

# Las Capas Archaeological Project: The Burial Assemblage

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Technical Report No. 2014-09  
Desert Archaeology, Inc.



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# ABSTRACT

Burial assemblage descriptions from archaeological investigations at the prehistoric site of Las Capas, AZ AA:12:111 (ASM), situated in the Tucson Basin of southern Arizona, are provided in this report. Testing and data recovery excavations at Las Capas were conducted by Desert Archaeology, Inc., from August 2008 through September 2009, with smaller phases of fieldwork in 2012 and 2013, as part of Pima County's Regional Wastewater Reclamation Department Regional Optimization Master Plan (ROMP). This massive project involved major upgrades and expansion of wastewater facilities at the Tres Rios Wastewater Reclamation Facility (WRF). Funding was provided by Pima County, and the excavations were conducted under the supervision of their Office of Cultural Resources and Historic Preservation, which requires all projects to adhere to the Federal standards of Section 106 of the National Historic Preservation Act of 1966 (as amended).

Las Capas is located in the northern Tucson Basin, situated on the eastern bank of the Santa Cruz River, just downstream from the confluences of the river with Rillito Creek and Cañada del Oro Wash. This is the point in the Santa Cruz River Valley where all major tributaries in the surrounding watersheds converge because of the terrain and the gradient, making it an ideal location for agriculture due to high water table levels and predictable streamflow. The great majority of features recovered at Las Capas dated to the San Pedro phase (A.D. 1200-800 B.C.) of the Early Agricultural period (2100 B.C.-A.D. 50).

The archaeological excavations allowed the singular opportunity of investigating a large area of the site in detail and intensity, providing the most comprehensive look at a San Pedro phase farming community conducted, to date, in southern Arizona. Backhoe trenches were excavated over most of the wastewater facility area to document the extent of archaeological deposits. Following this effort, intensive excavations were conducted in loci where new plant facilities were to be constructed (identified as Loci A-E; Loci F-H were only treated during the exploratory phase of the project).

Data recovery resulted in the identification of more than 5,500 prehistoric features, of which 3,455 were excavated or tested. Investigated feature types included 53 pithouses, 8 possible pithouses, 22 extramural surfaces, 610 bell-shaped pits, 49 large pits, 2,099 small pits, 490 roasting pits, 40 pits of unknown or other function, 20 inhumations, 2 cremations, and 11 animal burials. The excavations resulted in the recovery of more than 113,000 artifacts and 7,300 samples of various kinds, representing the largest quantity of San Pedro phase material recovered yet from the Tucson Basin. A large agricultural field system was also discovered containing primary and lateral canals that delivered irrigation water from the Santa Cruz River to hundreds of small fields. This field system has now been well-documented, and its history of development and modification through time reconstructed in detail.

Primary research issues investigated at Las Capas include chronology, artifact analyses, irrigation technology, subsistence systems, and syntheses of Early Agricultural lifeways. In short, the excavations at Las Capas have provided an ideal opportunity to study an Early Agricultural irrigation community in detail from the "production" end—fields, canals, and their contexts—to the "consumption" end of domestic living.

The results of the Las Capas investigations are presented in a series of Anthropological Papers, Technical Reports, and a book published, variously, by Archaeology Southwest and Desert Archaeology. The two Anthropological Papers provide a broad overview and synthetic examination of the site, with a specific emphasis on the reconstruction of prehistoric life in the northern Tucson Basin during the Early Agricultural period San Pedro phase. One volume (Anthropological Papers No. 50) provides the environmental and cultural context of the Las Capas project area. The environmental setting is discussed in detail, as it is the "stage" on which all cultural behavior is enacted. The complex mix of environment and culture defines the "Anthropogenic Landscape," the overarching research theme of the Las Capas Archaeological Project. The other volume (Anthropological Papers No. 51) explores the cultural and behavioral components of the San Pedro phase Las Capas occupation and the Early Agricultural period occupation of the Tucson Basin in general.

The five Technical Reports focus on more specific research issues, providing data that may be of interest to a more limited or specialized audience. The Technical Reports include discussions of the field methods, feature descriptions and descriptions of the mortuary assemblage, and an experimental analysis examining Early Agricultural period agriculture and ground stone tool production. A map packet is also

included as a Technical Report, with areal maps showing the project area and feature location by individual locus. Finally, the book is available that presents the first comprehensive study of Early Agricultural period projectile points in the greater Southwest United States, including both typological and behavioral interpretations.

