

6.2 Testing Results at Site ORA-441

6.2.1 Previous Studies of Site ORA-441

Site ORA-441 was first described in 1973 as a prehistoric midden deposit and artifact scatter with groundstone tools, choppers, scrapers, cores, hammerstones, and at least one feature consisting of a rock cairn measuring five meters in diameter. The site was reported as being situated on a moderately sloping south-facing slope between 970 to 1,000 feet AMSL, and measuring approximately 200 by 150 meters. The soil within the site was noted as a medium-gray loamy midden, and the native soil was a very light-tan sandy alluvium. Vegetation consisted of a native coastal sage scrub plant community, various cacti, and grasses. No disturbances were noted within the site area (Crabtree et al. 1973).

The site was surveyed in 1977 for the Glenn Ranch development project, and several rock cairns were noted as being associated with the site, which “make the site particularly interesting, as these are most unusual in the area” (Munoz and Cooley 1977). In 1980, the site was revisited and described as being located on a low ridge, with four rock cairns, one of which contained fire-cracked rock and groundstone fragments. The site area measured 100 by 75 meters, and contained hammerstones and flakes (Schilz 1980). The site was described again in a 1986 report for The Baldwin Company as a scatter of artifacts and chipping waste. None of the above-mentioned surveys involved testing the site.

6.2.2 Site Description

Site ORA-441 was recorded during the current field investigation as a *marine shell* and artifact scatter on a south-facing slope between 990 to 1,060 feet AMSL that measures 108 by 35 meters. The site is centrally located on the western property boundary, approximately 400 meters due south of the Glen Ranch Road and Saddleback Ranch Road intersection. One piece of debitage and a few shell fragments were observed on the surface near the drainage. No evidence remains of the four cairns observed during previous surveys, and no additional features were observed. Vegetation within the area consists of a native coastal sage scrub plant community, various cacti, and grasses. Disturbances noted within the site area include disking on the ridge top and an artificial cut made in part of the drainage to the west of the site. The previous disking has removed most of the native vegetation, and appears to have removed the previously identified rock cairns. An artifact location and excavation map of the site is provided in Figure 6.2-1. An overview of the site area is shown in Plate 6.2-1 and a north wall profile of the test unit is shown in Plate 6.2-2. The testing recovery is summarized in Tables 6.2-1 through 6.2-3.

6.2.3 Surface Recovery

The surface collection resulted in the recovery of 6.7 grams of shell and one piece of debitage (Table 6.2–1). The piece of debitage was recovered from the side of the hill, at 1,060 feet AMSL. The shell was recovered from the bottom of the hill, next to the drainage, at approximately 1,000 feet AMSL. None of the artifacts reported in the 1973 site record were observed. There was no indication from any of the previous reports that the artifacts were collected during previous surveys, indicating that the artifacts were collected but not documented, or they were removed as a result of disking and other modern activities within the site area. All artifacts were mapped by GPS (Figure 6.2–1).

6.2.4 Subsurface Excavation

Eleven shovel test pits were excavated at the site. The STPs were placed between the shell scatter near the seasonal drainage and the surface collection near the top of the hill. All shovel test pits were excavated to 30 centimeters, with the exception of STP 4 and STP 11, which were excavated to 50 centimeters (Table 6.2–2). No artifacts were recovered and no culturally modified soil was observed.

One standard one-meter-square test unit was excavated to 30 centimeters. The test unit was placed in the area where shell was observed on the surface. One shell fragment (0.7 grams) was recovered within the first 10 centimeters, and two shell fragments (16.0 grams) were recovered within the 10-to-20-centimeter level, for a total of 16.7 grams of shell (Table 6.2–3). A soil change was noted at 10 centimeters near the west wall of the unit, and at 20 centimeters for the majority of the unit. The top layer of soil was noted as a medium-gray sandy loam (10YR 5/1, fine to coarse grain, loose), and the lower layer of soil is a medium-gray/tan sandy alluvium (10YR 5/1, fine to medium grain, compacted). At the lower level, the soil did not change color, but it became much more compacted, and the sand was less coarse in size/texture.

6.2.5 Laboratory Analysis

Laboratory analysis for Site ORA-441 included the standard procedures described in Section 5.0 of this report. All artifacts recovered from field investigations conducted at the site were returned to the laboratory facilities of BFSa for cataloging and further analysis.

Shell (23.4 grams) and one piece of debitage were recovered at Site ORA-442. The single piece of debitage falls under the category of lithic production waste. Debitage consists of lithic production waste specimens that lack specific attributes of tools, cores, or flakes. Although the term debitage has been used to describe all waste products that result from flintknapping, its use here is limited to angular waste fragments, sometimes referred to as shatter, which may also result from use of percussion tools, particularly the sharpening of groundstone tools with hammerstones, and resharpening the edges of hammerstones dulled during sharpening of groundstone tools. The lithic material category for the single piece of debitage is medium-

grained metavolcanic (MGM), most likely sourced locally. The debitage exhibited use patterns typical of shatter from tool production; a single point of percussion and sharp, angular edges. Lithic production waste made from metavolcanic materials is in keeping with the abundance of these materials in the region and the preference to use these materials for tools. A catalog of the recovered artifact and shell fragments is provided in Appendix V.

