |

One interesting component of the No Name Playa area and SBr-112 in particular was the discovery of pieces of calcium carbonate. It has been proposed that the material found is bone of paleontological interest. During the present survey, several pieces of this material were examined by RECON's paleontological coordinator. Initial opinion was that the identified specimens were pieces of root casting and not actually bone. Because of the concern over this issue, a piece of this material was removed and submitted to the San Diego Museum of Natural History, where it was sectioned and subjected to microscopic evaluation. The results of this review indicated that the material collected was root casting and not bone as suggested.

3. SBr-4285. This site is located at the western edge of the project area and is substantially smaller than SBr-112. It consists of a metate, a portable slick, hearth area, and limited flake scatter. It covers approximately 2,500 square meters but is concentrated in an area of only 65 square meters.

The site is slightly higher in elevation than SBr-112 to the east with a minimum elevation of approximately 975 meters (3,200 feet above MSL).

As with SBr-112, a single one- by one-meter unit was excavated to provide additional information concerning a potential subsurface component. The hearth feature is partially embedded in the soil, and a subsurface element was, therefore, a distinct possibility.

The results of this limited examination revealed no subsurface component. No cultural materials were found below the surface, and no soil variation was detected. The soil color in this unit was Munsell color 7.5YR 5/4.

4. Isolated Artifacts. Forty-three items were collected from 24 broad locations throughout the study area. These isolated materials fall, for the most part, outside of the central band around the playa. Because of potential impacts that may result from the upcoming project, these materials were collected to avoid any later costs for relocating and collecting.

These items collected during the present project are summarized in Table 3. Three items are of particular interest and are illustrated in Figures 5, 6, and 7. These objects are typical of the blade/blank specimens found throughout the project area in association with flake scatters. When these ovate objects are found in association with flakes and debitage, the materials from which both the tools and flakes are provided vary. While both are usually a chert or chalcedony, the specific source of these specimens often differs.

TABLE 3
ISOLATED FINDS SUMMARY

| Isolate Number | Number of Items | Description |
|---|---|---|
| 1 | 2 | Chalcedony flakes |
| 2 | 2 | One chalcedony and one chert blade tip |
| 3 | NA | Number not used |
| 4 | 6 | Chalcedony flakes |
| 5 | 1 | Piece of basalt debitage |
| 6 | 1 | Chalcedony flake |
| 7 | 1 | Chalcedony blade tip |
| 8 | 2 | One chert and one chalcedony blade tip |
| 9 | 2 | Chalcedony flakes |
| 10 | 3 | Two andesite flakes and one chalcedony flake (tank target 3) |
| 11 | 1 | Multiple retouched chalcedony flake |
| 12 | 1 | Chalcedony flake |
| 13 | 3 | One andesite flake, one chalcedony flake, and one piece retouched quartz (tank target 2) |
| 14 | 2 | One chert and one chalcedony flake |
| 15 | 1 | Chalcedony Rose Spring/Eastgate point |
| 16 | 4 | One chert blade tip, two chalcedony flakes, and one chert flake |
| 17 | NA | Discarded in the lab as noncultural |
| 18 | 1 | Obsidian flake |
| 19 | 3 | Metavolcanic flakes |
| 20 | 1 | Edge-damaged basalt flake |
| 21 | 1 | Piece of bone or root fragment (possible paleontological interest) |
| 22 | 1 | Chalcedony blade/blank |
| 23 | 1 | Chalcedony blade/blank |
| 24 | 3 | One chert core/blank, one chalcedony flake, and one piece of obsidian |

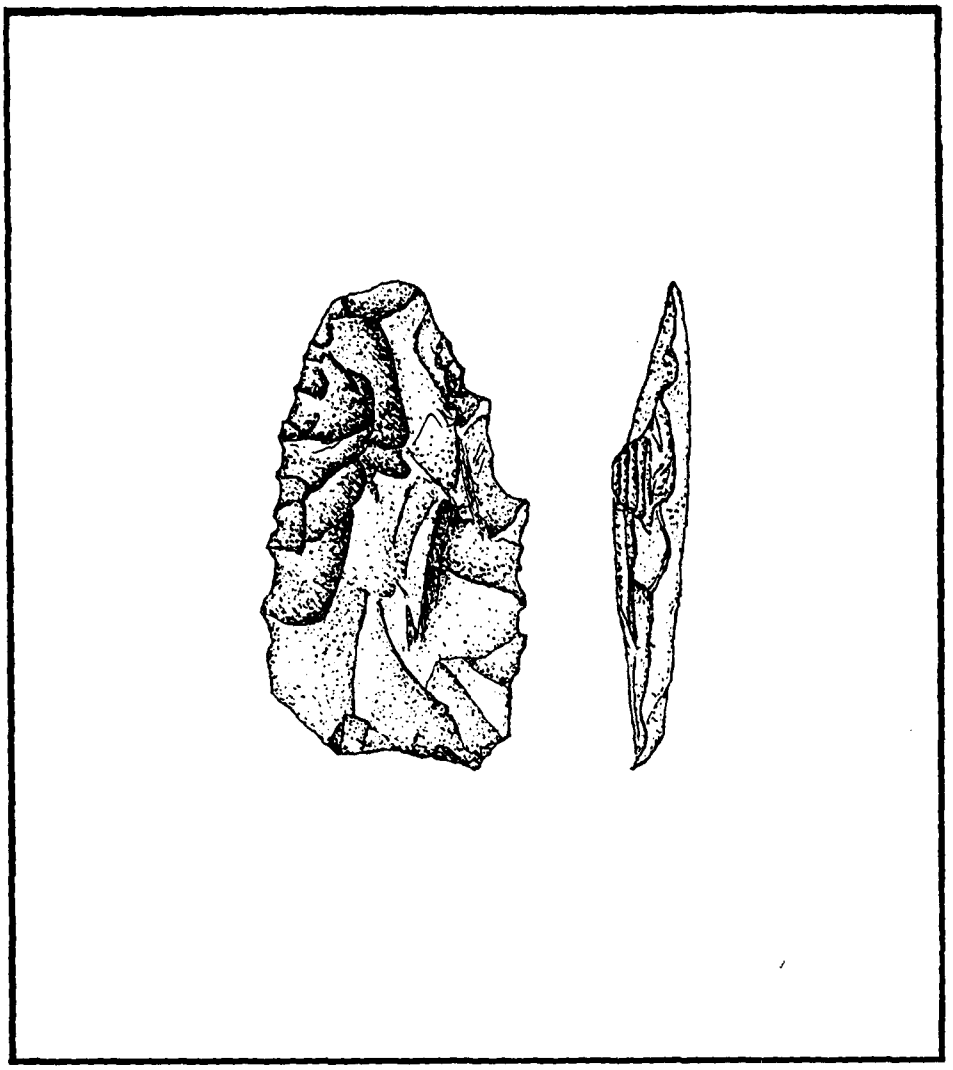

Figure 5. Isolate #22--Chalcedony blade/blank. Scale = 1:1.