The Las Capas-related publications are as follows:

### **Anthropological Papers**

Vint, James M. (editor)

- 2015 *Implements of Change: Tools, Subsistence, and the Built Environment of Las Capas, an Early Agricultural Irrigation Community in Southern Arizona*. Anthropological Papers No. 51. Archaeology Southwest, Tucson.

Vint, James M., and Fred L. Nials (editors)

- 2015 *The Anthropogenic Landscape of Las Capas, an Early Agricultural Irrigation Community in Southern Arizona*. Anthropological Papers No. 50. Archaeology Southwest, Tucson.

### **Technical Reports**

Adams, Jenny L., Joyce Skeldon Rychener, and Allen J. Denoyer

- 2015 *Las Capas Archaeological Project: Ground Stone and Maize Processing Experiments*. Technical Report No. 2014-02. Desert Archaeology, Inc., Tucson.

Price-Steinbrecher, Barry, George L. Tinseth, J. Homer Thiel, John R. McLelland, Rachel M. Byrd, and James T. Watson

- 2015 *Las Capas Archaeological Project: The Burial Assemblage*. Technical Report No. 2014-09. Desert Archaeology, Inc., Tucson.

Sinensky, Robert J., Jessica M. South, Barry Price-Steinbrecher, and George L. Tinseth

- 2015 *Las Capas Archaeological Project: House and Extramural Surface Descriptions*. Technical Report No. 2014-08. Desert Archaeology, Inc., Tucson.

Theriot, Tyler S., and Catherine B. Gilman

- 2015 *Las Capas Archaeological Project: Map Packet*. Technical Report No. 2014-10. Desert Archaeology, Inc., Tucson.

Whitney, Gregory J., Robert L. Sinensky, George L. Tinseth, Barry Price-Steinbrecher, and Jessica M. South

- 2015 *Las Capas Archaeological Project: Field Methods, the Retention Basin, and Extramural Feature Descriptions*. Technical Report No. 2014-01. Desert Archaeology, Inc., Tucson.

### **Book**

Sliva, R. Jane

- 2015 *Early Agricultural Period Projectile Points: Typology, Migration, and Social Dynamics from the Sonoran Desert to the Colorado Plateau*. Archaeology Southwest, Tucson.

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# **LAS CAPAS ARCHAEOLOGICAL PROJECT: THE BURIAL ASSEMBLAGE**

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## **HUMAN AND ANIMAL BURIALS RECOVERED DURING THE 2008, 2009, AND 2013 FIELDWORK AT LAS CAPAS, AZ AA:12:111 (ASM)**

Archaeological fieldwork at the Las Capas Site, AZ AA:12:111 (ASM), resulted in the discovery of thousands of features, most dating to the San Pedro phase (1200-800 B.C.) of the Early Agricultural period (1200 B.C.-A.D. 50) (Table 1). A small percentage of these features included the burial places of the people and animals who once lived at the site. Over the course of the Las Capas fieldwork, 23 features containing the remains of 24 humans were found. Ten animal burials, containing 13 mammals and one bird, were also excavated. A small amount of isolated human bone was also recovered. In this report are presented the methods used to excavate and analyze the burials, as well as descriptions of the burial features, including body position, osteological data, soil fill, artifacts present, and relationship to other features.

### **METHODS**

Excavation was conducted following the guidelines in A Burial Agreement to Facilitate Compliance with A.R.S. 41-844 and A.R.S. 41-865 for the Regional Optimization Management Plan within Pima County, Arizona, Case No. 2008-01. All human burials were hand-excavated by a team led by at least one person trained in human osteology (Kimberly Spurr, Michael Margolis, James Watson, or Homer Thiel). All soil was screened through 1/8-inch mesh. If small pieces of bone were present that were likely to go through the screen, the soil was also collected.

Standardized burial forms were completed recording the side, shape, and depth of the burial feature, the type of soil present, the types of artifacts and their position in relationship to the remains, and detailed information about the body position and treatment. Osteology forms that recorded completeness, measurements, sex and age determination, and other data were completed for those burials that were at least fairly well preserved. Scale plan view drawings, profiles, and cross sections were completed. No photographs were taken. The remains were removed and packaged in organic materials. Associated artifacts were kept with the remains. The illustrations here were prepared by Susan D. Hall.

