

**CHAPTER X**

**PART A: CULTURAL RESOURCES**

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## X.A CULTURAL RESOURCES

This part presents the archeological, historical, and paleontological information in and adjacent to the permit area. This information is contained in four (4) survey reports which are appended to this part.

The first, referred to herein as "Chapter 5.0", was prepared by AERC in October of 1980. The second, referred to herein as "Appendix 5-1", was prepared by AERC in July of 1981. The third, referred to herein as "Appendix 5-2", was prepared by Michael S. Berry, Utah Division of State History, in March of 1975. The fourth survey report, Appendix 5-3, was completed by AERC in October, 1988. The site forms are attached in a fifth section, referred to as "Appendix 5-4". The fifth survey report, Appendix 5-5, was completed by Montgomery Archaeological Consultants in May of 2002. This report covers 40 acres surrounding and including the 4th East Portal Site. The sixth referenced survey report, Appendix 5-6, covers the 4th East Powerline Corridor and was completed by Montgomery Archaeological Consultants in August of 2002. One site identified as historically significant was marked in the field and will be avoided as recommended by Montgomery. The seventh survey, referred to as "Appendix 5-7" was conducted by Montgomery Archaeological Consultants in March 2003. This survey was conducted to extend the inventoried areas of the 4th East Portal site. The survey covered an additional 40 acres to the east of "Appendix 5-5" original survey area. This extended area identified one new archaeological site "42Em2961". This new site will be avoided and a fence has been erected by the consultant along the site boundary.

These survey reports have not been edited or revised for this repermit application; they were originally prepared for the March 23, 1981 permit application (approved as ACT/015/015 on January 7, 1986) and subsequent revisions and are included herein in their entirety.

### UMC 783.12(b)

The attached investigations describe all of the known archeological sites in the permit area. No cultural and historic resources listed on the National Register of Historic Places occur in the permit area. A compendium is included which consolidates information on all of the sites.

Revised 10/2003

**UMC 783.24(i),(j),(k)**

Each of the attached investigations contain maps showing the locations of known archeological sites. Plate X.A-1 combines all of these locations on a single map at a scale of 1"-500'. This plate also shows areas of surface disturbance according to the plan of operations. There are no Indian burial grounds in or within 100 feet of the permit area. There are no lands in the area which are within the boundaries of any units of the Wild and Scenic Rivers System.

Portions of the designated disturbance area under the Emery Mine permit was placed under the National Trails System in late 2002. The Act cited as the "Old Spanish Trail Recognition Act of 2002" was by the President on December 4, 2002. Notation as to the trails existence is located on the "Cultural Resource Map", Plate X-A-1.

**UMC 784.17**

There are no historic places which would be adversely affected by the operation, within or adjacent to the permit area.

Inserted 9/2003

CULTURAL RESOURCE INVENTORY OF  
CONSOLIDATION COAL COMPANY'S  
EMERY MINE 4<sup>th</sup> EAST PORTAL LOCATION IN  
EMERY COUNTY, UTAH

Sharyl Kinnear-Ferris

CULTURAL RESOURCE INVENTORY OF  
CONSOLIDATION COAL COMPANY'S  
EMERY MINE 4<sup>th</sup> EAST PORTAL LOCATION IN  
EMERY COUNTY, UTAH

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MOAC Report 03-49

March 26, 2003

United States Department of Interior (FLPMA)  
Permit No. 02-UT-60122

State of Utah Antiquities Project (Survey)  
Permit No. U-03-MQ-0129p

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1. Inventory Area of Consolidation Coal Company's Emery Mine 4<sup>th</sup> East Portal Location in Emery County, UT ..... 3

## INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants (MOAC) in March 2003 for Consolidation Coal Company's Emery Mine 4<sup>th</sup> East Portal Location in Emery County, Utah. The inventory was implemented at the request of Mr. Timothy Kirschbaum of Consolidation Coal Company, Sesser, IL. The project area is located approximately 3 miles southeast of the town of Emery in Emery County, Utah. The survey area occurs on private property.

The objectives of the inventory were to locate, document, and evaluate any cultural resources within the project area in order to attain compliance with a number of federal and state mandates, including the National Historic Preservation Act of 1966 (as amended), the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1992).

The fieldwork was performed by Sharyl Kinnear-Ferris, assisted by Eli Jones on March 25, 2003. Permits issued to MOAC entailed U.S.D.I. (FLPMA) Permit No. 02-UT-60122 and State of Utah Antiquities Project (Survey) No. U-03-MQ-0129p.

A file search for previous inventories and documented cultural resources was performed by Keith Montgomery on July 24, 2002 at the Bureau of Land Management, Price Field Office. In the immediate project area MOAC completed an inventory in T 22S, R 6E, Sec. 27 for Consolidation Coal Company's Emery mine portal (Elkins and Montgomery 2002). The survey resulted in the documentation four prehistoric isolated artifacts consisting of a biface and pieces of lithic debitage. Later in 2002, MOAC inventoried Consolidation Coal Company's power line route to the Emery Mine, finding two archaeological sites and one isolated find of artifact (Raney and Montgomery 2002). Site 42Em2821 consists of a historic trash scatter, evaluated as not eligible for inclusion to the NRHP. Site 42Em2822 is a multi-component (protohistoric/historic) site evaluated as eligible to the NRHP under Criterion D. The protohistoric component is comprised of lithic debitage, chipped stone tools, and groundstone tools. Historic items include pieces of ceramic and glass, and tin cans.