6.2.6 Discussion

Site ORA-441 was recorded during the current investigation as a prehistoric site with *marine shell* and (one) lithic production waste. The site is situated on a moderately sloping south-facing slope and measures approximately 108 by 35 meters. The artifacts initially listed in the 1973 site form were not relocated, and the features initially reported were not observed. One artifact (debitage) and 23.4 grams of *marine shell* were recovered during the current field investigation. No artifacts were recovered from the STPs, and only three shell fragments were recovered to a depth of 20 centimeters within the test unit, indicating that there is no subsurface midden deposit. The shell fragments are more likely the result of disking within the site area.

Due to the lack of artifacts observed on the surface despite the excellent ground visibility and the absence of a subsurface cultural deposit, it appears that Site ORA-441 was a temporary or seasonal resource extraction and processing site that lacks any information that might reflect focused or long-term use. The rock cairns listed in the 1973 site form were once believed to indicate the presence of human burials (The Baldwin Company 1986), but no evidence of human remains was observed during previous surveys, or during the present field investigation. The subsurface excavations combined with the collection and curation of surface artifacts and recordation of the site has exhausted the research potential for Site ORA-441.

Figure 6.2-1
Excavation Location Map
Site ORA-441

(Deleted for Public Review; Bound Separately)

Table 6.2-1
Surface Collection Data
Site ORA-441

Surface	Quantity	Artifact Type	Material Type	Cat. No.
1	6.7 g.	Unidentified fragment(s)	Shell	1
2	1	Debitage	MGM	2

Table 6.2-2
Shovel Test Excavation Data
Site ORA-441

Shovel Test	Depth	Recovery
1	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
2	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
3	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
4	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
	30-40	No Recovery
	40-50	No Recovery
5	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
6	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery

Shovel Test	Depth	Recovery
7	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
8	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
9	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
10	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
11	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
	30-40	No Recovery
	40-50	No Recovery

Table 6.2-3
Test Unit Recovery Data
Site ORA-441

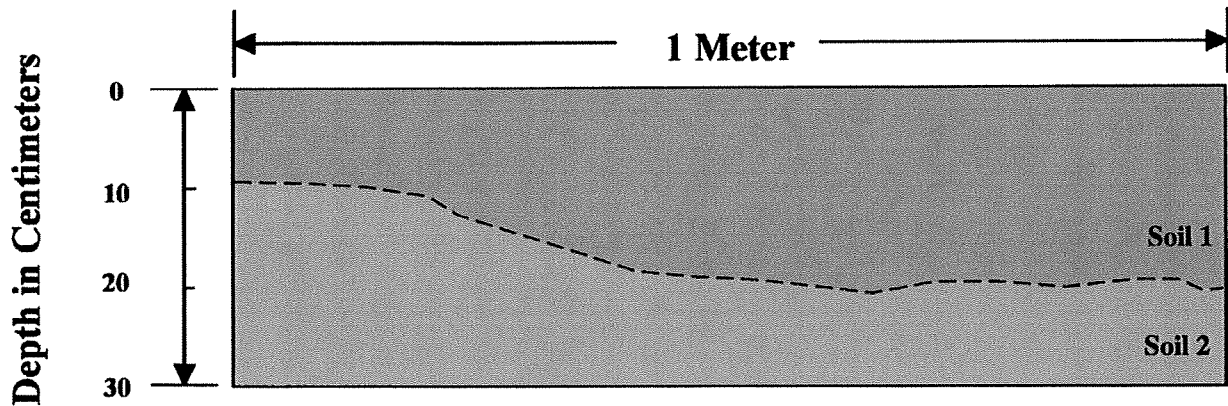
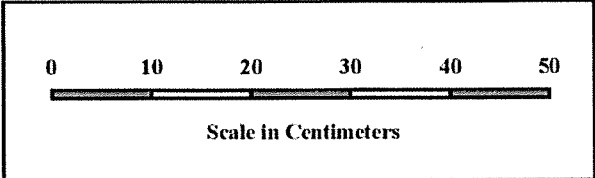
Test Unit	Depth (cm)	Quantity	Artifact Type	Material Type	Cat. No.
1	0-10	0.7 g.	Unidentified fragment(s)	Shell	42
	10-20	16.0 g.	Unidentified fragment(s)	Shell	43
	20-30		No Recovery		



Plate 6.2-1. Overview of Site ORA-441, facing southwest.



Plate 6.2-2. North wall profile of test unit, Site ORA-441.



Soil Types

- 1** Gray, (10YR 5/1) fine to coarse grain, loose
- 2** Gray, (10YR 5/1) fine-medium grain, compacted

Figure 6.2-2

Test Unit 1 Profile of North Wall

Site ORA-441

The Portola Center Project



6.3 Testing Results at Site ORA-442

6.3.1 Previous Studies of Site ORA-442

Site ORA-442 was first described in 1973 as an artifact scatter with groundstone tools, scrapers, and cores. The site was reported as being situated on a low knoll between 960 to 1,000 feet AMSL, but the site area was not defined. The native soil was noted as a gray/tan sandy alluvium, and no midden soil was reported. Vegetation consisted of a native coastal sage scrub plant community, various cacti, and grasses. No disturbances were noted within the site area (Crabtree and Cooley 1973).