The human remains were later re-examined by Rachael Byrd, James Watson, and John McClelland of the Arizona State Museum (ASM), with the assistance of Danielle Phelps, Alexandra Tuggle, Mariah Moe, and Sydney Tuller. Artifacts were analyzed by Jenny Adams (ground stone, pipes, and pigments), James Heidke (ceramics and figurines), Jane Sliva (flaked stone), Christine Lange (shell), and Jennifer Waters (faunal bone).

The remains and their associated artifacts recovered in 2008 and 2009 were repatriated to Joe Joaquin, a representative of the Tohono O'odham Nation, on 29 June 2013 and 18 November 2014.

### **FEATURE DESCRIPTIONS**

Descriptions of each burial feature are presented below, organized by stratum/substratum, locus, and feature number. A summary of the recovered human burials is provided in Table 2, while the attributes of the human burial features and artifacts clearly associated with the burials are listed in Table 3. Table 4 provides summary information about the body position within the human burial features. The recovered animal burials are listed in Table 5.

**Table 1.** Las Capas, AZ AA:12:111 (ASM), site specific chronology.

Phase	Stratum	Age Range	Comments
Cienega phase to modern	501	Hohokam to Protohistoric, capped by historic present	—
	502	Circa 730 B.C. forward	Cienega phase; continues into Hohokam sequence
	503	Circa 730 B.C.	Single event flood; age based on intersection of direct OSL dates on Stratum 503 sands with end range of Stratum 504
Late San Pedro phase	504	Circa 800-730 B.C.	—
	505	Circa 930-800 B.C.	Scouring by Stratum 505 probably removed terminal Strata 506 deposits; does not necessarily mean a hiatus in occupation
Early San Pedro phase	506	Circa 1220-1000 B.C.	Scouring event between contact of Stratum 505 with Stratum 506 indicated by hiatus in <sup>14</sup> C model and geomorphology between Strata 506 and 505
Pre-San Pedro phase ("Silverbell Interval" <sup>a</sup> )	507	Circa 1500-1220 B.C.	—
	507?	Circa 2300-1900 B.C.	Dates are tentative; based on three ages from SWCA's work; no associated features or artifacts

<sup>a</sup>Silverbell Interval named by Whittlesey et al. 2010.

**Table 2.** Human burials excavated at Las Capas, AZ AA:12:111 (ASM), in 2008, 2009, and 2013.

Feature No.	Locus	Stratum or Substratum	Phase	Sex	Age Group	Age (years) <sup>a</sup>
3306	G	505	Late San Pedro	Unknown	Infant	0-2 months
3464	G	505	Late San Pedro	Female	Middle adult	40-50
4612	A	506.01	Early San Pedro	Unknown	Child	3.5-4.5
7059	B	504.01	Late San Pedro	Female?	Young adult	20-23
7760	B	506.01	Early San Pedro	Female	Old adult	50+
7773	B	506.01	Early San Pedro	Unknown	Adult	18+
7780	B	506.01	Early San Pedro	Unknown	Infant	0-1
8479	B	506.01	Early San Pedro	Unknown	Fetus/infant	8-10 lunar months
8580	B	506.01	Early San Pedro	Male?	Young adult	16-18
9015	B	506.01	Early San Pedro	Male	Young adult	25-35
9015	B	506.01	Early San Pedro	Unknown	Fetus/infant	8-10 lunar months
9185	B	506.01	Early San Pedro	Male	Middle adult	30-40
9362	B	506.01	Early San Pedro	Female?	Middle adult	30-50
9441	B	506.01	Early San Pedro	Male	Middle adult	30-50
9463	B	506	Early San Pedro	Female	Middle adult	30-40
12021	C	504.02	Late San Pedro	Male	Middle/old adult	35-55
13756	D	504.02	Late San Pedro	Female?	Middle adult	35-50
14188	D	504	Late San Pedro	Unknown	Fetus/infant	8-10 lunar months
14236	D	504	Late San Pedro	Male?	Middle adult	35-50
14240	D	504	Late San Pedro	Unknown	Child	2-3
14268	D	504	Late San Pedro	Unknown	Child	2.5-4.5
14278	D	504.02	Late San Pedro	Male?	Young/middle adult	35-50
23731	F	504.04	Late San Pedro	Unknown	Neonate	6-9 lunar months
26121	E	504	Late San Pedro	Unknown	Infant	0-3 months

<sup>a</sup>Unless otherwise indicated.