A number of other projects have been conducted near the project area. The Division of State History conducted an inventory for the Consolidated Coal and Kemmerer Coal Company in 1976 that resulted in the documentation of three prehistoric sites (42Em635, 42Em636 and 42Em637) (Berry 1975). In 1980, Archeological-Environmental Research Corporation performed a survey of the Emery Mine project area in T 22S, R 6E, Secs. 27, 28 and 33 (Hauck 1980). Documented cultural resources included the Browning Mine, a portion of the Spanish Trail as well as several rockshelters and lithic scatters. None of the cultural resources documented by AERC are in the survey area. The Bureau of Reclamation completed an inventory of eight irrigation canals for the Price-San Rafael Basin project (Wiens 1984). No cultural resources were found. Also in 1984, La Plata Archaeological Consultants performed a survey of 11 seismic lines in Emery and Carbon counties, finding no sites (Harden 1984). In 1995, SWCA Inc. completed an inventory of the SR-29, Straight Canyon to SR-10 project (Miller and Roberts 1995). In 1996, Montgomery Archaeological Consultants surveyed Texaco Exploration's Cottonwood Creek and Grimes Wash pipelines that resulted in the documentation of a segment of the historic Straight Canyon road (42Em2423.5) (Montgomery 1996). In 1997, MOAC completed the Cottonwood Creek water project (Montgomery and Montgomery 1997). Two cultural resources including a segment of the historic Straight Canyon road (42Em2423.6) and a portion of the Mammoth Canal (42Em2472.1) were documented. In 2002, MOAC inventoried a coal haul road for Consolidation Coal finding no cultural resources (Montgomery 2002).

## DESCRIPTION OF THE PROJECT AREA

### Environmental Setting

The proposed Consolidation Coal Company's Emery Mine 4<sup>th</sup> East Portal is located about 3 miles southeast of the town of Emery, Utah. The 40-acre parcel lies near Christiansen Wash, with Miller Canyon and the Coal Cliffs to the east and Quitchupah Creek to the west (Figure 1). The legal description is Township 22 South, Range 6 East, Section 27.

In general, the project area lies along the western margin of Castle Valley, along the boundary of the Mancos Shale Lowland and San Rafael Swell sections of the Colorado Plateau (Stokes 1986). Castle Valley is comprised of a series of broad, shallow canyons and flat-topped mesas. Sandstones and shales ranging in age from the Pennsylvanian through the Holocene predominate in this area. The primary formation is the Cretaceous Mancos Shale, which consists of a series of thick shale layers with thinner interbeds of sandstones. Many of the areas of higher relief are capped with Quaternary gravel sediments, while the lower areas such as valley bottoms are filled in with patches of Quaternary and recent alluvium.

Situated within the Upper Sonoran lifezone, the primary vegetation communities represented in the project area include low sagebrush and shadscale. Plant species include sagebrush, shadscale, yucca, prickly pear cactus, and various grasses. The elevation ranges from 6060 to 6120 feet a.s.l.. Numerous drainages occur in or near the project area, including Christiansen Wash, Muddy Creek, and Quitchupah Creek. Modern impacts to the project area include coal development, grazing, roads and isolated occurrences of modern trash dumping.

### Cultural Overview

Prehistoric occupation of the region spans the last 10,000-12,000 years. Cultural remains representing the Paleoindian, Archaic, Formative, Late Prehistoric and Historic stages have been identified in the study area region. The earliest known archaeological remains in central Utah are attributable to the Paleoindian stage, which emphasized the exploitation of megafauna and floral resources during the period of transition from the Pleistocene to the Holocene. Based on projectile point typologies and subsistence strategies, the Paleoindian stage is commonly divided into three cultural complexes termed the Llano (ca. 11,500-11,000 B.P.), the Folsom (ca. 11,000-10,000 B.P.) and the Plano (ca. 10,000-7500 B.P.). The Llano complex is represented by Clovis fluted projectile points, a rare find in the area. Mammoths are thought to have been the primary prey of these early big game hunters, in contrast to an apparent preference for bison exhibited by the Folsom peoples. Folsom points, among the more common Paleoindian projectile points that occur throughout the Colorado Plateau, have been found in Emery country, sometimes associated with lithic debitage (Copeland and Fike 1988; Schroedl 1991). Megafauna, represented by mammoth and short-faced bear and dating to 9440 B.P., have also been found north of the project area in upper Huntington Canyon. The remains exhibit evidence of butchering, in the form of cut marks, and are associated with a Paleoindian projectile point (Gillette 1989; Madsen 2000). The Plano complex is characterized by large, lanceolate points and reliance on large game as well as plants. Projectile points found nearby that date to this complex include Lake Mohave points, Lovell Constricted points and a Medicine Lodge point style (Black and Metcalf 1986; Hauck 1977).



The termination of the Pleistocene enacted major changes in the environment of central Utah. Overall, the climate became warmer and drier, causing expansion of xeric vegetation zones and a retreat of plant communities requiring cool and moist conditions at higher elevations. The Archaic stage (7800 to 500 B.P.) is represented by subsistence patterns more labor-intensive than those practiced by Paleoindians. Large herd animals were less intensively exploited, replaced by a greater emphasis upon smaller, more dispersed fauna, in addition to plant resource processing. Archaic sites tend to cluster in areas which offer good viewsheds, proximity to outcrops of tool quality stone, as well as nearness to major topographic features (Black and Metcalf 1986; Howell 1992). Schroedl (1976) defined four phases for the Archaic stage based on technology, subsistence, and environmental change. The earliest is the Black Knoll phase (ca. 8300-6200 B.P.). Sites dating to this phase are characterized by Pinto projectile points and a contrast in subsistence between high and low elevations in which large artiodactyla are hunted in the uplands, while wild plant gathering is emphasized at lower elevations (Schroedl 1976:61-62). The Castle Valley phase (ca. 6200-4500 B.P.) is characterized by a lower aboriginal population on the Colorado Plateau, possibly attributed to a two-stage Altithermal drought (Black and Metcalf 1986:10). It was during this time period that a variety of projectile point styles were employed, including Rocker, Hawken, and Sudden Side-notched points, as well as Humboldt and McKean points. Slab-lined fire pits and an increasing reliance upon grasses and forbs as foodstuffs are also aspects of this phase (Schroedl 1976:63-64). The Green River phase (ca. 4500-3300 B.P.) is marked by the occurrence of Gypsum and San Rafael Side-notched projectile point types and split-twig figurines (Schroedl 1976). In this phase, hunting (especially for mountain sheep) becomes important and amaranths are a preferred plant resource (Black and Metcalf 1986:11). The Dirty Devil phase (ca.3000-1500 B.P.) marks the transition into the Formative stage and is characterized by increased sedentism, the introduction of corn and bow and arrow, and Gypsum projectile points (Schroedl 1976).