The site was mentioned in a site survey letter report for the El Toro Road realignment, dated 1975. The site was grouped with ORA-443; together they were described as “secondary seasonal gathering camps” (Howard 1975). The site was surveyed in 1977 for the Glenn Ranch development project, and described as “a thick scatter of artifacts and chipping waste covering an ill-defined area of unknown depth.” The site was reported as having been disked (Munoz and Cooley 1977). In 1980, the site was revisited and described as being located on an east-facing slope of a low ridge, with a dense lithic scatter, manos, metate fragments, hammerstones, and numerous water-worn cobbles covering an area measuring 40 by 50 meters. Four rock clusters were observed on the west-facing slope of the same ridge, but it was not determined if they were natural or cultural (Schilz 1980). The site was described again in a 1986 report for The Baldwin Company as a thick scatter of artifacts and chipping waste. None of the above mentioned surveys involved testing of the site.

6.3.2 Site Description

Site ORA-442 was recorded during the current field investigation as an artifact scatter located on a southwest-facing slope between 960 to 1,060 feet AMSL that measures 198 by 54 meters. The site was relocated at the southwest corner of the subject property, just northwest of Aliso Creek and El Toro Road, 600 meters southwest of Glen Ranch Road. Artifacts consisting of five lithic production waste flakes, two scrapers, one cobble scraper, one piece of debitage, one mano, and one core were collected from the surface of the southwest-facing slope. No features were observed. Vegetation in the site vicinity consists of a native coastal sage scrub plant community, various cacti, and grasses. Dark, midden-like soil was observed on the slope, but within an area that has been disked for many years. The soil is most likely not culturally modified other than being altered by years of agricultural use. The site has been disturbed by disking, which has removed all of the native vegetation within the site.

An artifact location and excavation map of the site is provided in Figure 6.3–1, and Plates 6.2–1 and 6.3–2 show an overview of the site area and a view of the test unit north wall, respectively. The testing recovery is summarized in Tables 6.3–1 to 6.3–3.

6.3.3 Surface Recovery

The surface collection resulted in the recovery of five lithic production waste flakes (one Monterey chert, one chalcedony, one quartzite, and two MGM), two scrapers, one cobble scraper, one piece of debitage, one mano, and one core (Table 6.3–1). All artifacts were mapped by GPS (Figure 6.3–1).

6.3.4 Subsurface Excavation

Eleven shovel test pits were placed within and just beyond the surface scatter of artifacts. All shovel test pits were excavated to 30 centimeters except for STP 1 and STP 2, which went to 40 and 50 centimeters, respectively. The diameter of each averaged about 30 centimeters. No prehistoric artifacts were recovered and no culturally modified soil was observed.

One standard one-meter-square test unit was excavated to a depth of 30 centimeters. No artifacts or culturally modified soil were observed during the test unit excavation, however, a soil change was noted between 12 and 25 centimeters BTS. The native soil is a medium gray/tan (10YR 5/2, fine to coarse grain) sandy loam, which became more compacted in the lower level. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site.

6.3.5 Laboratory Analysis

Laboratory analysis for Site ORA-442 included the standard procedures described in Section 5.0 of this report. All artifacts recovered from field investigations at the site were returned to the laboratory facilities of BFSa for cataloging and further analysis.

A total of 11 artifacts were recovered from the surface at Site ORA-442. The artifact assemblage consisted of five lithic production waste flakes (one Monterey chert, one chalcedony, one quartzite, and two MGM), three scrapers, one piece of debitage, one mano, and one core. The cobble scraper and one additional scraper were made from quartzite; the remaining artifacts were made from MGM. See Appendix V for a complete catalog of recovered artifacts.

The groundstone tool recovered from the site consisted of a mano that was measured, weighed, and analyzed for groundstone characteristics and material type. The lithic material category for the mano is MGM, it weighs 664.0 grams, and measures 13 by nine by five centimeters. Metavolcanic materials are abundant in the region and the preferred material to use for tools. The mano recovered from the site appears to have been used lightly on one side, and fire affected/burned.

The lithic production waste recovered from the site consisted of one core, five flakes, and one piece of debitage. Cores are typically rocks from which percussive flakes have been struck. The critical element in this classification is that the resultant flakes, not the source, are the objects of percussive activity. While the manufacture of most lithic tools requires flaking, the core is simply a source for potentially usable flakes. Other tools may exhibit core-like

percussive edge preparation and therefore incorporate the term “core” in their nomenclature (e.g., core/scrapper); however, the classification of core was reserved for those objects that were used as sources of flakes. The lithic material category for the core recovered from the site is MGM, which was most likely sourced locally.

Flakes typically consist of flaked lithic material that exhibits specific attributes that are the result of flake-producing activities. Flakes exhibited a platform, a bulb of percussion, and force lines and rings, among other attributes. The lithic material categories for the flakes recovered at the site include chalcedony, Monterey chert, quartzite, and MGM. Medium-grained metavolcanic flakes indicate that some tool manufacturing occurred locally or at the site. Materials such as Monterey chert and chalcedony are also locally sourced materials; however, more specialized materials such as certain types of chert and obsidian (although no obsidian was recovered at the site) indicate that the local inhabitants traded raw materials with surrounding populations for the production of tools.