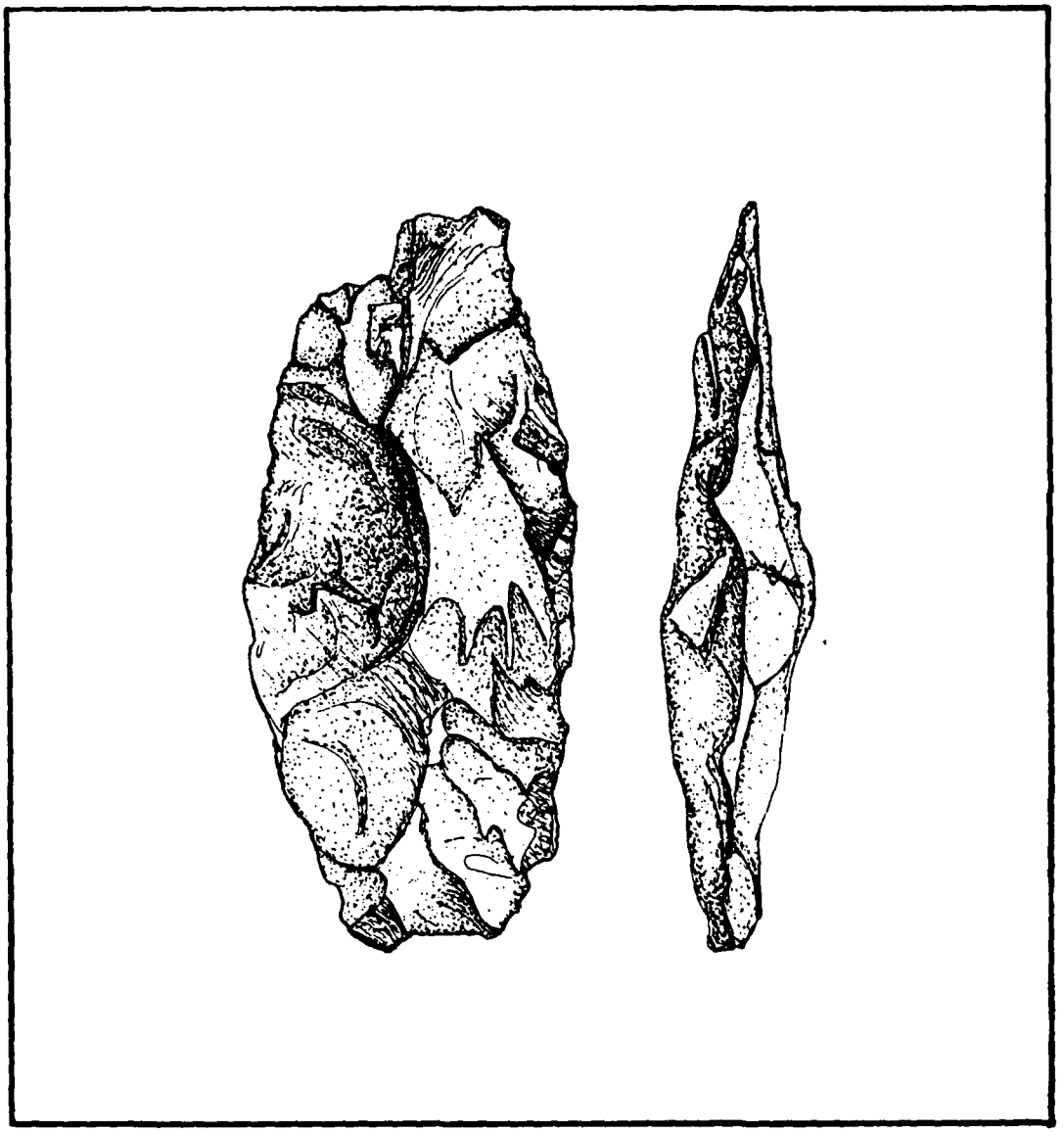

Figure 6. Isolate #23--Chalcedony blade/blank. Scale = 1:1.

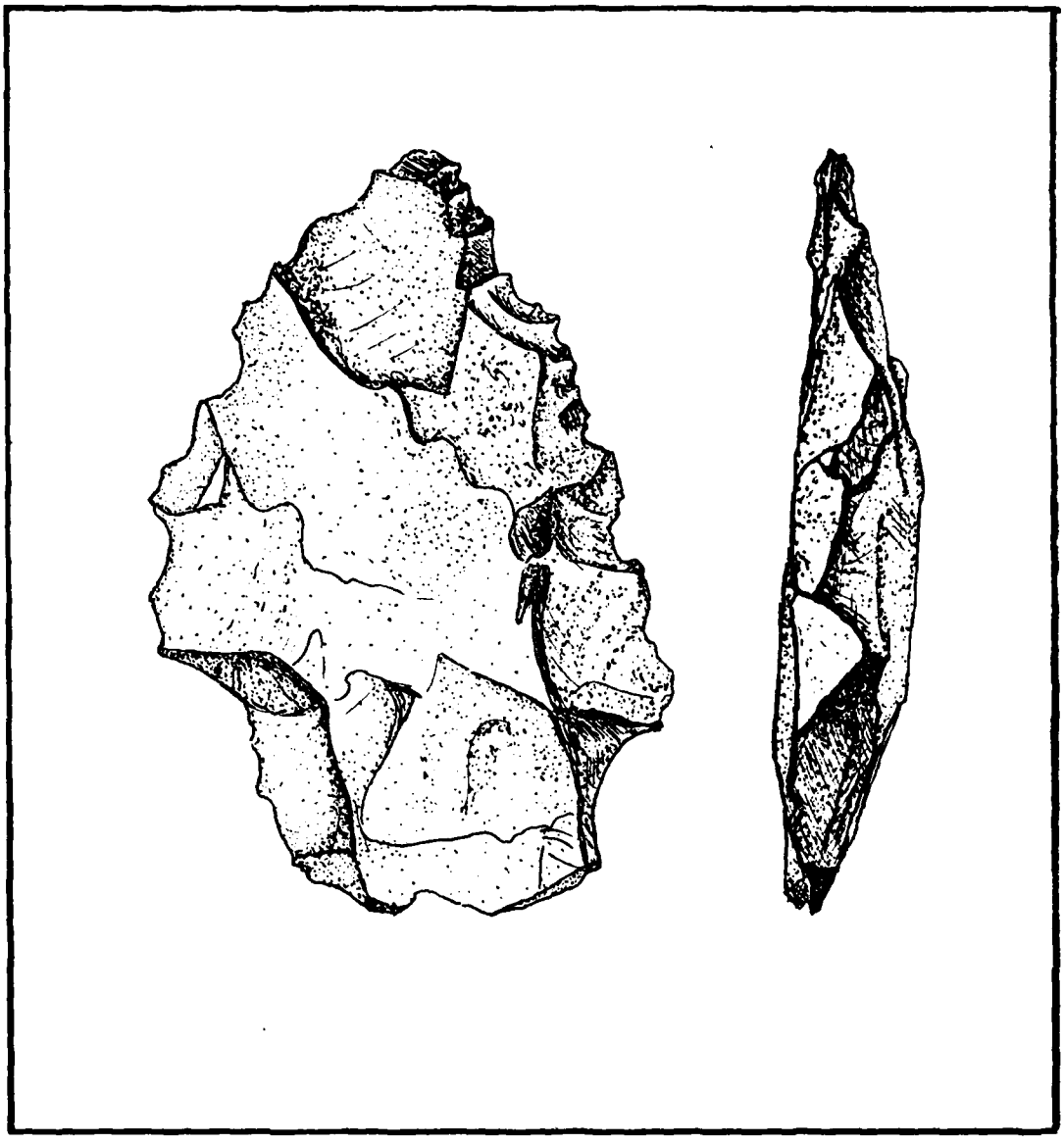

Figure 7. Isolate #24--Chert core/blank. Scale = 1:1.

Isolates occurred at only 2 of the 14 tank targets. Isolate #13 was found in the radius of tank target 2, and isolate #10 was found near tank target 3. The former consisted of one andesite flake, one chalcedony flake, and a piece of retouched quartz. The latter had two andesite flakes and one chalcedony flake.

Both of these target positions lie near SBr-4204, recently recorded by Kaldenberg and Davis (Attachment 2). Target 2 (isolate #13) is on the northern edge of the site, north of Bow Willow Wash. It is probable that the isolates found near this position are associated with the site materials located further south.

Tank target 3 is situated immediately east of a plotted quarry workshop. This area lies approximately 200 meters west of the target position. While this was just outside of the present study area, it is quite possible that the isolated materials found near this location were associated with this quarry area, the only problem being that the materials found here are apparently not available on-site, except potentially in the gravels which cover the area.

## D. DISCUSSION

One characteristic stands out from a preliminary review of the survey results: drainage through and out of the No Name Playa area played a significant role in directing land use patterns. The playa was not the sole feature defining the use of the area.

The fact that substantial archaeological sites can be found around many of the playas in the California deserts indicates a key role of these dry lakes in prehistory. The linear pattern of materials on No Name Playa, extending in a west-east direction along the valley's central drainage, emphasizes the role that the drainage played in the course of prehistory.

The association of cultural materials with the general drainage pattern of the basin is further documented by the recent discovery of another archaeological site near the place where the wash exits the small valley. This wash has been termed Bow Willow Wash by Kaldenberg and Davis (1980), the recorders of this site.

The site is located to the east of the project area and has been recorded as SBr-4204 by Kaldenberg and Davis (1980). It is also referred to as the Secret Site or the Ash Bed site. Near this site, the present investigation found three isolated artifacts. These items were located near tank target 2 and were found in the bottom of the wash itself. They could well be a part of SBr-4204.

It should be noted that No Name Playa, Bow Willow Wash, and Drinkwater Lake are all located on one arm of a drainage system that ultimately ends in the Amargosa River. A careful examination of the course of this system may provide an understanding of the areal relationships of peoples responsible for the materials on this side of the Avawatz Mountains with an occupation along the Amargosa River.

The cultural materials on No Name Playa have the potential of providing a great deal of valuable information for understanding prehistory in the California deserts, and anthropology and archaeology in general. Besides the assessment of land use patterns as influenced by the drainage system, several other problems can be addressed with information recovered from the sites described above.

Cultural resources have been identified around Drinkwater Lake, Nelson Dry Lake, McLean Lake, and others, as well as around No Name Playa.