The Formative stage (A.D. 700-A.D. 1200) is characterized by reliance on domesticated plants (most notably corn), substantial habitation structures often organized into hamlets or villages, production of pottery, and the use of the bow and arrow. The study area is within the occupation zone of the San Rafael Fremont variant, as defined by Marwitt (1970). Sites in this area are characterized as small isolated hamlets or single dwelling units, usually found on small ridges overlooking perennial water sources and arable land (Schroedl and Hogan 1975). Three San Rafael Fremont phases have been proposed for the study area based on chronology, settlement patterns, subsistence strategies, and material culture (Black and Metcalf 1986; Greubel 1996). The earliest phase has been termed by Black and Metcalf (1986) the "Proto-Formative" phase (A.D. 150 to 700), a transition stage from an Archaic to a Formative lifeway in which groups became more sedentary. During this phase corn horticulture increased in importance, although hunting and gathering continued to play a major role in the subsistence strategy. Common artifacts of this phase include Rose Springs Series arrow points and Emery Gray Ware (introduced between A.D. 650 and 700). More recently, investigations along Muddy Creek have better defined the earliest manifestations of the Fremont culture, termed as the Confluence Phase (Greubel 1996). The Confluence Phase is proposed to encompass preceramic, semi-sedentary, horticultural adaptations in the San Rafael Fremont area, beginning around A.D. 200 (Ibid: 516). Important aspects of this phase include the presence of a well-developed pattern of semi-sedentism, pithouse architecture, maize horticulture, large bell-shaped storage pits, use of the bow and arrow, and the presence of community or special function structures. During this preceramic Formative period, settlements occurred along the floodplain terraces above perennial streams. Recent excavations at the Confluence site (42Em1887), situated near the confluence of Muddy Creek and Ivie Creek, revealed five shallow pithouses and a variety of extramural features including bell-shaped pits and firehearths. Data from this site indicated that it is a horticulture-based community with the subsistence strategy based on the growing of maize dating from A.D. 540 to 630 (Ibid:348).

The Muddy Creek phase is marked by increased sedentism and greater reliance upon horticulture. In Castle Valley, the settlement strategy during this time is marked by small isolated hamlets or single dwelling units, usually found on small ridges overlooking perennial water sources and arable land. In the study area, the cultural material remains are dominated by Emery Gray Ware, some decorated by applique and incisions, and Rose Springs Series and Uinta Side-notched arrow points (Holmer and Weder 1980). The Bull Creek phase (A.D. 1000 to 1200) is distinguished by larger habitations composed of pit houses and surface masonry structures usually used for storage of cultigens. Diagnostic artifacts of this phase include Bull Creek and Nawthis Side-notched projectile points, decorated Fremont ceramics including Ivie Creek Black-on-white, and higher frequencies of Anasazi trade wares. Black and Metcalf (1986:157) suggest that Fremont populations aggregated during this phase most likely in response to the salubrious climatic conditions (post-A.D. 950). These favorable climatic conditions may have also enhanced the productivity of maize fields as evidenced by the increase of storage facilities in the area. Also during late Fremont times a linear settlement pattern is exhibited in areas where sites are clustered along drainage systems, such as Miller Creek. Sometime following A.D. 1200, the Fremont appear to have abandoned east-central Utah, attributed to both environmental and subsistence-related reasons (Lindsay 1986).

Following the Fremont abandonment of the area, a largely nomadic hunting and gathering lifeway resumed. This occupation is attributed to the Numic-speaking peoples, a diverse group that was present throughout much of Utah upon the arrival of Europeans in the 18th century. Historic records indicate that the Ute were the primary occupants of eastern Utah and western Colorado since the late eighteenth century. Numic expansion in the archaeological records appears at approximately A.D. 1100 based on the distribution of chronometric dates associated with brown ware sherds (Reed 1994:188). The archaeological evidence of the Numic-speaking peoples consists primarily of lithic scatters, low density ceramic scatters, and the occasional wickiup. Most of the artifact scatters are in open settings, although a small number are in rockshelters. Diagnostic artifacts include Desert Side-notched, tri-notched, and Cottonwood Triangular projectile points, a fairly crude micaceous tempered pottery and distinctive rock art (Jennings 1978). On the Colorado Plateau eighteenth and nineteenth century Ute sites may also contain varying quantities of Euroamerican artifacts, such as sheet metal cone tinklers, tin cans, weaponry, and equestrian tack (Horn 1988).