As discussed in the previous chapter, debitage consists of specimens of lithic production waste that lack specific attributes of tools, cores, or flakes. Although the term debitage has been used to describe all waste products that result from flintknapping, its use here is limited to angular waste fragments, sometimes referred to as shatter, which may also result from use of percussion tools, particularly the sharpening of groundstone tools with hammerstones, and resharpening the edges of hammerstones dulled during sharpening of groundstone tools. The lithic material categories for the single piece of debitage recovered from the site is MGM, most likely sourced locally. The debitage exhibited use patterns typical of shatter from tool production, a single point of percussion and sharp, angular edges with no visible cortex.

The unifacial precision tools recovered from the site consisted of three scrapers. Scrapers include unifacial tools that were used to scrape, cut, or flense wood, flesh, or other fibrous materials. The scrapers recovered from the site were divided into three different types based on the morphological form of the tool, usually derived from the characteristics of the utilized edges. One scraper is a cobble scraper that was derived from a cobble split along its length and width, with one utilized edge that also has a perforator; the second scraper is a split cobble scraper that was reduced to a very large flake with one percussion bulb and two reworked edges; and the third scraper is a large spall scraper that has a slightly utilized edge. The materials used to produce the tools consist of quartzite and MGM, most likely sourced locally. The scrapers do not exhibit signs of extensive use; rather, they appear to have been utilized lightly, with little retouching or re-flaking of the edges. The split cobble scraper exhibited the most retouching of the three scrapers.

6.3.6 Discussion

Site ORA-442 is an artifact scatter with precision tools, a groundstone tool, and lithic production waste. The site is situated on a low knoll and measures 198 by 54 meters. Eleven

artifacts were recovered from the surface during the current field investigation of ORA-442. No artifacts were recovered from the shovel test pits and test unit, indicating that no subsurface deposit is present.

It appears that Site ORA-442 was a temporary or seasonal resource extraction, processing, and perhaps, tool production and maintenance site. The groundstone tools indicate that seed grinding activities took place at the site. The site lacks information that might reflect long-term use. The subsurface excavations combined with the collection and curation of surface artifacts and the recordation of the site have exhausted the research potential for Site ORA-442.

Figure 6.3-1
Excavation Location Map
Site ORA-442

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Table 6.3-1
Surface Collection Data
Site ORA-442

Surface	Quantity	Artifact Type	Material Type	Cat. No.
1	1	Debitage	MGM	1
2	1	Flake(s)	Chalcedony	2
	1	Core(s)	MGM	3
	1	Flake(s)	Quartzite	4
3	1	Flake(s)	Monterey Chert	5
	1	Cobble Scraper(s)	Quartzite	6
4	1	Mano(s)	MGM	7
	1	Flake(s)	MGM	8
	1	Scraper(s)	Quartzite	9
5	1	Flake(s)	MGM	10
6	1	Scraper(s)	MGM	11

Table 6.3-2
Shovel Test Excavation Data
Site ORA-442

Shovel Test	Depth	Recovery
1	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
	30-40	No Recovery
2	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
	30-40	No Recovery
	40-50	No Recovery
3	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery

Shovel Test	Depth	Recovery
4	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
5	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
6	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
7	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
8	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
9	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
10	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
11	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
12	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
13	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery

Shovel Test	Depth	Recovery
14	0-10	No Recovery
14	10-20	No Recovery
	20-30	No Recovery
15	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery

Table 6.3-3
Test Unit Excavation Data
Site ORA-442

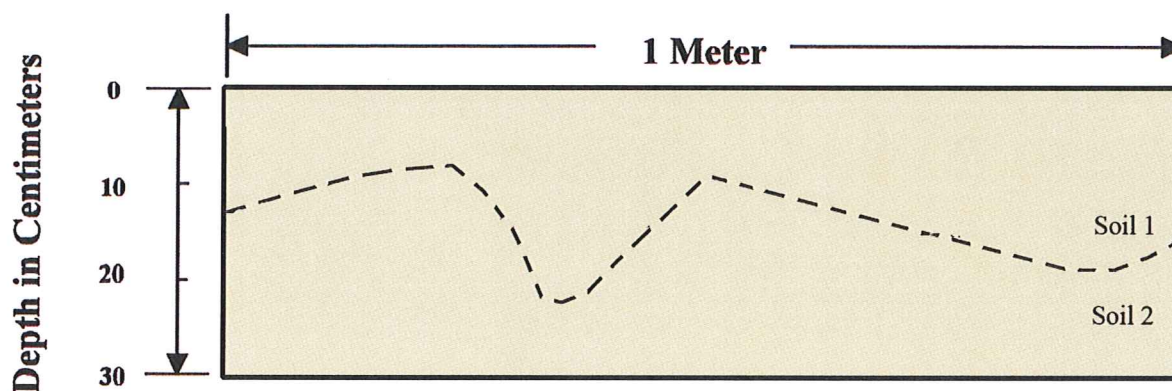
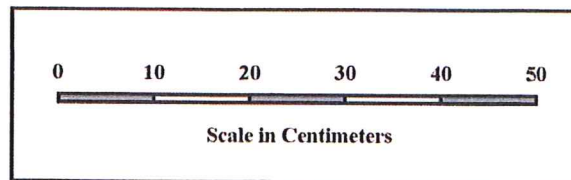
Test Unit	Depth (cm)	Quantity	Artifact Type	Material Type	Cat. No.
1	0-10	No Recovery			
	10-20	No Recovery			
	20-30	No Recovery			



Plate 6.3-1. View of Site ORA-442, facing west.