**Table 3.** Attributes and associated artifacts for human burials excavated at Las Capas, AZ AA:12:111 (ASM), in 2008, 2009, and 2013.

Feature No.	Sex	Age Group	Type of Pit	Length (cm) <sup>a</sup>	Width (cm) <sup>a</sup>	Average Depth (cm)	Artifacts
3306	Unknown	Infant	Basin-shaped	28	20	11	Red pigment on several elements
3464	Female	Middle adult	Bell-shaped	84/90	67/84	39	Red pigment on several elements
4612	Unknown	Child	Basin-shaped	47	38	24	—
7059	Female	Young adult	Bell-shaped	98/109	83/90	67	Purple pigment, red pigment on right ribs
7760	Female	Old adult	Bell-shaped	70/109	30/107	94	Deer cranium
7773	Unknown	Adult	Irregular	96	59	31	—
7780	Unknown	Infant	Structure	—	—	—	—
8479	Unknown	Fetus/infant	Bell-shaped	90/120	80/120	57	Pigment patty
8580	Male	Young adult	Bell-shaped	85/145	85/136	89	1 Empire point, 2 manos, broken ground stone above, 1 whole, and 1 broken clay pipe
9015	Male	Young adult, fetus/infant	Bell-shaped	163/175	159/167	111	4 Empire points, mano next to skull
9185	Male	Middle adult	Basin-shaped	93	61	57	—
9362	Female	Middle adult	Basin-shaped	77	70	20	—
9441	Male	Middle adult	Basin-shaped	78	63	30	Red pigment on right parietal
9463	Female	Middle adult	Straight wall, flat	90	61	43	3 awls
12021	Male	Middle/old adult	Basin-shaped	130	100	11	Red pigment on bones, stone pipe near right arm
13756	Female	Middle adult	Straight wall, flat	107	50	34	—
14188	Unknown	Fetus/infant	Basin-shaped	24	21	6	—
14236	Male	Middle adult	Basin-shaped	102	57	32	—
14240	Unknown	Child	Basin-shaped	50	45	8	—
14268	Unknown	Child	Bell-shaped	50/95	45/103	73	Shell pendant
14278	Male	Young/middle adult	Basin-shaped	87	60	27	—
23731	Unknown	Neonate	Unknown	—	—	—	—
26121	Unknown	Infant	Bell-shaped	55	53	5	—

<sup>a</sup>Upper and lower measurements are reported for bell-shaped pit features.