The earliest recorded visit by Europeans to Utah was the Dominguez-Escalante expedition, which moved through the areas north and west of Castle Valley in 1776-1777. Throughout the first half of the nineteenth century, explorers, surveyors and trappers moved in small parties through the valley, up and down the Old Spanish Trail. The main branch of the Spanish Trail veered northwest from Green River and wound through the San Rafael Swell via Cottonwood Creek and Buckhorn Flat, emerging into Castle Valley near the Red Seeps east of Castle Dale. Beginning in the 1870's, ranchers began to herd cattle in the area, using the higher mesas for summer grazing and the valley lowlands during the winter (Geary 1996). By the census of 1895, Emery County boasted 4,390 residents. Early engineers and surveyors noted the presence of coal deposits in Castle Valley. The agricultural and mining potential of the area boomed as Augustus Ferron's township survey in the area spawned an inpouring of people ready to extract and exploit the valley's natural resources (Geary 1996). While agriculture and ranching remain viable economic pursuits in Castle Valley today, the mining boom of the late 19<sup>th</sup> century and early 20<sup>th</sup> century ended just after WW I, with a slight increase in mining activities again just prior to WWII.

## SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. A 40-acre parcel was surveyed by the archaeologists walking parallel transects spaced no more than 10 meters (30 ft) apart. The project area occurs on private land. Ground visibility was considered good.

Cultural resources were recorded as either archaeological sites or isolated finds of artifacts. Archaeological sites were defined as spatially definable areas with features and/or ten or more artifacts. Sites were documented by the archaeologists walking across the site marking the locations of cultural materials with pinflags. This procedure allowed clear definition of site boundaries and artifact concentrations. Site maps were made using tape and compass, with artifact and feature proveniences being recorded accordingly. Archaeological sites were plotted on a 7.5' USGS quadrangle, photographed, with site data entered on an Intermountain Antiquities Computer System (IMACS, 1990 version) inventory form (Appendix A). Isolated finds are defined as individual artifacts or light scatter of items, which lack sufficient material culture to warrant IMACS forms, or to derive interpretation of human behavior in a cultural and temporal context. All isolated artifacts were plotted on a 7.5' USGS map and described in this report.

## INVENTORY RESULTS

The inventory of the Consolidation Coal Company's Emery Mine 4<sup>th</sup> East Portal resulted in the documentation of one new archaeological site (42Em2961) and one isolated find of artifact (IF-A).

### Archaeological Sites

Smithsonian Site No.: 42Em2961  
Temporary Site No.: MOAC 03-49-1  
Eligibility: Eligible

Description: This lithic scatter of unknown temporal affiliation lies on a gentle slope in a broad valley bounded by the Coal Cliffs to the east and Quitcupah Creek to the west. Sediments at the site are categorized as a silty sand and black carbonaceous sediment mixture. Vegetation includes low sagebrush, shadscale, yucca, prickly pear cactus, and grasses. The artifact assemblage is comprised of lithic debitage (n=102), chipped stone tools (n=3), and groundstone tools (n=2). Debitage is manufactured from a variety of chert, and all stages of reduction are represented. Tools include a light brown-beige mottled opaque chert utilized flake (Tool 1), one yellow-tan opaque chert test core (Tool 2), red sandstone groundstone (metate) fragments (Tools 3 and 4), and a brown chert Stage 4/5 biface fragment (Tool 5). No cultural features were found.

### Isolated Finds of Artifact

Isolated Find A (IF-A) is located in the NE/SW/NE of Section 27, T 22S, R 6E; UTM 480075E/4302737N. It is a brown sandstone slab metate exhibiting unifacial heavy grinding in the center of the slab and toward a lateral margin (30% of total surface). It measures 32 x 32 x6 cm.

## NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:

- a)...are associated with events that have made a significant contribution to the broad patterns of our history; or
- b)...are associated with the lives of persons significant to our past; or
- c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents 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)...have yielded or may be likely to yield information important in prehistory or history.

The inventory of the proposed Consolidation Coal Company Emery Mine 4<sup>th</sup> East Portal resulted in the documentation of one archaeological site (42Em2961) and one isolated find of artifact (IF-A). Site 42Em2961 is a lithic scatter of unknown temporal affiliation that is recommended eligible for inclusion to the National Register of Historic Places (NRHP) under Criterion D. Additional investigations at this site could address such research domains as chronology, technology, and subsistence strategy.

## MANAGEMENT RECOMMENDATIONS

The inventory of the Consolidation Coal Company's Emery Mine 4<sup>th</sup> East Portal resulted in the documentation of one archaeological site, 42Em2961, that is evaluated as eligible to the NRHP. MOAC, working in conjunction with Consolidation Coal Company, erected a fence along the site boundary to ensure avoidance during the proposed project.

Based on these findings, and action taken to avoid site 42Em2961, a determination of "No Historic Properties Affected" is proposed for this undertaking pursuant to Section 106, CFR 800.

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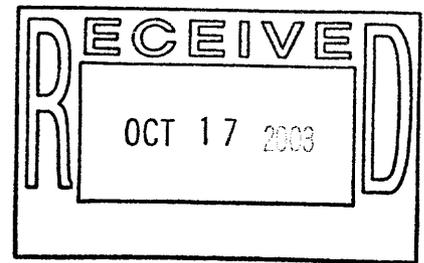
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APPENDIX A:  
INTERMOUNTAIN ANTIQUITIES SITE FORM  
42Em2961