Plate 6.3-2. North wall profile of test unit, Site ORA-442.



Soil Types



-  Medium gray-brown, (10YR 5/2) fine to coarse grain, loose
-  Medium gray-brown, (10YR 5/2) fine to coarse grain, compact sandy loam



Figure 6.3-2
Test Unit 1 Profile of North Wall

Site ORA-442

The Portola Center Project

6.4 Testing Results at Site ORA-443

6.4.1 Previous Studies of Site ORA-443

Site ORA-443 was first described in 1973 as an artifact scatter with groundstone tools, scrapers, scraper planes, and hammerstones. The site was reported as being situated within a drainage that opens up to the south and drains into Aliso Creek. The site was reported as being situated at approximately 1,150 feet AMSL, and extending south to approximately the 1,050-foot level. The site measured 180 by 300 meters. One feature was noted and described as a rock grouping. The native soil was noted as a gray/tan sandy alluvium, and no midden soil was reported. Vegetation consisted of a native coastal sage scrub plant community, various cacti, and grasses. No disturbances were noted within the site area (Cooley and Crabtree 1973).

The site was mentioned in a site survey letter report for the El Toro Road Realignment, dated 1975. The site was grouped with ORA-442, and together they were described as “secondary seasonal gathering camps” (Howard 1975). The site was surveyed in 1977 for the Glenn Ranch Development Project and described as being located along the west side of a ridge, with scrapers, scraper planes, hammerstones, and manos in the 180 by 300-meter area. The artifact scatter was reported as appearing thin and shallow (Munoz and Cooley 1977). In 1980, the site was revisited and described as being located on a west- and south-facing slope of a ridge, and appeared to have been disturbed by erosion. Three manos, a metate fragment, two cores, and two small clusters of stones were observed in a 30 by 50 meter area (Schilz 1980). The site was described again in a 1986 report for The Baldwin Company as containing manos, scrapers, scraper planes, and hammerstones. None of the above-mentioned surveys involved testing of the site.

6.4.2 Site Description

Site ORA-443 was recorded during the current field investigation as an artifact scatter with groundstone tools situated within a drainage that opens up to the south and drains into Aliso Creek. The site is centrally located near the southeast property boundary, just south of Glen Ranch Road, and approximately 100 meters northwest of El Toro Road and Aliso Creek. The site measures approximately 54 by 180 meters and extends south from the top of a knoll at approximately 1,180 feet AMSL to approximately the 1,050-foot level. Eleven artifacts consisting of four lithic production waste flakes, two debitage flakes, and five manos were observed on the surface, primarily located on the top of the knoll. No features were observed, including the rock grouping reported in the 1973 site record. No midden soil was observed. Vegetation consists of a native coastal sage scrub plant community, various cacti, and grasses. The site area did not appear to be disturbed other than from natural erosion within the drainage. An artifact location and excavation map of the site is provided in Figure 6.4-1, and Plates 6.4-1 and 6.4-2 show an overview of the site area and a view of the test unit north wall, respectively. The testing recovery is summarized in Tables 6.4-1 to 6.4-3.

6.4.3 Surface Recovery

The surface collection resulted in the recovery of four lithic production waste flakes (two Monterey chert and two MGM), two pieces of debitage, and five manos. The majority of the surface collections originated from the top of the hill at the north end of the site. All artifacts were mapped by GPS (Figure 6.4-1).

6.4.4 Subsurface Excavation

Fifteen shovel test pits were placed within and just beyond the surface scatter of artifacts. All shovel test pits were excavated to 30 centimeters, and the diameter of each averaged about 30 centimeters. No artifacts were recovered and no culturally modified soil was observed.

One standard one-meter-square test unit was excavated to a depth of 30 centimeters. No artifacts or culturally modified soil was observed during the test unit excavation; however, a soil change was noted around 20 to 25 centimeters BTS. The soil changed color slightly, from a dark gray (10YR 4/1 fine grain) sandy loam to a lighter grayish tan (10YR 5/2); it also became much more compacted at the lower level, and the sand was less coarse in size and texture. Although the soil appeared darker on the surface, this is most likely due to natural processes such as the decomposition of organic debris, which forms a loamy topsoil. There was no evidence that the topsoil was culturally modified, or contained cultural constituents such as shellfish remains. The placement of the test unit was based on the potential for the site to contain a subsurface deposit, which was higher within the eastern portion of the site area where the terrain was considerably flatter and more level than the western portion of the site, which contained more surface artifacts, but was sloped and rocky. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site.

6.4.5 Laboratory Analysis

Laboratory analysis for Site ORA-443 included the standard procedures described in Section 5.0 of this report. All artifacts recovered from field investigations conducted at the site were returned to the laboratory facilities of BFSa for cataloging and further analysis.

A total of 11 artifacts were recovered from Site ORA-443. The artifact assemblage consisted of four lithic production waste flakes (two Monterey chert and two MGM), two pieces of debitage (MGM and Monterey chert), and five manos. The lithic material categories for the five manos include granite, quartzite, and coarse-grained metavolcanic, which can be found locally. A complete catalog of recovered artifacts is provided in Appendix V.