There are several potentially important differences between the cultural resources around each of these lakes. Variations fall within both assemblage and pattern components. Materials around Drinkwater Lake are broadly scattered and consist of small flakes with only occasional cores or tools. These small flakes occur on a gravel bar surrounding the lake bed. There are limited gravels at the east end of No Name Playa which support cultural materials similar to the Drinkwater assemblage, but the bulk of SBr-112 lies within the vegetation surrounding the lake and exit drainage.

Nelson Lake cultural materials differ from No Name and Drinkwater assemblages both in type and in the kinds of lithic materials represented. While the distribution around the lake itself is similar to both Drinkwater and No Name, there are assemblages and material differences.

In each instance the importance of the playa is apparent, but the nature of the differences in patterns and characteristics could potentially result from temporal or geneological causes. Omitting information from any single playa, therefore, would greatly limit the ability to understand these specific exploitation patterns.

In addition, on No Name Playa it should be possible to use the clusters of artifacts to define social work groups, assess the functional nature of the tools employed, and provide an expanded series of diagnostic criteria for general prehistory.

Each of these problems is addressed based on the same philosophical foundation: the closer any two points on an archaeological site the greater the likelihood the materials are the result of the same socio-cultural group. Specifically, it is more likely that materials within any single cluster of artifacts are produced by the same group than materials from any two, distinct clusters.

The site at No Name Playa provides a unique opportunity to employ this concept, as horizontal displacement of artifacts has been minimal. While past military activity has, undoutedly, displaced items, the disturbance has not significantly altered the individual clusters.

Perhaps the most difficult and ultimately most valuable of these questions would be the expanded diagnostic series for the California deserts. While few of the artifacts identified during the present survey are currently considered diagnostic, retouch method, tip angle, and materials used could all be incorporated into a diagnostic scheme. It would be necessary to associate particular sets of variables with previously established criteria.

Any evaluation of diagnostic criteria must deal with the validity and reliability of the existing prehistoric explanation. While it is not within the scope of the present report, any detailed examination of the No Name Playa cultural resources must address this concern.

Of course, the prehistoric explanation is not only critical for the understanding of the intrarelationships at SBr-112 and No Name Site 1, but for relating the sites found around Drinkwater Lake and Bow Willow Wash. The temporal relationships among these sites and others along this drainage system must be established in any attempt to understand local land use patterns.



30<

## III. RECOMMENDATIONS

The proposed training maneuvers could, as conceived, have an adverse effect on archaeological sites SBr-112 and No Name Site 1. The nature of the potential disturbance is evident at points throughout the present study area (see Photograph 2). Past maneuvers have resulted in some displacement of and damage to cultural materials. To date, the sites have not been totally impacted, and there is still a great deal of information available from their study. The potential impact from the proposed project, however, would be significant.

As opposed to the central project area, the proposed activities would not have an adverse impact in the immediate vicinity of the tank targets. Only six isolated artifacts were found near the target areas: three at target 2 and three at target 3. As such, the use of the areas for targets will not result in the disturbance of the area's cultural record.

It should be noted that one archaeological site (SBr-4204) has been recorded along Bow Willow Wash, which is located near tank targets 2 and 3. It is part of the recorder's recommendation that "No tanks or traffic shall be permitted near the SBr-4204 site area" (see Attachment 2). Since the present survey did not investigate the entire area of SBr-4204 but only a small portion potentially on the sites' boundaries, an evaluation of this recommendation cannot be made. Use of the 4.36-acre targets will not adversely affect the area's cultural resources.

Based on the nature of the proposed impacts, a portion of the No Name Playa area should be placed off limits. The area recommended for exclusion from the maneuvers encompasses a strip 500 meters wide and 2,000 meters long (Figure 8). If this area can be avoided, the significant impacts represented by the proposed project can also be eliminated.

A data recovery program should be designed and implemented for SBr-112 and SBr-4285. If the area described above can be eliminated from the project at this time, this program can be postponed. If not, these procedures need to be completed prior to the proposed exercise. Such a program should include the following concerns:

1. A detailed surface map should be made of the cultural materials found within SBr-112 and SBr-4285. This mapping should identify individual artifact clusters as well as their intrarelationships and be accompanied by a controlled surface collection.

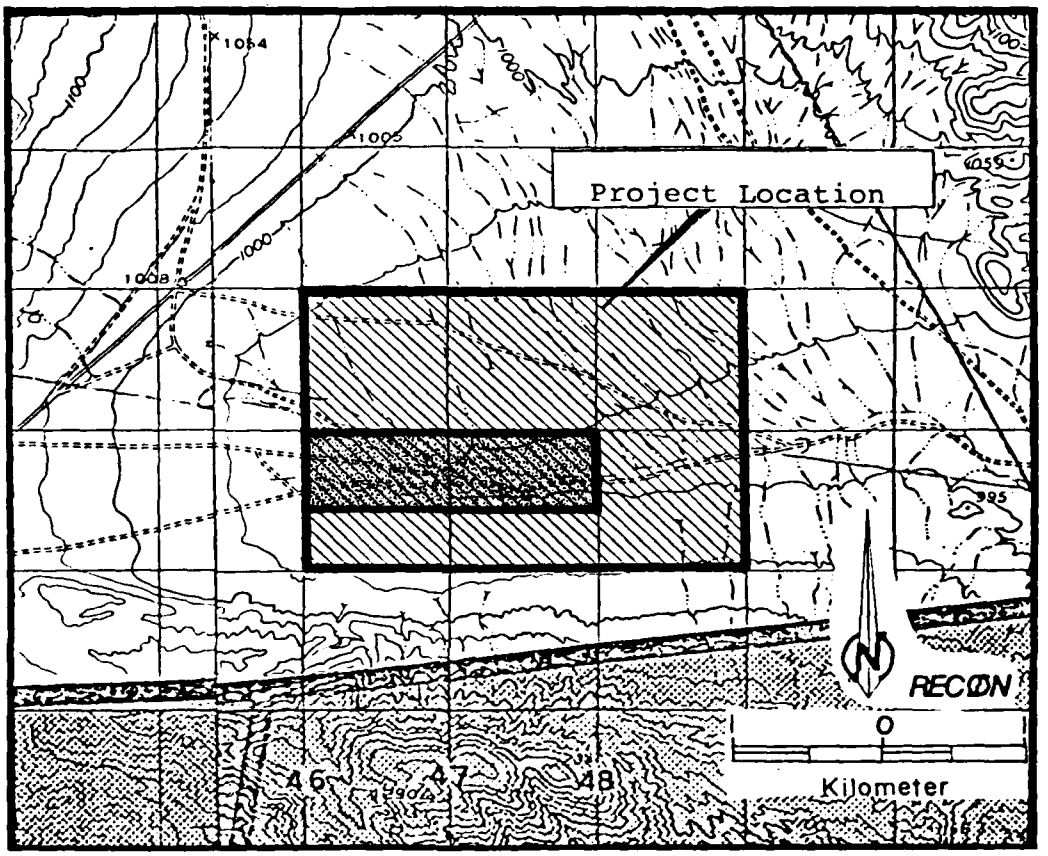


Figure 8. The dark area within the project boundaries indicates the recommended areas of avoidance.

2. In addition to a map of the artifact locations, it is necessary to plot the limits of the playa relative to the concentrations of cultural material and the location and orientation of the drainage system. Final analysis will need to assess the relationships of these features with the recorded cultural information.

3. Part of any comprehensive program at the No Name Playa sites should include excavation of test units and trenches. While the present investigation found no concrete evidence for subsurface cultural material, a more detailed assessment is needed. This is particularly true when viewed in light of the information presently emerging from the Drinkwater Lake area.

4. Analysis of recovered materials should be sufficient to allow for a discussion of the functional nature of the deposit, socio-cultural relationships of the people responsible for the different associations, and the position of the deposit in the prehistoric explanation. This will, or course, involve some addressment of work done elsewhere in the Fort Irwin and Mojave Desert area.

5. The specific approach chosen for the data recovery program and resultant analysis must be framed in terms of a specific research design. This design needs to be established prior to the initiation of fieldwork and should address both the method and foundation for the collection of information.