**Table 4.** Body positioning of the human burials excavated at Las Capas, AZ AA:12:111 (ASM), in 2008, 2009, and 2013.

Feature No.	Sex	Age Group	Flexure	Side	Head	Face	Arms	Hands	Legs	Feet
3306	Unknown	Infant	Flexed	Right side	East	—	Right along chest, bent	Right near knees	Flexed	Near pelvis
3464	Female	Middle adult	Flexed	Right side	North	—	Left along chest, bent; right beneath chest, bent	Left against pit wall, right below ribs	Flexed	Right below pelvis, left against pit wall
4612	Unknown	Child	Seated	—	West	East	Left along side, bent	—	Straight	Edge of pit
7059	Female	Young adult	Flexed	Right side	Southeast	North	Bent	Right in pelvic area, left on right humerus	Bent	Left against pit edge
7760	Female	Old adult	Flexed	Face down	Missing	—	Flexed	—	Flexed	Bottom faced upward
7773	Unknown	Adult	Unknown	—	—	—	—	—	—	—
7780	Unknown	Infant	Unknown	—	—	—	—	—	—	—
8479	Unknown	Fetus/infant	Unknown	—	West	—	—	—	—	—
8580	Male	Young adult	Flexed	Supine	North	East	Right extended out, left tightly bent	Left near face	Flexed	Next to each other
9015	Male	Young adult	Extended	Supine	Southeast	East	Right along side, left angled away	—	Extended	Against pit wall, elevated
9015	Unknown	Fetus/infant	Unknown	—	—	—	—	—	—	—
9185	Male	Middle adult	Flexed	Right side	East	—	Left extended along chest, right extended away	Left on top pelvis	Flexed	Next to each other
9362	Female	Middle adult	Unknown	—	—	—	—	—	—	—
9441	Male	Middle adult	Flexed	Right side	Southeast	—	Left across chest, bent; right across chest	Right next to left knee	Flexed	Left near pelvis
9463	Female	Middle adult	Flexed	Left side	Northwest	—	Right along chest, bent; left across chest, bent	Next to face	Flexed	Next to each other
12021	Male	Middle/old adult	Flexed	Supine	Southeast	West	Right flexed; left extends from body, bent	Right at shoulder, left below rib cage	Flexed	Next to each other
13756	Female	Middle adult	Flexed	Right side	Southeast	North	Right flexed, left extended and bent	Right near mandible, left at pit edge	Flexed	—
14188	Unknown	Fetus/infant	Flexed	Seated	Northwest	East	Arms along chest, left bent	Right near pelvis, left at shoulder	—	—
14236	Male	Middle adult	Cremation	—	—	—	—	—	—	—
14240	Unknown	Child	Flexed	—	Southeast	Upright	—	—	Flexed	—
14268	Unknown	Child	—	—	East	South	Arms bent	Right on ribs	Flexed	Against west side
14278	Male	Middle adult	Flexed	Supine	Northwest	—	Extended, right arm bent	Right on right shoulder	Flexed	Against pit edge
23731	Unknown	Neonate	Unknown	—	—	—	—	—	—	—
26121	Unknown	Infant	Flexed	Face down	Southeast	Downward	Extended, bent	Each side of skull	Flexed	Left close to pelvis



**Table 5.** Animal burials located at Las Capas, AZ AA:12:111 (ASM), during the 2008 and 2009 excavations.

Feature No.	Locus	Stratum or Substratum	Phase	Taxon	Age	Relative Size
3432	E	504	Late San Pedro	Domestic dog? ( <i>Canis</i> cf. <i>lupus familiaris</i> )	Adult	Medium
4159	A	504.02	Late San Pedro	Domestic dog ( <i>Canis lupus familiaris</i> )	Adult	Medium-large
8838	B	506.01	Early San Pedro	Dog/coyote ( <i>Canis</i> sp.)	Adult	Small-medium
9467	B	506.01	Early San Pedro	Dog/coyote ( <i>Canis</i> sp.)	Adult	Small-medium
9467	B	506.01	Early San Pedro	Dog/coyote ( <i>Canis</i> sp.)	Adult?	Small-medium
9467	B	506.01	Early San Pedro	Dog/coyote ( <i>Canis</i> sp.)	Juvenile, 12-14 months	Small-medium
9467	B	506.01	Early San Pedro	Gray fox ( <i>Urocyon cinereoargenteus</i> )	Adult	
9467	B	506.01	Early San Pedro	Bobcat ( <i>Lynx rufus</i> )	Immature	
12036	C	504.02	Late San Pedro	Domestic dog ( <i>Canis lupus familiaris</i> )	Adult	Medium-large
12105	C	504.02	Late San Pedro	Dog/coyote ( <i>Canis</i> sp.)	Adult?	Small-medium
13706	D	504.02	Late San Pedro	Dog/coyote ( <i>Canis</i> sp.)	Pup, 4-5 months	Small-medium?
23732	F	505	Late San Pedro	Domestic dog ( <i>Canis lupus familiaris</i> )	Adult male	Medium-large
23772	F	506	Early San Pedro	Dog/coyote ( <i>Canis</i> sp.)	Adult	Small-medium
23807	F	505	Late San Pedro	Swainson's hawk? ( <i>Buteo</i> cf. <i>swainsoni</i> )	Adult	