The groundstone tools recovered from the site were measured, weighed, and analyzed for groundstone characteristics and material type. The weights range from 54.9 to 765.2 grams.

Four of the five manos recovered from the site exhibit use-wear on primarily one surface. Use-wear often forms noticeable striations along the used surface, creating an artificial shoulder

between the grinding surface and the side of the mano. The fifth mano appears to have been used on both sides. The manos appear to have been used moderately, and were fragmented and fire-affected as a result of burning.

The lithic production waste consisted of four flakes and two pieces of debitage. The lithic material categories for the lithic production waste recovered at the site includes Monterey chert and MGM. MGM can be sourced locally, and the Monterey chert also appears to be a local material. Very fine-grained metavolcanics (FGM), such as chert, were highly valued due to their flaking characteristics, which allow for very sharp, precise edges. The flakes are mostly primary and secondary flakes, which have cortex on some of the surfaces. The debitage exhibited use patterns typical of shatter from tool production – one or two points of percussion and sharp, angular edges with no cortex.

6.4.6 Discussion

Site ORA-443 is an artifact scatter with manos, and lithic production waste. The site measures approximately 54 by 180 meters, and is situated within a drainage that opens up to the south and drains into Aliso Creek. Some artifacts listed in the 1973 site record were not relocated. No features were observed during the current field investigations, including the rock cluster reported in 1973. Eleven artifacts were recovered during the current field investigation. The shovel test pits and test unit excavations did not expose any subsurface artifacts or midden soil, indicating that no subsurface deposit is present.

It appears that Site ORA-443 was a temporary or seasonal resource extraction, processing, and perhaps, a tool production and maintenance site that utilized both local and imported materials in the production of stone tools, and where the grinding of seeds and/or acorns also occurred. Although the ground visibility was fair to good, the site lacks information that might reflect long-term use. The subsurface excavations, combined with the collection and curation of surface artifacts and recordation of the site, has exhausted the research potential for Site ORA-443.

Figure 6.4-1
Excavation Location Map
Site ORA-443

(Deleted for Public Review; Bound Separately)

Table 6.4-1
Surface Collection Data
Site ORA-443

Surface	Quantity	Artifact Type	Material Type	Cat. No.
1	1	Mano(s)	Granite	1
2	1	Flake(s)	MGM	2
3	1	Mano(s)	Granite	3
	1	Flake(s)	Monterey Chert	4
4	1	Mano(s)	Granite	5
5	1	Mano(s)	CGM	6
	1	Debitage	MGM	7
6	1	Flake(s)	MGM	8
7	1	Mano(s)	Quartzite	9
9	1	Debitage	Monterey Chert	11
	1	Flake(s)	Monterey Chert	12

Table 6.4-2
Shovel Test Excavation Data
Site ORA-443

Shovel Test	Depth	Recovery
1	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
2	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
3	0-10	No Recovery

Shovel Test	Depth	Recovery
	10-20	No Recovery
	20-30	No Recovery
4	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
5	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
6	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
7	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
8	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
9	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
10	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
11	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
12	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
13	0-10	No Recovery
	10-20	No Recovery

Shovel Test	Depth	Recovery
	20-30	No Recovery
14	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
15	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery

Table 6.4-3
Test Unit Excavation Data
Site ORA-443

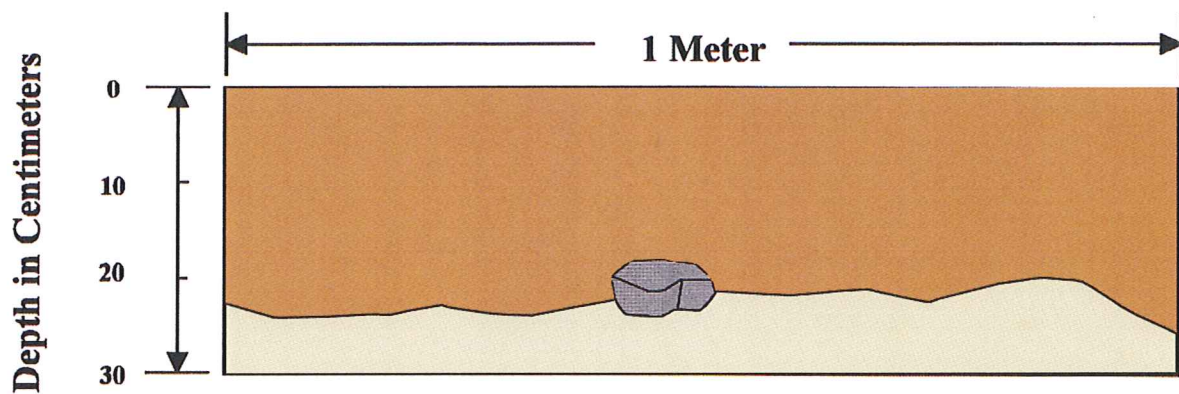
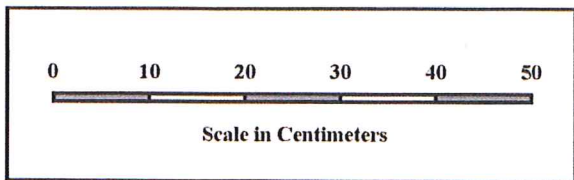
Test Unit	Depth (cm)	Quantity	Artifact Type	Material Type	Cat. No.
1	0-10	No Recovery			
	10-20	No Recovery			
	20-30	No Recovery			



Plate 6.4-1. View of Site ORA-443, facing north.