## IV. PROJECT STAFF

| | |
|---|---|
| Charles Bull | Coprincipal Investigator |
| Richard Norwood | Coprincipal Investigator |
| John Larson | Field Assistant |
| John Williams | Field Assistant |
| Mario Gonzales | Field Assistant |
| M. Joe Sonnier | Field Assistant |
| Terry Polanski | Field Assistant |
| Edward Brunjes | Paleontologist |
| Denise Palazzolo Swink | Production Coordinator |
| Cindy Bechtel-Groat | Production Specialist |
| Joan Bonin | Technical Illustrator/Graphics |
| Roberta Y. White | Production Specialist |
| Cynthia A. Kreke | Senior Editor/Production Supervisor |
| Eloise Feola | Production Specialist |

## V. PERSONS AND AGENCIES CONSULTED

Bureau of Land Management, Riverside
Russell L. Kaldenberg

Interagency Archaeological Services
Garland Gordon, Chief
Sally Dean

San Bernardino County Museum
Dr. Joseph Hearn

U.S. Army, TCATA, Fort Hood, Texas
Major James Fitting

35<

## VI. REFERENCES CITED


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1953 Reconnaissance of Geologic Map of Parts of the Goldstone Lake, Quail Mountains, Leach Lake, Avawatz Pass, Red Pass, and Tiefort Mountains Quadrangles, California. Presented in Geologic Map of California, Trona Sheet. Ed. Jennings et al. 1962.

# ATTACHMENTS FOR THE CULTURAL RESOURCE SURVEY OF THE OFFENSE AREA OF THE LIVE FIRE MANEUVER RANGE, FORT IRWIN, CALIFORNIA

Prepared for

HERITAGE CONSERVATION AND RECREATION SERVICE
INTERAGENCY ARCHAEOLOGICAL SERVICES
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

Funded by

UNITED STATES ARMY, FORSCOM
IN PARTIAL FULFILLMENT OF
PURCHASE ORDER NO. A52007(80),

Prepared by

CHARLES S. BULL
PRINCIPAL INVESTIGATOR

RECON
Regional Environmental Consultants
1694 Cudahy Place Suite 204 San Diego, CA 92110

37

RECON NUMBER R-1167
19 FEBRUARY 1981

ATTACHMENT 1

SAN BERNARDINO COUNTY
MUSEUM
ASSOCIATION
TELEPHONE (714) 792-1334 OR (714) 825-4825

MAILING ADDRESS
2024 ORANGE TREE LANE • REDLANDS, CALIFORNIA 92373

August 19, 1980

RECEIVED
AUG 22 1980
RECON

RECON
Regional Environmental Consultants
1094 Cudahy Place, Suite 204
San Diege, CA 92110

Attn: Charles S. Bull

RECON number R-1167

Dear Sir:

The San Bernardino County Museum has completed an Archaeological map and recorded sites file search of the area outlined on the map with your letter.

We find one site located near a stream (dry), number SBr-112 in Section 31, and another north of your area a couple of miles. We are forwarding copies of these sites records.

Please let us know if we can be of further service.

Sincerely,

Joseph L. Hearn

Dr. Joseph Hearn, President
San Bernardino County Museum Association

enclosures
JH/gt

SBCM # 3564

# ARCHAEOLOGICAL SITE SURVEY RECORD

1. Site SBr-112 2. Map Avawatz Mountain 60' 3. County San Bernardino

4. Twp. 16 N Range 5 E; ____ 1/4 of ____ 1/4 of Sec. 31

5. Location On western end of small playa on both isdes of road about 4 miles ENE of Granite Pass.

6. On contour elevation 3177

7. Previous designations for site Avawatz Mountain: 5: 2b; BR-112

8. Owner public land 9. Address -----

10. Previous owners, dates -----

11. Present tenant none

12. Attitude toward excavation -----

13. Description of site small surface site on playa - marked by large quantities of flakes

14. Area ca. 200 x 100 15. Depth none 16. Height -----

17. Vegetation ____ 18. Nearest water probably playa

19. Soil of site playa 20. Surrounding soil type same

21. Previous excavation none

22. Cultivation none 23. Erosion slight

24. Buildings, roads, etc. desert road crosses site east-west

25. Possibility of destruction slight

26. House pits none

27. Other features none noted

28. Burials none

29. Artifacts point fragment, reject.

30. Remarks No further work recommended; one metate was found ca. 3/4 the distance between junction of Barstow-Cave Spr. Road & Loach Lake Road (1.5 mi. NW of site / siteSBr-112.

31. Published references none

32. Accession No. ____ 33. Sketch map ____

34. Date [illegible] 35. Recorded by A. Mohr 36. Photos ____

SBCM # 3360

# ARCHAEOLOGICAL SITE SURVEY RECORD

1. Site SBr-111 2. Map EE Avawatz Mountain 60' 3. County San Bernardino

4. Twp. 16 N Range 5 E; ____ 1/4 of ____ 1/4 of Sec. 9

5. Location In outcrop 50' W of Barstow-Cave Springs road at point 200' N of northern most junction of Hohannesburg-Cave Spring (via Desert King Spring) road.

6. On contour elevation 3500

7. Previous designations for site Avawatz Mountains:5:1a; BR-111;

8. Owner Public Land 9. Address ____

10. Previous owners, dates none

11. Present tenant none

12. Attitude toward excavation ____

13. Description of site Small shelter in outcrop, exposure ca. E.

14. Area ____ 15. Depth ____ 16. Height ____

17. Vegetation grass 18. Nearest water probably wash which passes in of site

19. Soil of site rocky midden 20. Surrounding soil type talus

21. Previous excavation ____

22. Cultivation ____ 23. Erosion slight

24. Buildings, roads, etc. ____

25. Possibility of destruction considerable

26. House pits ____

27. Other features ____

28. Burials ____

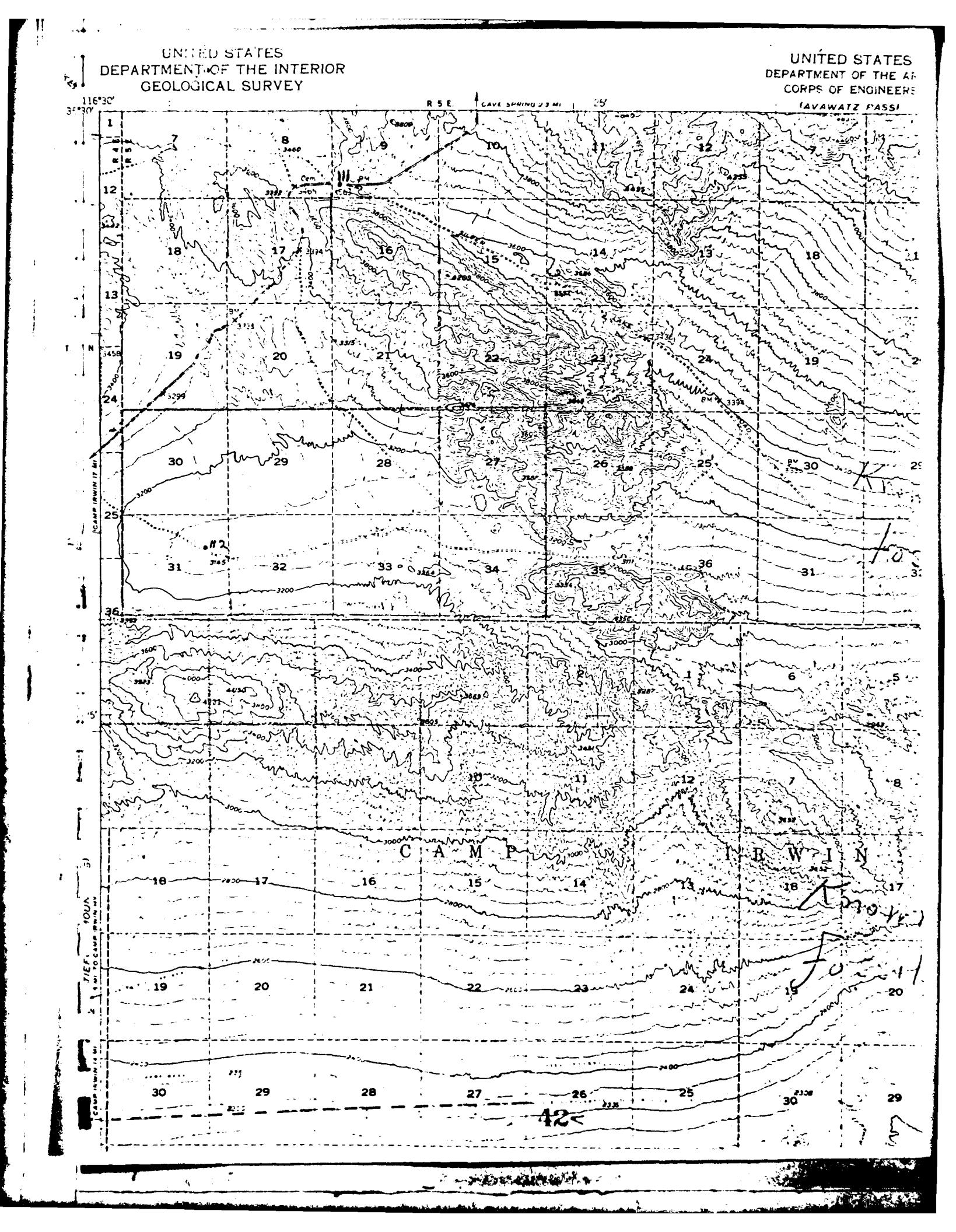
29. Artifacts Proj. pt. frag., side scraper, potsherd, metate frag., used chip. One metate with 2 manos placed beside it were found about 300' W of road junctio mentioned above.