## STRATUM 506

### Locus B

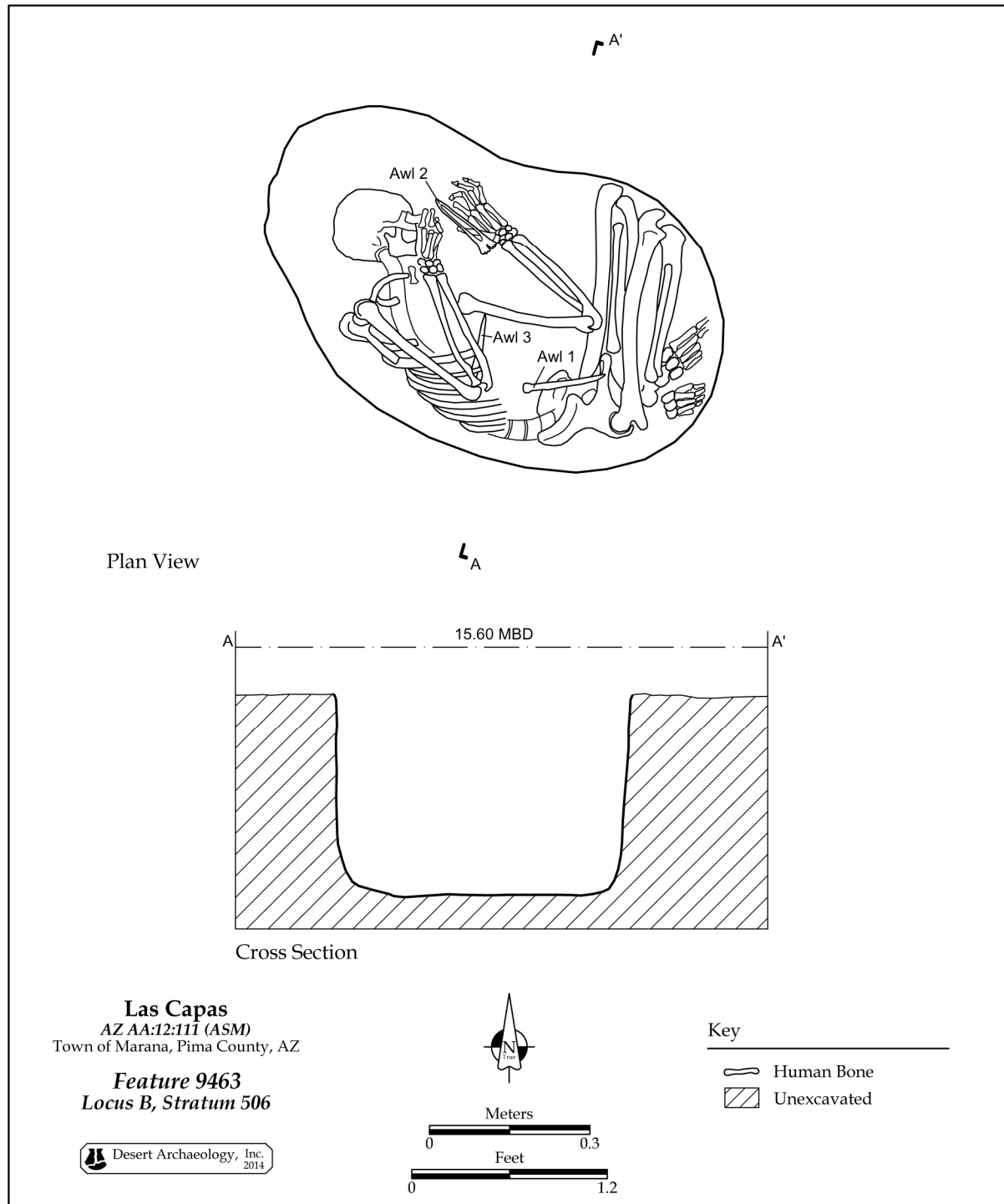
#### Feature 9463

*General Description.* This primary inhumation was discovered during mechanical stripping (Figure 1). The remaining fill was subsequently removed by hand-excavation, exposing the remains. The burial pit was not formally prepared, and was oval in plan view with straight walls and a flat base. The pit measured 90 cm east-west by 61 cm north-south and averaged 43 cm in depth. The pit elevation was 15.63-16.06 meters below datum (mbd).

The individual interred within the pit represented an adult female. The individual was lying on her left side in a tightly flexed position with the cranium at the northwestern end of the pit, and the pelvis at the southeastern end of the pit. The right arm extended along the chest, and was tightly flexed at the elbow with the right palm down and over the right side of the mandible. The left arm extended out from the chest and was bent with the hand palm side up and positioned about 10 cm from the front of the face. Both legs were flexed with the knees drawn up and close to the left elbow. The right leg was elevated at the knee. The feet were close together.