Plate 6.4-2. North wall profile of test unit, Site ORA-443.



Soil Types

1 Dark gray-brown, (10YR 4/1) fine to coarse grain, sandy loam

2 Gray-tan, (10YR 5/2) fine grain, dense sandy alluvium

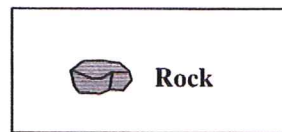


Figure 6.4-2

Test Unit 1 Profile of North Wall

Site ORA-443

The Portola Center Project



6.5 Testing Results at Site ORA-445

6.5.1 Previous Studies of Site ORA-445

Site ORA-445 was first described in 1973 as an artifact scatter with groundstone tools, mortar bowl fragments, and fire-cracked rock. The site was reported as being situated on a low hill and extending eastward to a creek terrace. The site elevation was approximately 950 feet AMSL, and measured 200 by 160 meters. No features were observed. The native soil was noted as being a light tan sandy alluvium that “grades into a gray loam on the stream terrace to the east.” Midden soil was predicted to exist below the erosional deposition from the hill, and may also be below the surface on top of the hill. Vegetation consisted of a native coastal sage scrub plant community, various cacti, and grasses. No disturbances were noted within the site area (Butler et al. 1973).

The site was surveyed in 1977 for the Glenn Ranch Project, and described as being located on a knoll and on an adjacent stream terrace, with manos, mortar bowl fragments, and fire-cracked rock in a 200 by 160-meter area. The survey reported that some of the midden from the top of the knoll may have eroded, and possibly overlaps the midden on the lower terrace (Munoz and Cooley 1977). In 1980, the site was revisited and described as being located on a knoll and east-facing terrace. The distribution of artifacts, consisting of manos, flakes, and hammerstones, indicated that the site measured 50 by 75 meters (Schilz 1980). The site was described again in a 1986 report for The Baldwin Company as containing manos, fire-cracked rock, and mortar bowl fragments. None of the above-mentioned surveys involved testing the site.

6.5.2 Site Description

Site ORA-445 is disturbed, evidenced by the presence of concrete and modern trash, which covers the entire site area. Site ORA-445 was relocated during the current field investigation near the western property boundary, south of Glen Ranch Road, and approximately 50 meters southwest of the Saddleback Ranch Road and Glen Ranch Road intersection. The site boundaries could not be accurately defined because of the disturbances and lack of surface artifacts; however, the testing covered an area that measured approximately 72 by 108 meters, between 920 and 960 feet AMSL. No artifacts, midden soil, or features were observed on the surface. A concrete drainage ditch running north/south has impacted the west side of the site, and the northeast end of the site area has been graded for a road. Vegetation within the area consists of a native coastal sage scrub plant community, various cacti, and grasses. An excavation map of the site is provided in Figure 6.5–1, and Plate 6.5–1 shows an overview of the site.

6.5.3 Surface Recovery

No artifacts were observed on the surface, including those previously reported. It appears that disturbances to the site have removed all the previously recorded artifacts.

6.5.4 Subsurface Excavation

Five shovel test pits were placed within the previously mapped site area. All shovel test pits were excavated to 30 centimeters, and the diameter of each averaged about 30 centimeters. The soil is a grayish tan (10YR 5/2 fine to medium-grained) sandy loam. No artifacts were recovered and no culturally modified soil was observed. Table 6.5-1 lists the shovel test pit excavation data. The purpose of the excavations was to search for any evidence of the site within the disturbed area. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavations indicate that there is no subsurface component to the site.

6.5.5 Laboratory Analysis

No artifacts were recovered; therefore, laboratory analysis was not required.

6.5.6 Discussion

Site ORA-445 was initially recorded as a midden site on top of a knoll and on a stream terrace with artifacts on the surface, including manos and a fragmented bowl mortar. The current investigations did not relocate the artifacts reported in the 1970s and 1980s. In addition, no midden soil was observed. It appeared that the site area has been greatly impacted by modern improvements such as the construction of Glen Ranch Road and an associated drainage ditch. No features were observed during the current field investigations.

During the current field investigation of ORA-445, five shovel test pits were excavated. No artifacts were recovered and no midden soil was observed, indicating that no subsurface deposit is present.

It appears from the results of the records search that Site ORA-445 was a temporary or seasonal resource extraction and processing site, which utilized the stream to the east, and where the grinding of seeds and/or acorns also occurred. From past descriptions of the size of the site, and the reported presence of midden soil, the site may have been used more frequently than the other resources within the project area. The results of the current field investigation, however, lack any information that might reflect focused or long-term use. The subsurface excavations and recordation of the site has exhausted the research potential for Site ORA-445.

Figure 6.5-1
Excavation Location Map
Site ORA-445

(Deleted for Public Review; Bound Separately)

Table 6.5-1
Shovel Test Excavation Data
Site ORA-445

Shovel Test	Depth	Recovery
1	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
2	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
3	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
4	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery
5	0-10	No Recovery
	10-20	No Recovery
	20-30	No Recovery



Plate 6.5-1. Overview showing the concrete drainage at Site ORA-445, facing north.