30. Remarks The site area is used at present by campers and had been disturbed and tered with trash.

31. Published references ____

32. Accession No. ____ 33. Sketch map ____

34. Date May 26, 1946 35. Recorded by Mohr 36. Photos ____


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
UNITED STATES
DEPARTMENT OF THE AI
CORPS OF ENGINEERS
CAMP IRWIN

ATTACHMENT 2

# BLM CALIFORNIA DESERT PROJECT
# ARCHAEOLOGICAL SITE SURVEY RECORD

[1] County San Bernardino
[2] District Riverside
[3] Planning Unit Ft Irwin
[4] Sample Unit none
[5] Photos color slides
[6] Date August 18, 1980
[7] Recorder R. Kaldenberg/E.L. Davis

[8] Site # SBr 4204 [9] Other # 14-1978

[10] Site Name "Secret Site"; Ash Bed Site

[11] Cadastral Location: Twn 5N Rng 5E SE¼ of 34 and NE ¼ of Section 2

[12] Quadrangle Red Pass Lake 15' [13] Elevation 3000 feet

[14] UTM Grid Loc. Zone 11 Northing 39202650 Easting 5513950E

[15] Reference Points: 39201050N/5511550E and 39201650N/5512450E and 39201950N/551450E and 39202250N/551550E Descriptively approximately ½ mile south of the east/west trending road leading to No Name Playa. 3 mi. east of No Name Playa.

| [16] OWNER | | | | | [17] NAT'L REGISTER | | | | | | | | [18] DISTURB | | | | | [19] CNDTN | | | [20] COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BLM | OTHER FED. | STATE | PRIVATE | UNKNOWN | LISTED | CANDIDATE | POTENTIAL | NOT ELIG. | NO DET. | DISTRICT | SITE | OTHER | DEVELOPMENT | ANIMAL | VANDALISM | ORV | OTHER | GOOD | FAIR | POOR | |
| | X | | | | | | X | | | | | | | | | | | X | | | Site first located in 1978 but outside Brave Shield impact area. Revisited by Kaldenberg, Davis, Reed, and Von Werlhof in 1980. No new damage noted. Some tank tracks and evidence of militia ussage |

| [21] SITE TYPES | | | | | | | | | | | | | | | | | | [22] AREA | | | | | [23] DEPTH | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VILLAGE | TEMPORARY CAMP | SHELTER/CAVE | MILLING STA. | LITHIC SCATTER | QUARRY SITE | POTTERY LOCUS | CEMETERY | CREMATION LOCUS | INTAGLIO | ROCK ALIGNMENT | PETROGLYPH | PICTOGRAPH | TRAIL | ROASTING PIT | ISOLATED FIND | CAIRN | HISTORIC | OTHER | 0-10 SQ. M. | 11-50 | 51-250 | 251-1000 | 1001-5000 | over 5000 | SURFACE | 1-20 cm. | 21-100 | over 100 | UNKNOWN |
| XX | | | | | | | | | | | | | | | | | | | | | | | X | X | | | | |

[24] General Site Description: The site is representative of the San Dieguito III phase as described by M. Rogers. Skilled and finely worked end, side, and domed scrapers, burins, choppers, spokeshaves, and highly patinated flakes, cores, and rock ring features dominate the terraces overlooking a wash filled with bow willow.

| [25] FEATURES | | | | | | | | | | | | [26] ARTIFACTS | | | | | | | | | | | | [27] ECO. | | | | [28] MAT. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STRUCTURAL DEP. | ROCK RING | ROCK STRUCTURE | CAIRN /SHRINE | ROASTING PIT/FAR | HEARTH | PETROGLYPHS | PICTOGRAPHS | BEDROCK MORTAR | GRINDING SLICK | OTHER | | PROJECTILE POINT | FLAKED STONE TOOL | CORE-DETRITUS | MILLING TOOL | OTHER GROUND STONE | CERAMIC | BONE | PERISHABLE | ORNAMENT | HISTORIC | OTHER | | FIRE AFFECTED ROCK | FAUNA | FLORA | OTHER | CRYPTOCRYSTALLINE | OBSIDIAN | PERLSITE | OTHER |
| | X | | | | | | | | | | | | X | X | X | | | | | | | | | | | | | X | | X | |

[29] Describe: Artifacts are finely flaked representing a sophisticated flaking technol Two metates (pecked, not ground) were associated with the flaked stone implements. The artifacts are highly patinated indicating some considerable antiquity. On one three cleared areas were located. These are reminiscent of sleeping circles but are more than likely, observation positions. Material is indigeneous chalcedony and imported felsite. Float is found in the Bow Willow Wash.

| [30] VEGETATION | | [31] COVERAGE | | [32] WATER | |
|---|---|---|---|---|---|
| BARREN | | CONTINUOUS (over 75%) | | INTERMITTENT STREAM | X |
| SALTBUSH | X | INTERRUPTED (50-75%) | | PERENNIAL STREAM | |
| CREOSOTE | X | PARK-LIKE (25-50%) | | SPRING | |
| JOSHUA/CREOSOTE | | RARE (6-25%) | X | PLAYA | |
| JOSHUA/YUCCA | | BARELY PRESENT (1-5%) | | OTHER | |
| YUCCA/CACTUS | | ABSENT (0-1%) | | | |
| BLACKBRUSH | | | | | |
| SAGEBRUSH | | | | | |
| PINYON/JUNIPER | | | | | |
| CONIFER | | | | | |
| SHADSCALE | | | | | |
| CHAPARRAL | | | | | |
| OAK WOODLAND | | | | | |
| MESQUITE | | | | | |
| RIPARIAN | | | | | |
| WASH | X | | | | |
| GRASSLAND | | | | | |
| OTHER | | | | | |

[33] Describe Artifacts are scattered throughout the Bow Willow Wash but are in more direct association with the creosote community. The preponderance of woodworking artifacts indicates that much more vegetation was present during the occupation of the archaeological site than now.