The skeletal remains were both well preserved and complete. Portions of the skeleton were burned, including the left side of the cranium, the left clavicle, the left arm (with the proximal radius and ulna less burned), the right arm, the lower rib cage except the 12th right rib, the right ilium, the left ilium, the left leg, the right distal femur, and the right foot. Portions not burned included most of the skull, the upper ribcage, the vertebral column, the sacrum, the ischiums and pubises, and most of the right leg. There was no evidence of in situ burning within the burial pit. Three bone awls were found; their presence and position in the remains are indicative of a violent death.

*Osteological Data.* Feature 9463 represents a complete, relatively well-preserved middle adult female (30-40 years old). The bones show evidence of cracking and breakage. The remains are a dark black color. Salt crystals appear to be coating the remains, especially the cranium and feet, and may have aided in preservation.



**Figure 1.** Plan view and cross section of Feature 9463, an adult primary inhumation found in Stratum 506, Locus B, Las Capas, AZ AA:12:111 (ASM).

The cranium is in excellent condition and is complete. The vertebral column is minimally represented by fragments of the first cervical vertebra and five partial thoracic vertebrae. Five fragmentary left ribs and seven fragmentary right ribs are present, although many unsided rib fragments are also present. Fragmentary left and partial right scapulae are present. Both right and left clavicles and os coxae are partially represented. Both patellae are complete. The left humerus is partially complete, and the right humerus is complete. The left radius is represented by a portion of the diaphysis, and the right radius is complete. The left and right ulnae are mostly complete except broken distal epiphyses. Both the right and left femora and tibiae are complete. Both right and left fibulae have complete diaphyses with broken epiphyses. Seven carpals, 7 metacarpals, and 9 phalanges represent the right and left hands. Fourteen tarsals, 10 metatarsals, 8 phalanges, and 2 sesmoids represent the right and left feet.

The mandible and maxilla are both completely preserved. A full set of permanent dentition is present, except a congenitally missing mandibular left third molar. Dentition shows moderate dental attrition on the incisors and canines and heavy dental attrition on the first and second molars. An occlusal surface carious lesion is present on the maxillary right first molar, with an associated periapical abscess on the buccal surface of the alveolar bone. A periapical abscess is also present on the buccal surface of the alveolus below the maxillary left first molar. Mild periodontal resorption is present on both the maxillary and mandibular alveolar crest.

Cranial traits, including the nuchal crest, mastoid processes, supraorbital margin, glabella, and mental eminence, are gracile and indicative of a female (Buikstra and Ubelaker 1994). The left sciatic notch is wide, but the left is ambiguous. The left preauricular sulcus is well-defined and narrow, making it also ambiguous. The right humerus vertical head diameter (38.13 mm) and the left femoral maximum head diameter (41.76 mm) are within the female range (Bass 1995). The left auricular surface is mostly smooth without billowing, dense, and has a slightly granular texture with a developing rim (Stage IV-VI), suggesting an individual between the ages of 35-49 years (Lovejoy et al. 1985). The cranial sutures appear to be significantly fused, and the thoracic annular epiphyses are fused. Moderate tooth wear on the incisors and canines and heavy tooth wear on the molars suggest a middle-aged adult individual. Stature was calculated with the left maximum femur length (435 mm), and indicates an individual 161.00 cm±5.95 cm, or approximately 5 feet, 3 inches in height (Auerbach and Ruff 2010). No postcranial pathology is evident.

*Internal Stratigraphy and Artifact Content.* The internal fill consisted predominantly of a light tan, loose, sandy silt, with areas of a loose brown loam that contained high amounts of small charcoal flecks, ash, and burned organics concentrated around the remains.

Artifact density was low, including one core within the fill, which may not have been associated with the burial. As noted, three complete bone awls were present around the individual and were associated with the burial. One awl was located just above the right hand within the fill and was burned on its proximal end, and the second completely burned awl was located on top of the pelvis. The third awl protruded through the right rib cage, and was also burned. Two awls were made from unidentified artiodactyls bone, and one was made from large mammal (deer-sized) bone. One piece of flaked stone debitage was also recovered.