6.6 Testing Results at Site ORA-446

6.6.1 Previous Studies of Site ORA-446

Site ORA-446 was first described in 1973 as an artifact scatter with manos, scrapers, and cores. The site was reported as being situated on top of a knoll, and a road was cut into the western side of the site area. The site elevation was approximately 1,150 feet AMSL, and measured 100 by 200 meters. No features or midden soil were reported. The native soil was noted as being a light gray/tan sandy alluvium. Vegetation consisted of a native coastal sage scrub plant community, various cacti, and grasses. The road cut was the only disturbance to the site reported, which resulted in the exposure of artifact materials (Fenenga et al. 1973).

The site was surveyed in 1977 for the Glenn Ranch Project, which reported that artifact materials were visible in the road cut and also revealed a “middle depth” of 40 to 60 centimeters. The site area was estimated to measure 100 by 200 meters, and the site was described as situated on a narrow knoll adjacent to a tributary of Serrano Creek. The artifacts included manos, scrapers, and cores (Munoz and Cooley 1977). In 1980, the site was revisited during a survey, which also reported that artifacts were eroding out of the road cut. This survey could not determine the areal extent of the site due to vegetation; however, the portion of the site exposed in the road extended for approximately 25 meters. Artifacts observed included mano fragments and flakes (WESTEC Services, Inc. 1980). The site was described again in a 1986 report for The Baldwin Company as producing manos, scrapers, and cores. None of the above-mentioned surveys involved testing of the site.

6.6.2 Site Description

Site ORA-446 was recorded during the current field investigation as an artifact scatter with lithic production waste situated on top of a knoll between approximately 1,060 and 1,100 feet AMSL, and measuring approximately 58 by 49 meters, although this was difficult to determine due to the disturbances at the site. The site is located along the western property boundary, 200 meters north of Glen Ranch Road, and approximately 200 meters due west of Millwood Road. A dirt road borders the western half of the site. Additionally, the majority of the site area appeared graded. The knoll has been flattened, and most of the topsoil has been pushed down slope to the east. There were cement drainage ditches on the east and west slopes below the site as well. Despite the extensive impacts to the site from grading, four artifacts were observed on the surface, primarily located on the top of the knoll within the area where the topsoil was removed. No features or midden soil were observed. Vegetation consists of a native coastal sage scrub plant community, various cacti, and grasses outside of the extensively graded area. An artifact location and excavation map of the site is provided in Figure 6.6–1, and Plates 6.6–1 and 6.6–2 show an overview of the site area and a view of the test unit north wall, respectively. The testing recovery is summarized in Table 6.6–1 to 6.6–3.

6.6.3 Surface Recovery

The surface collection resulted in the recovery of four lithic production waste flakes (two quartzite and two MGM). The surface collections originated from the top of the hill, at the north end of the site. All artifacts were mapped by GPS (Figure 6.6–1).

6.6.4 Subsurface Excavation

Eight shovel test pits were placed within and just beyond the surface scatter of artifacts, as well as along the side of the road where artifacts were observed eroding out of the road cut. All shovel test pits were excavated to 30 centimeters, and the diameter of each averaged about 30 centimeters. No artifacts were recovered and no culturally modified soil was observed.

One standard one-meter-square test unit was excavated to a depth of 30 centimeters. No artifacts or culturally modified soil was observed during the test unit excavation, and the soil, which is a grayish tan (10YR 5/2, fine to medium grain) compacted sandy and gravelly loam, remained unchanged throughout the decimeter levels. Since no artifacts were recovered and no culturally modified soil was observed, the results of the subsurface excavation data verified that no subsurface component is present at the site.

6.6.5 Laboratory Analysis

Laboratory analysis for Site ORA-446 included the standard procedures described in Section 5.0 of this report. All artifacts recovered from field investigations conducted at the site were returned to the laboratory facilities of BFA for cataloging and further analysis.

A total of four artifacts were recovered from ORA-446. The artifact assemblage consisted of four lithic production waste flakes (two quartzite and two MGM). A complete catalog of recovered artifacts is provided in Appendix V.

The lithic production waste consisted of four flakes that exhibited a platform, a bulb of percussion, and force lines and rings, among other attributes. The lithic material category for the flakes is MGM, most likely found locally.

6.6.6 Discussion

Site ORA-446 was initially reported as an artifact scatter on top of a knoll with artifacts eroding out of a dirt road cut including manos, cores, and scrapers. The current investigations did not relocate the artifacts described in previous survey reports. It appeared that the site area has been greatly impacted by grading at the top of the knoll, the continued use of the dirt road that bisects the site, and the drainage ditches located on the hillsides below the site area.

Four artifacts, consisting of lithic production waste flakes, were recovered from the disturbed area of the site during the current field investigation. Eight shovel test pits and one test unit were excavated. No artifacts were recovered from the shovel test pits or test unit, and no midden soil was observed, indicating that no subsurface deposit is present.

Due to the minimal number of artifacts observed on the surface despite excellent ground visibility and the absence of a subsurface cultural deposit, it appears that the Site ORA-446 was a temporary or seasonal resource extraction and processing site that lacks any information that might reflect focused or long-term use.

The subsurface excavations and recordation of the site has exhausted the research potential for Site ORA-446, and mitigated any potential impacts to the site that may be caused by the proposed project to a level that is less than significant.