IMACS SITE FORM

**PART A - ADMINISTRATIVE DATA**



1. **STATE NO.:** 42Em2961
2. **AGENCY NO.:**
3. **TEMP NO.:** 03-49-1
4. **STATE:** Utah **COUNTY:** Emery
5. **PROJECT:** CRI of Consolidation Coal Company's Emery Mine, 4<sup>th</sup> East Portal Location
6. **REPORT NO.:** U-03-MQ-0129p
7. **SITE NAME/PROPERTY NAME:**
8. **CLASS:**  PREHISTORIC  HISTORIC  PALEONTOLOGIC  ETHNOGRAPHIC
9. **SITE TYPE:** Lithic Scatter
10. **ELEVATION:** 6060 feet
11. **UTM GRID:** Zone [ 12 ] [479931] E [4302729] N
12. [ NW1/4 ] of [ SW1/4 ] of [ NE1/4 ] of Section [27] Township [22S] Range [6E].
13. **MERIDIAN:** Salt Lake City
14. **MAP REFERENCE:** Emery East, Utah
15. **AERIAL PHOTO:** N/A
16. **LOCATION AND ACCESS:** From SR 10 in the town of Emery, Utah, proceed south on 300 South Road for approximately 2.5 miles. Turn east at the second "Y" in the road (the first "Y" travels to Miller Canyon and I-70). Travel about 3/4 mile. The site is located approximately 400 feet to the east of the road, and is marked with a rebar and aluminum cap datum stamped with the site's temporary number.
17. **LAND OWNER:** Private
18. **FEDERAL ADMIN. UNITS:** None
19. **LOCATION OF CURATED MATERIALS:** N/A
20. **SITE DESCRIPTION:** This lithic scatter of unknown temporal affiliation lies on a gentle slope in a broad valley bounded by the Coal Cliffs to the east and Quitcupah Creek to the west. Sediments at the site are categorized as a silty sand and black carbonaceous sediment mixture. Vegetation includes low sagebrush, shadscale, yucca, prickly pear cactus, and grasses. The artifact assemblage is comprised of lithic debitage (n=102) and lithic tools (n=5). Debitage is manufactured from a variety of chert, and all stages of reduction are represented. Tools include a light brown-beige mottled opaque chert utilized flake (Tool 1), one yellow-tan opaque chert test core (Tool 2), red sandstone groundstone (metate) fragments (Tools 3 and 4), and a brown chert Stage 4/5 biface fragment (Tool 5). No cultural features were found.
21. **SITE CONDITION:**  EXCELLENT  GOOD  FAIR  POOR
22. **IMPACT AGENT(S):** Erosion
23. **NAT. REGISTER STATUS:**  SIGNIFICANT  NON-SIGNIFICANT  UNEVALUATED  
**JUSTIFY:** This lithic scatter is located on a gentle slope showing evidence of colluvial (sheetwash) action. It appears that artifacts have been dispersed downslope, suggesting that the integrity of the site is compromised. Even so, the site is evaluated as eligible under criterion D, since the adjacent excavated stock pond indicates depth of sediments at the site. It is conceivable that cultural materials are buried, and thus additional information may exist at this site regarding chronology, technology, and subsistence strategies.
24. **PHOTOS:** 03-49/1:1-10
25. **RECORDED BY:** Sharyl Kinnear-Ferris



PART B - PREHISTORIC SITES

1. **SITE TYPE:** Lithic Scatter
2. **CULTURE:**  
**CULTURAL AFFILIATION:** Unknown Aboriginal  
**DATING METHOD:** None  
**DESCRIBE:** No temporally diagnostic items were found.
3. **SITE DIMENSIONS:** [35] M by [45] M  
**AREA [1237] SQ M**
4. **SURFACE COLLECTION/METHOD:** None
5. **ESTIMATED DEPTH OF CULTURAL FILL:** Depth suspected, but not tested  
**How estimated (If tested, show location on site map):** Observation of adjacent excavated stock pond.
6. **EXCAVATION STATUS:** [ ] EXCAVATED [ ] TESTED [X] UNEXCAVATED  
**TESTING METHOD:** N/A
7. **SUMMARY OF ARTIFACTS AND DEBRIS:** Lithic Scatter (LS), Groundstone (GS)  
**DESCRIBE:** The artifact assemblage is comprised of lithic debitage (n=102) and lithic tools (n=5). Debitage is manufactured from a variety of chert, and all stages of reduction are represented. Tools include a chert utilized flake (Tool 1), one chert test core (Tool 2), sandstone groundstone (metate) fragments (Tools 3 and 4), and a Stage 4/5 biface fragment (Tool 5).
8. **LITHIC TOOLS:**

#	TYPE
1	Utilized Flake (IA)
1	Core (ID)
2	Groundstone (ME)
1	Biface (IG)

**DESCRIBE:** Tool 1 is a light brown-beige mottled opaque chert utilized flake (4x3x0.7 cm). It shows microflaking and use wear along one lateral margin. Tool 2 is a yellow-tan opaque chert test core measuring 10x7x3 cm. Four flakes are removed from wide margins. Tool 3 is a red sandstone groundstone (slab milling stone) fragment measuring 18.5 [IC]x16x2.8 cm. Light unifacial grinding is apparent. Tool 4 consists of three pieces of a red sandstone milling stone showing very light grinding on one face. The pieces measure 14[IC]x7[IC]x1.5 cm; 6[IC] (tapers to 1 cm at opposite end)x9.4[IC]x1.5 cm; and 9[IC]x9[IC]x1.5 cm. Tool 5 is a brown semitranslucent chert Stage 5 biface fragment exhibiting a bend fracture. It measures 4[IC]x4x0.5 cm (see sketch and photo).
9. **LITHIC DEBITAGE - ESTIMATED QUANTITY:** 100-500 (E) (n=102)  
**MATERIAL TYPE:** See Lithic Analysis Form  
**FLAKING STAGES:** (0) NOT PRESENT (1) RARE (2) COMMON (3) DOMINANT  
**[2] DECORTICATION [2] SECONDARY [3] TERTIARY [1] SHATTER [1] CORE**
10. **MAXIMUM DENSITY-#/SQ M (all lithics):** 6/SQ M
11. **CERAMIC ARTIFACTS:**