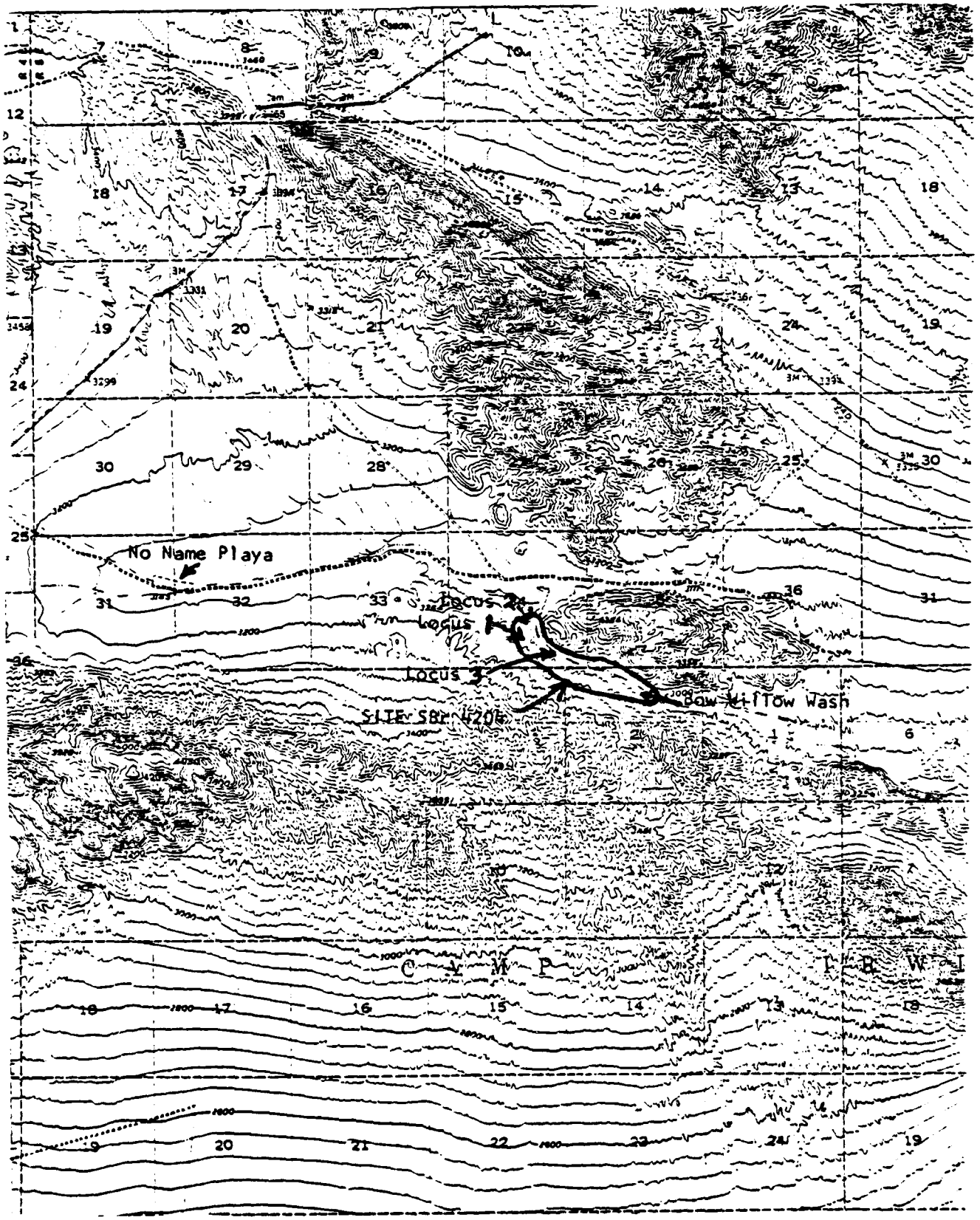
| [34] LANDFORM | | [35] BEDROCK | | [36] TEXTURE | | [37] SOILS | |
|---|---|---|---|---|---|---|---|
| MOUNTAIN | | EXTRUSIVE IG. | | SAND | X | RESIDUAL | X |
| HILL | | INTRUSIVE IG. | | LOAM | X | ALLUVIAL | |
| TERRACE | X | METAMORPHIC | | SILT | | COLLUVIAL | |
| RIDGE | | SEDIMENTARY | X | CLAY | | EOLIAN | |
| ALLUVIAL FAN | | QUATERNARY ALLUV. | | OTHER | | BEDROCK | |
| CANYON | | OTHER | | | | OTHER | |
| ARROYO | | | | | | | |
| SAND DUNE | | | | | | | |
| DESERT PAVEMENT | X | | | | | | |
| BADLANDS | | | | | | | |
| PLAYA | | | | | | | |
| OTHER | | | | | | | |

[38] Describe The sites on the terraces are imbedded in desert pavement which is highly developed and highly patinated. The material in Bow Willow Wash may be float however it also may be remaining vestiges of later occupation in the wash since the material located was in a sandy central rill held in place by the bow willows.

| [39] SLOPE | | [40] ASPECT | | [41] EROSION | | [42] DRAIN. | |
|---|---|---|---|---|---|---|---|
| POINT OF INFLEX | | NORTH | | DEFLATION | | CONVERGING | |
| LOWER 1/3 | X | NORTH/EAST | | RILLING | | DIVERGING | |
| MID 1/3 | | EAST | | GULLYING | X | BRAIDED | X |
| UPPER 1/3 | | SOUTH/EAST | | SHEET WASH | | OTHER | |
| 0-5° | X | SOUTH | | ROCK/DEBRIS | | | |
| 6-15° | | SOUTH/WEST | | SLUMPING | | | |
| 16-30° | | WEST | | OTHER | | | |
| 31-60° | | NORTH/WEST | | | | | |
| over 60° | | | | | | | |

[43] Remarks Since the area is so complex it is safe to state that numerous geological phenomenon exist within the site from pavements to sandy washes.

Blade made of Chalcedony were located in the wash. Two loci on terraces were located one loci in the wash. The site area on the accompanying map is extrapolated based upon the distribution of terraces adjacent to the wash.




Site SBr 4204 (The Secret Site; The Ash-bed Site) on Ft. Irwin. Southeastern portion of site is projected based upon existence of terraces such as those at Locus 1 and Locus 2. Locus 3 is the entire Bow Willow Wash. Red Pass Lake 15' USGS Quadrangle.

8/11/80

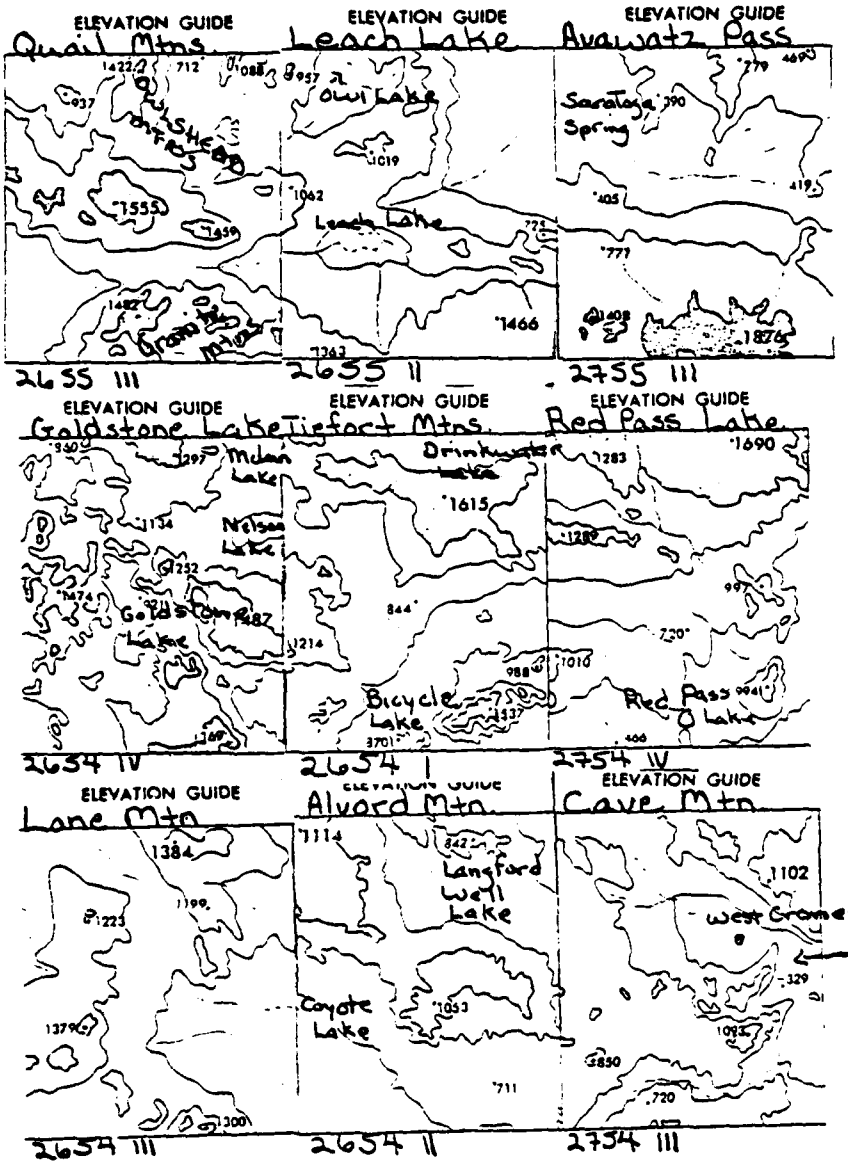
Dr. Emma Lou Davis
1239 Concord St.
[illegible] 92106

The Ash-bed Paleo Sites of No-Name Lake: SBr-4204 has great prehistoric significance

Russell Kaldenburg & Emma Lou Davis

Undisturbed, rich and spatially extensive deposits of PaleoIndian materials are incorporated in desert pavements, on stream-side bluffs at the extreme southeast end of No-Name Lake basin. Neither the depth nor extent of the archaeological area is known at present and a research plan must be designed to determine both. This design will incorporate 1) search of the literature; 2) a regional survey based on stratified but purposive sampling; 3) complete, meter-by-meter survey of the SBr-4204 bluff to determine extent of this stream-side site area; 4) artifact collection and analysis; 5) test excavations; 6) publication. Grant funding will be required.

The importance of this site area is that it appears to contain extensive deposits of Lake Mojave/San Dieguito III tools and workshop debris. It is on an overlook position above a stream and therefore will give excellent information on paleoecology and humans-to-geomorphology relationships. No tanks or traffic shall be permitted near the SBr-4204 site area.



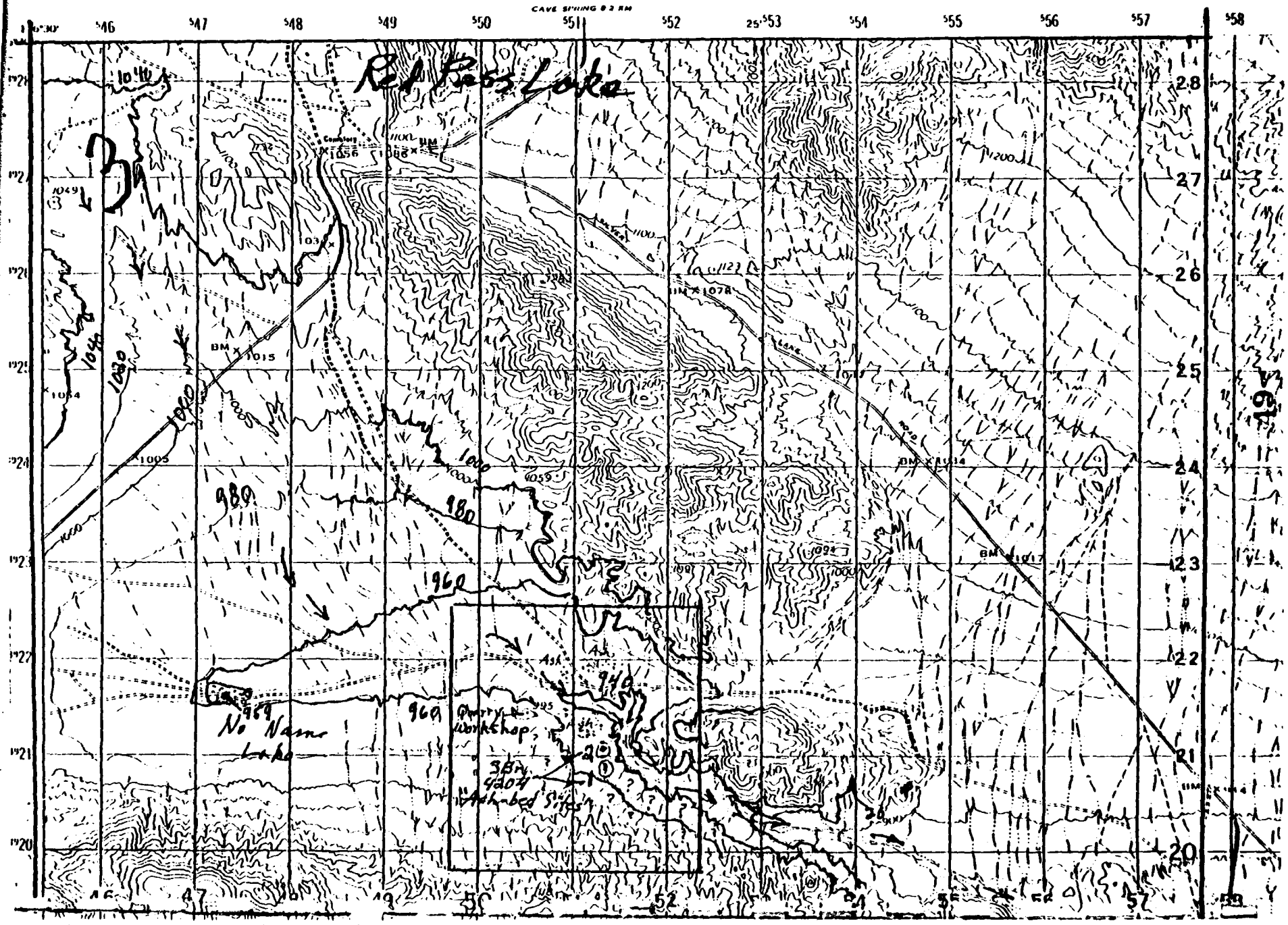

CORRELATION SHEET

Barstow 15km.

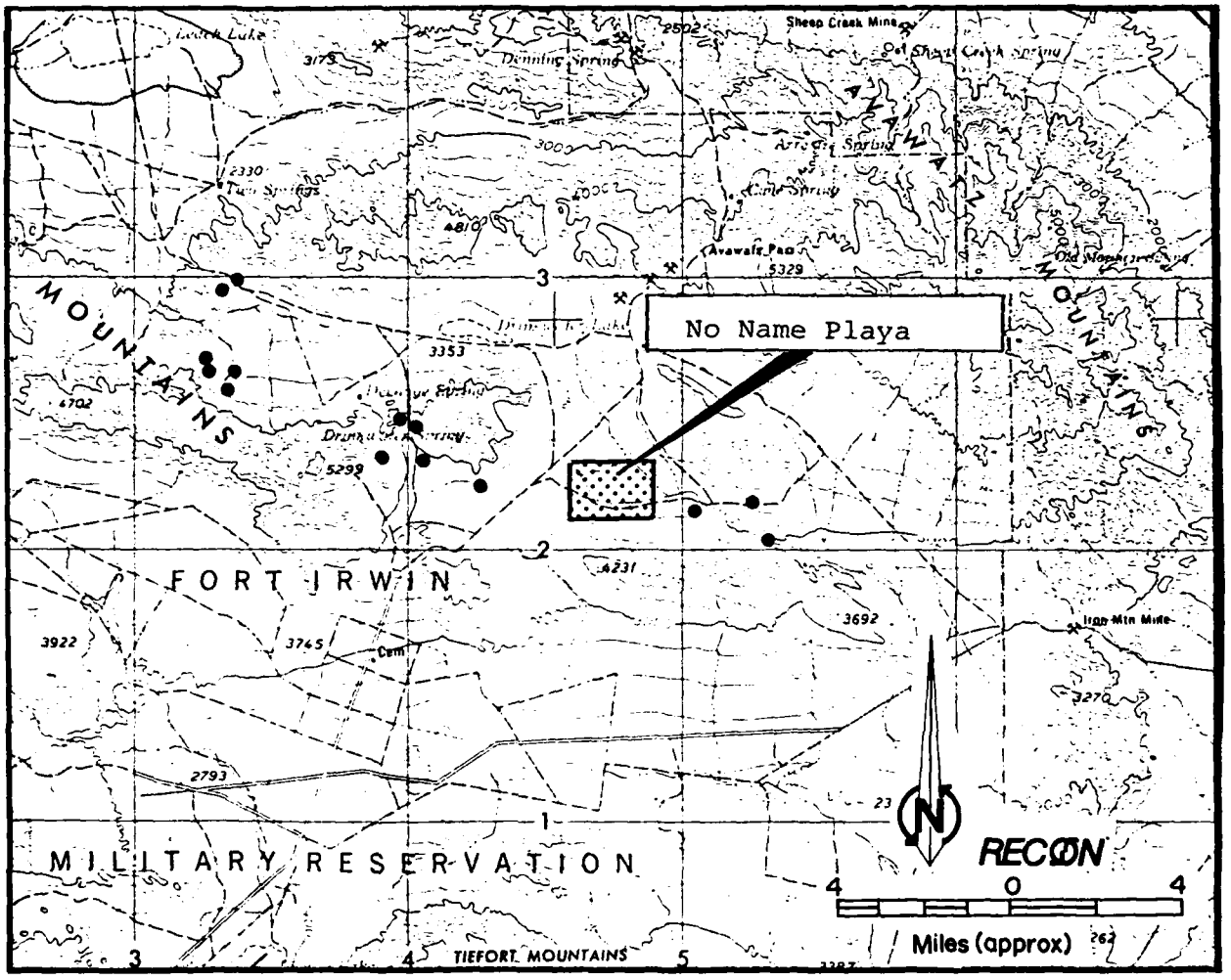
MAP #2, TOPOGRAPHY & LAKES, FORT IRWIN AREA