#	TYPE
None	

**DESCRIBE:** N/A
12. **MAXIMUM DENSITY-#/SQ M (ceramics):** N/A

IMACS SITE FORM: 42Em2961, PART B Continued

13. **NON-ARCHITECTURAL FEATURES (locate on site map):** None

**DESCRIBE:** N/A

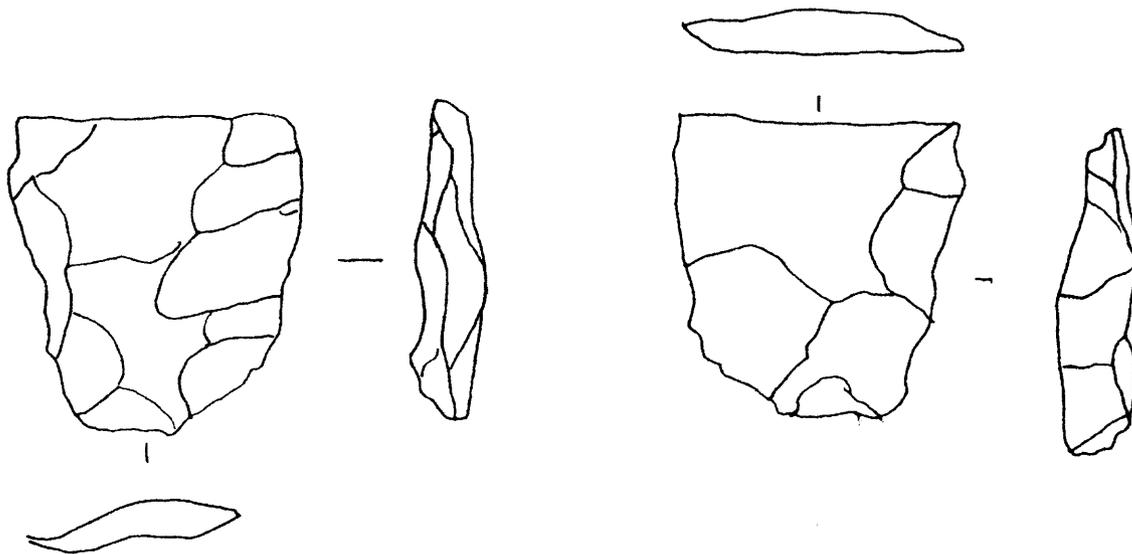
14. **ARCHITECTURAL FEATURES (locate on site map):**

#	MATERIAL	TYPE
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None

**DESCRIBE:** N/A

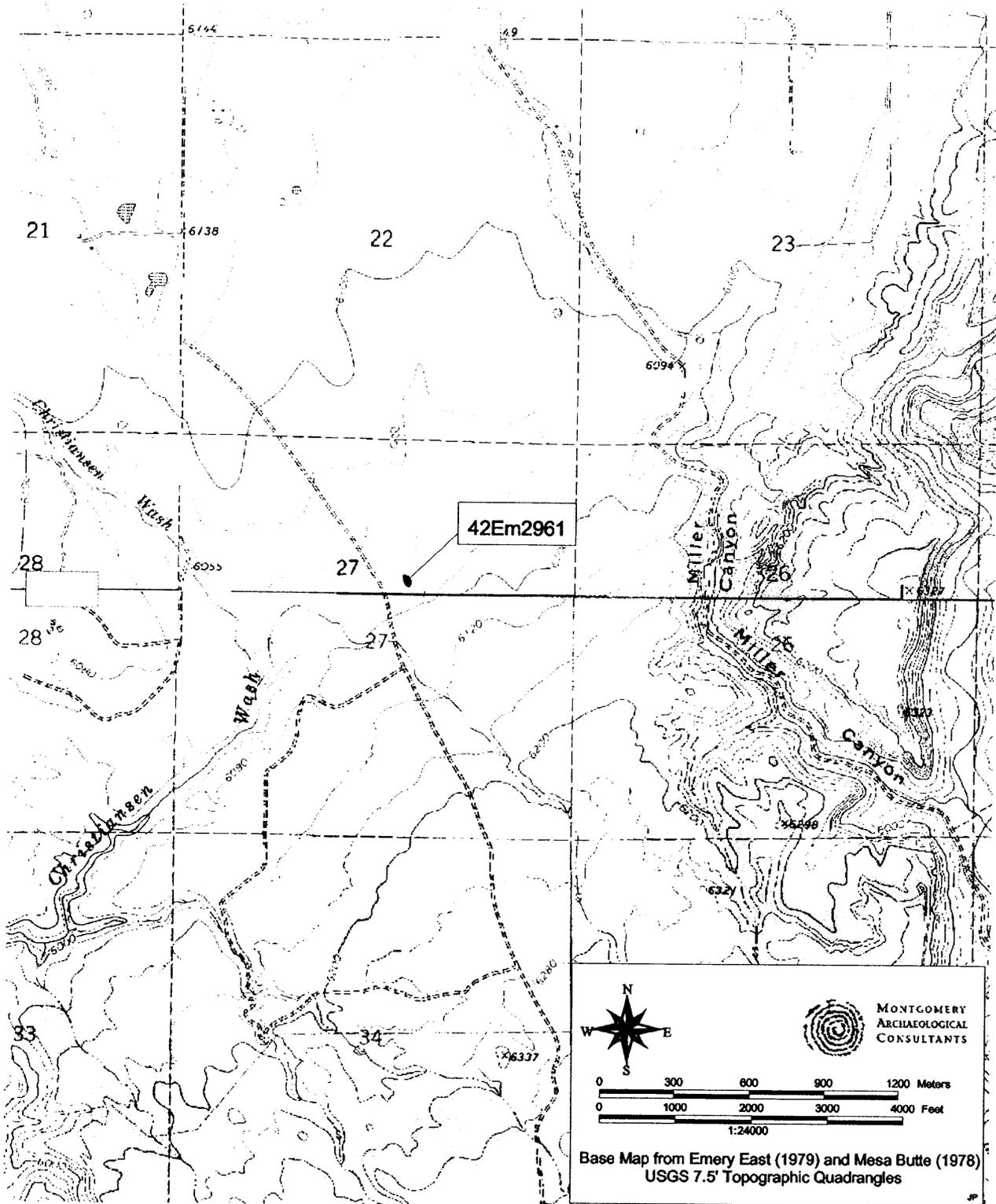
15. **COMMENTS/CONTINUATIONS:** Lithic Analysis Form



Tool 5 (actual size):

Lithic Analysis Table: 42Em2961

Material Type	Core Reduction (Primary) Decortication	Core Reduction (Secondary) Decortication Flake	Edge Preparation Flake	Percussion Biface Thinning Flake	Pressure Biface Thinning Flake	Undiagnostic Flake Fragment	
Clear translucent chert	0	1	2	5	2	0	10
Brown-beige mottled semitranslucent chert	5	10	1	7	7	3	33
Gray semitranslucent chert	1	1	0	4	2	1	9
Brown with black and beige inclusions semitranslucent chert	2	1	0	1	0	0	4
Dark gray opaque chert	2	3	0	5	1	2	13
Yellow-tan opaque chert	6	10	1	2	3	3	25
Gray with orange inclusions opaque chert	2	2	0	0	0	0	4
Red-clear semitranslucent chert	1	1	0	2	0	0	4
	19	29	4	26	15	9	102



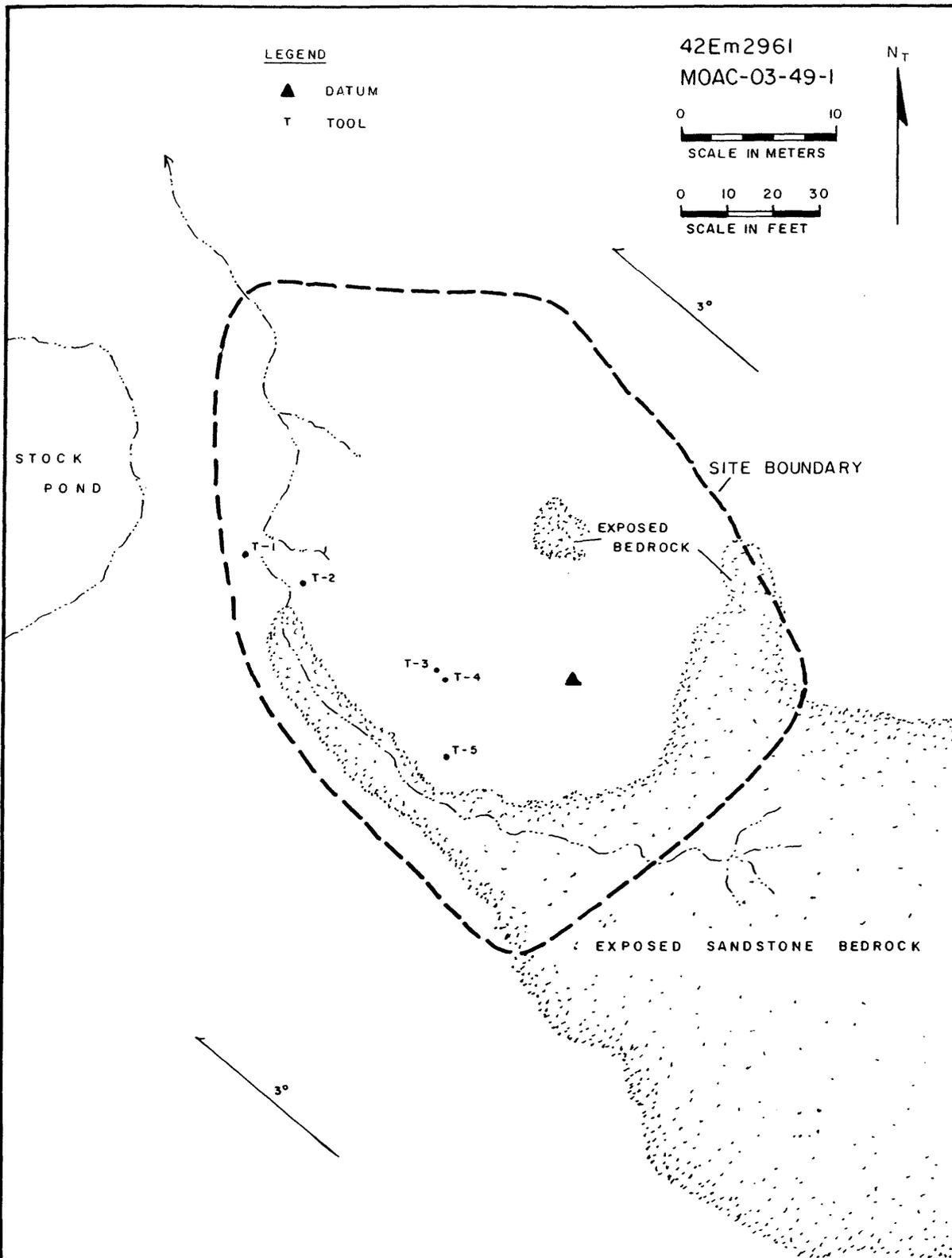
LEGEND

- ▲ DATUM
- T TOOL

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N ↑





42Em2961. Overview of site, archaeologist standing at datum. Viewed to the north-northeast. Roll 03-49/1:1.