RNIA 1:50,000

# RED PASS LAKE

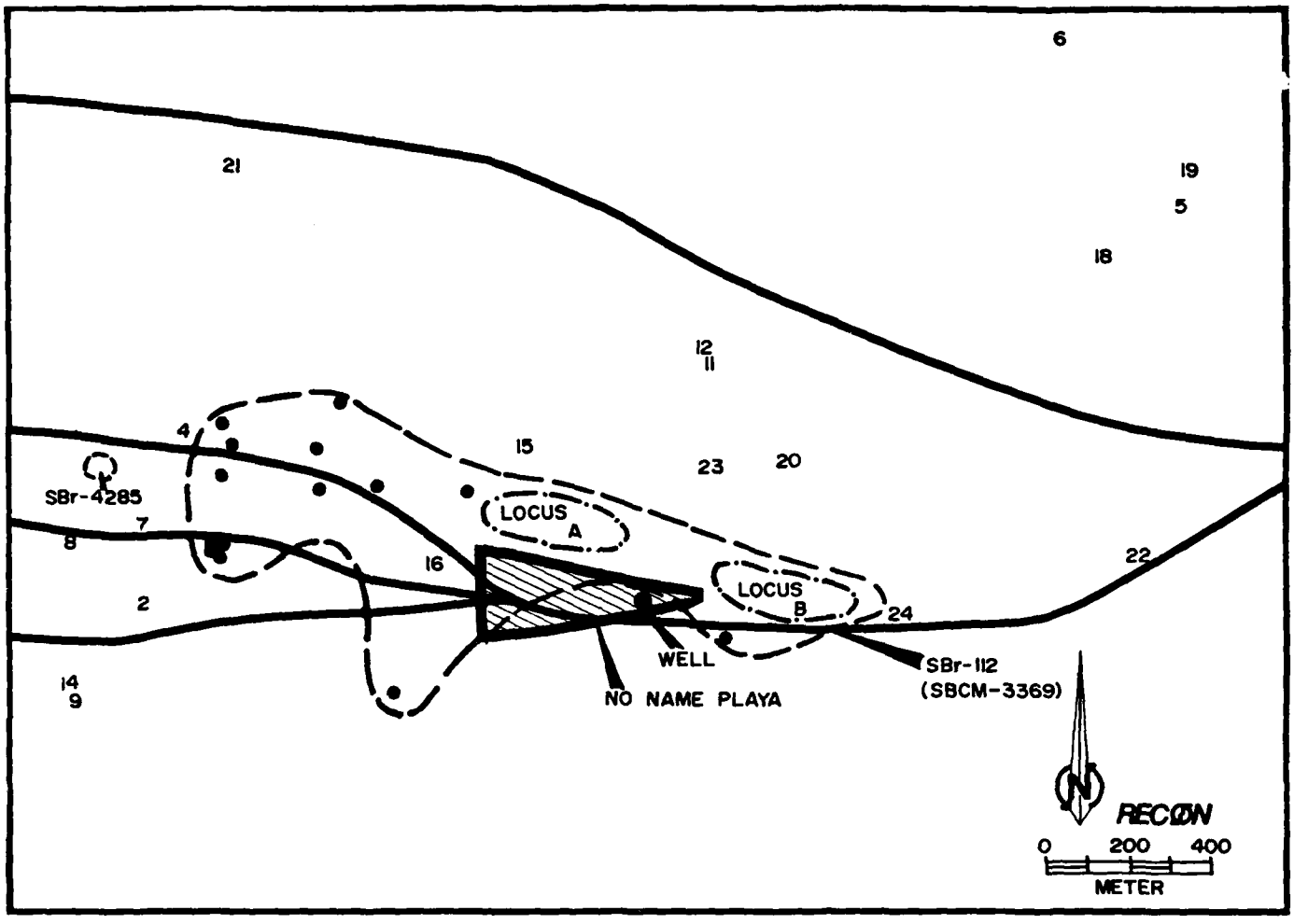


ATTACHMENT 3




● Tank Target Locations

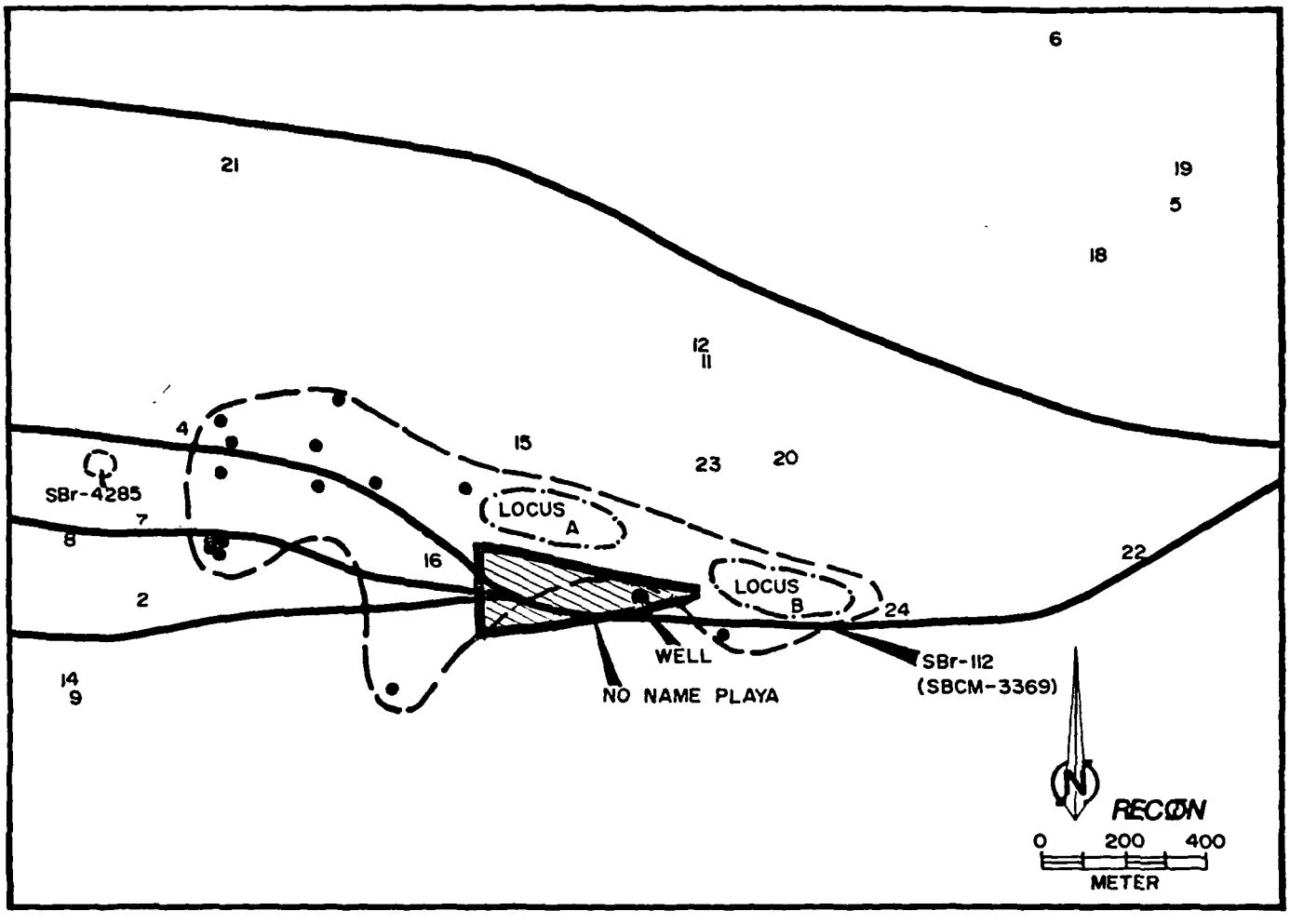
Figure 2. This figure illustrates the project area as shown on Trona 1° map.




LEGEND

| | |
|---|---|
| • scatter not collected | ——— site boundaries |
| oo collected object(s) | —·—·— locus boundaries |
| ▬▬ roads | |

Figure 3. This map shows the relationship of SBr-112, SBr-4285, and isolated and scattered materials.




LEGEND

- • scatter not collected
- oo collected object(s)
- ———— site boundaries
- —·—·— locus boundaries
- ▬▬▬ roads

Figure 3. This map shows the relationship of SBr-112, SBr-4285, and isolated and scattered materials.

TABLE 1
NUMBER, LOCATION, AND GEOLOGIC SETTING
FOR THE TARGET POSITIONS

| Tank Target | UTM Reference (Nearest 100 meters) | Geologic Formation |
|---|---|---|
| 1 | E05527<br>N39217 | Mesozoic granitic rock |
| 2 | E05530<br>N39204 | Mesozoic granitic rock |
| 3 | E05506<br>N39214 | Pliocene-Pleistocene nonmarine |
| 4 | E05425*<br>N39226 | Mesozoic granitic rock |
| 5 | E05410<br>N39235 | Quaternary alluvium |
| 6 | E05404<br>N39246 | Mesozoic granitic rock/<br>Quaternary alluvium |
| 7 | E05398<br>N39247 | Mesozoic granitic rock |
| 8 | E05391<br>N39236 | Mesozoic granitic rock |
| 9 | E05366<br>N39298 | Mesozoic granitic rock |
| 10 | E05335<br>N39295 | Mesozoic granitic rock |
| 11 | E05336<br>N39262 | Mesozoic granitic rock |
| 12 | E05330<br>N39277 | Mesozoic granitic rock |
| 13 | E05337<br>N39273 | Quaternary alluvium |
| 14 | E05330<br>N39275 | Mesozoic granitic rock |

Source: Jennings, et al. 1962.

*Approximately 200 meters west and 300 meters north of location referenced in RFP.

END

DATE
FILMED

6-83

DTIC