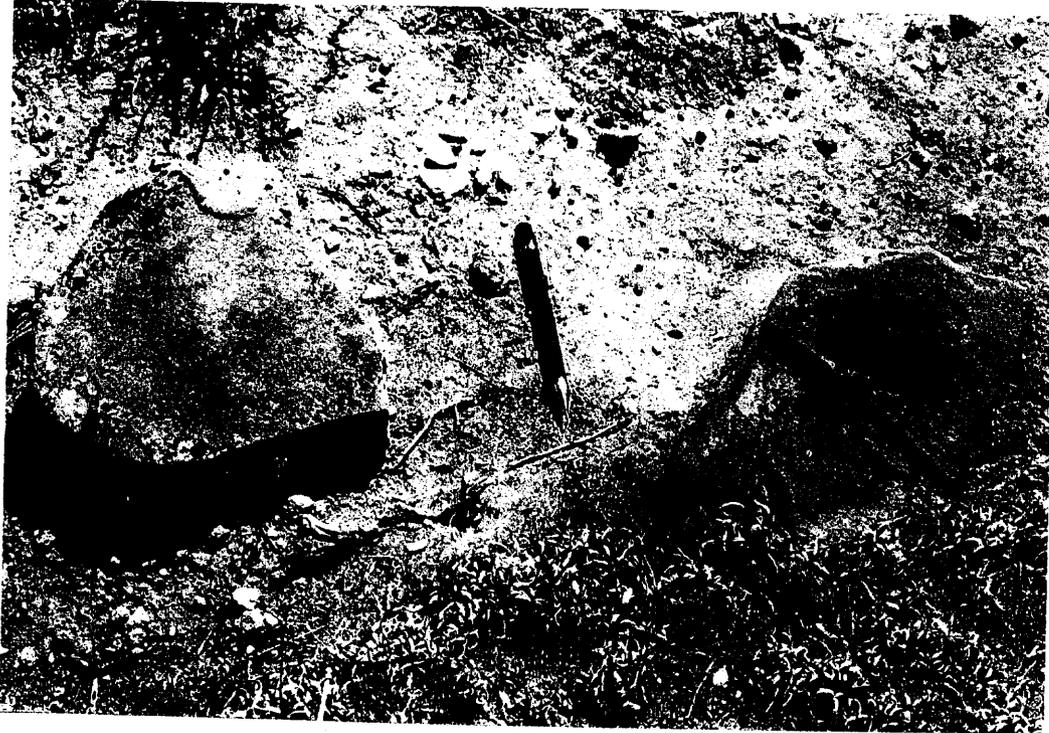
42Em2961. Overview of site, looking southwest. Current coal operation in background. Roll 03-49/1:2.



42Em2961. Close-up view of Tool 1. Roll 03-49/1:5.



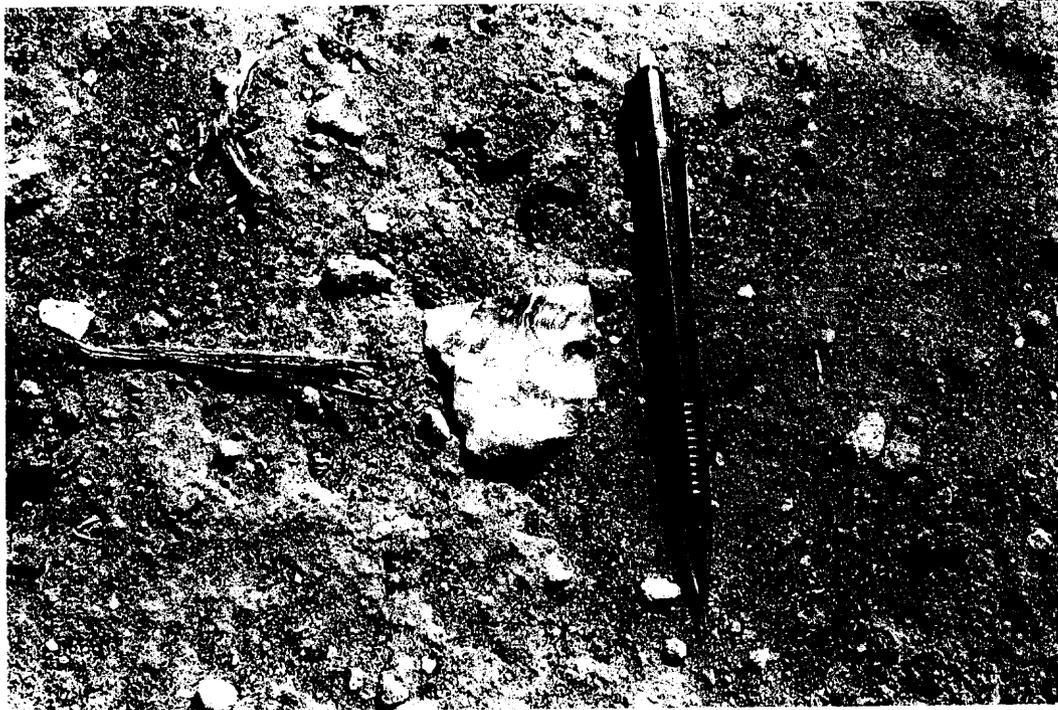
42Em2961. Close-up view of Tool 2. Roll 03-49/1:6.



42Em2961. Close-up view of Tool 3. Roll 03-49/1:7.



42Em2961. Close-up view of Tool 4. Roll 03-49/1:8.



42Em2961. Close-up view of Tool 5. Roll 03-49/1:9.