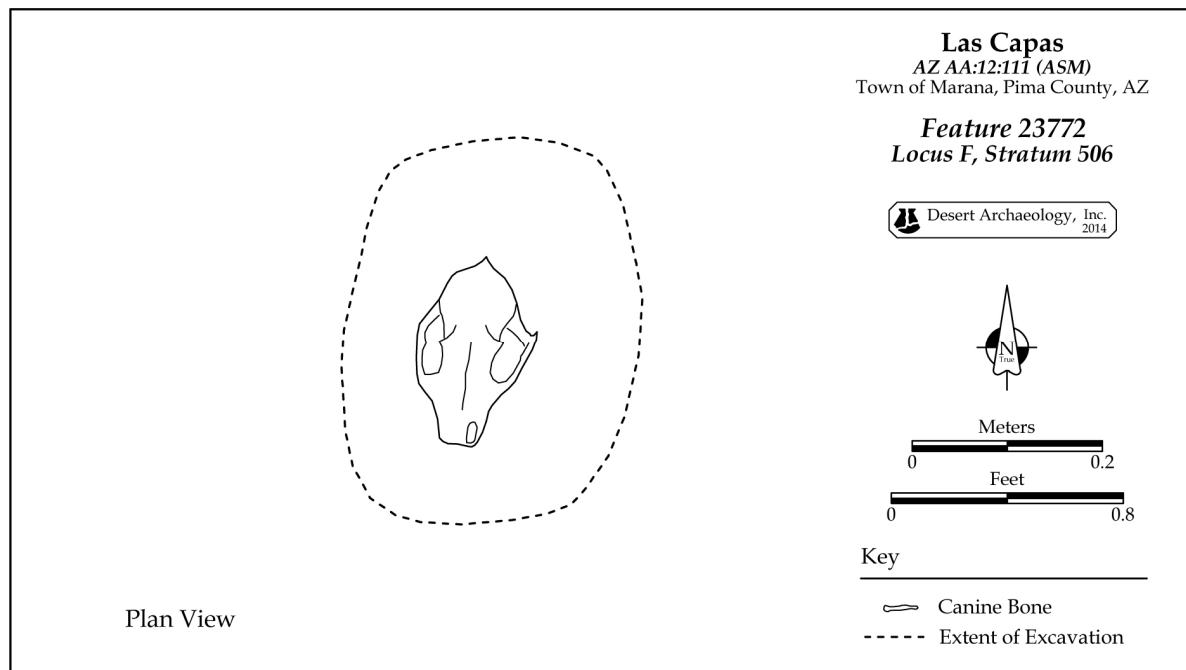
*Stratigraphic Relationships.* This primary inhumation originated within Stratum 506, which dates to the early San Pedro phase, and it was buried by additional deposits of this stratum, as well as from deposits from overlying strata. This burial pit was located in close proximity to several extramural pit features within Stratum 506.

## Locus F

### Feature 23772

*General Description.* This well-preserved canid (*Canis* sp.) cranium was discovered during mechanical stripping (Figure 2). The cranium was not in a clearly defined pit. The elevation of the bone was 13.74-13.83 mbd.

The cranium was isolated, with no other skeletal elements present. The cranium measured 17.7 cm in length and had a maximum width of 10.3 cm, measured at the zygomatics. The cranium was completely intact, upright, and faced the south. Insect disturbance was noted in the area, but was not extensive.



**Figure 2.** Plan view of Feature 23772, a canid cranium found in Stratum 506, Locus F, Las Capas, AZ AA:12:111 (ASM).

*Osteological Data.* The canid was a small- to medium-sized adult dog or coyote. Less than 25 percent of the skeleton was present.

*Internal Stratigraphy.* The fill around the cranium consisted of blocky textured, brown, silty, sandy clay, with mica inclusions and a small amount of charcoal flecking. No artifacts were present near the remains.

*Stratigraphic Relationships.* The cranium was located in Stratum 506, which dates to the early San Pedro phase; it buried by additional deposits of this stratum, as well as by deposits of overlying strata. Although a few extramural pits within Stratum 506 were located east of the cranium, the feature was relatively isolated. While no other faunal burials were found within Stratum 506 in Locus F, two instances of buried faunal remains were found within Stratum 505 in Locus F. Feature 23732, a nearly complete primary inhumation of a canine, was located in the northeastern part of the locus. Feature 23807, a hawk, was also found in the northeastern portion of the locus.

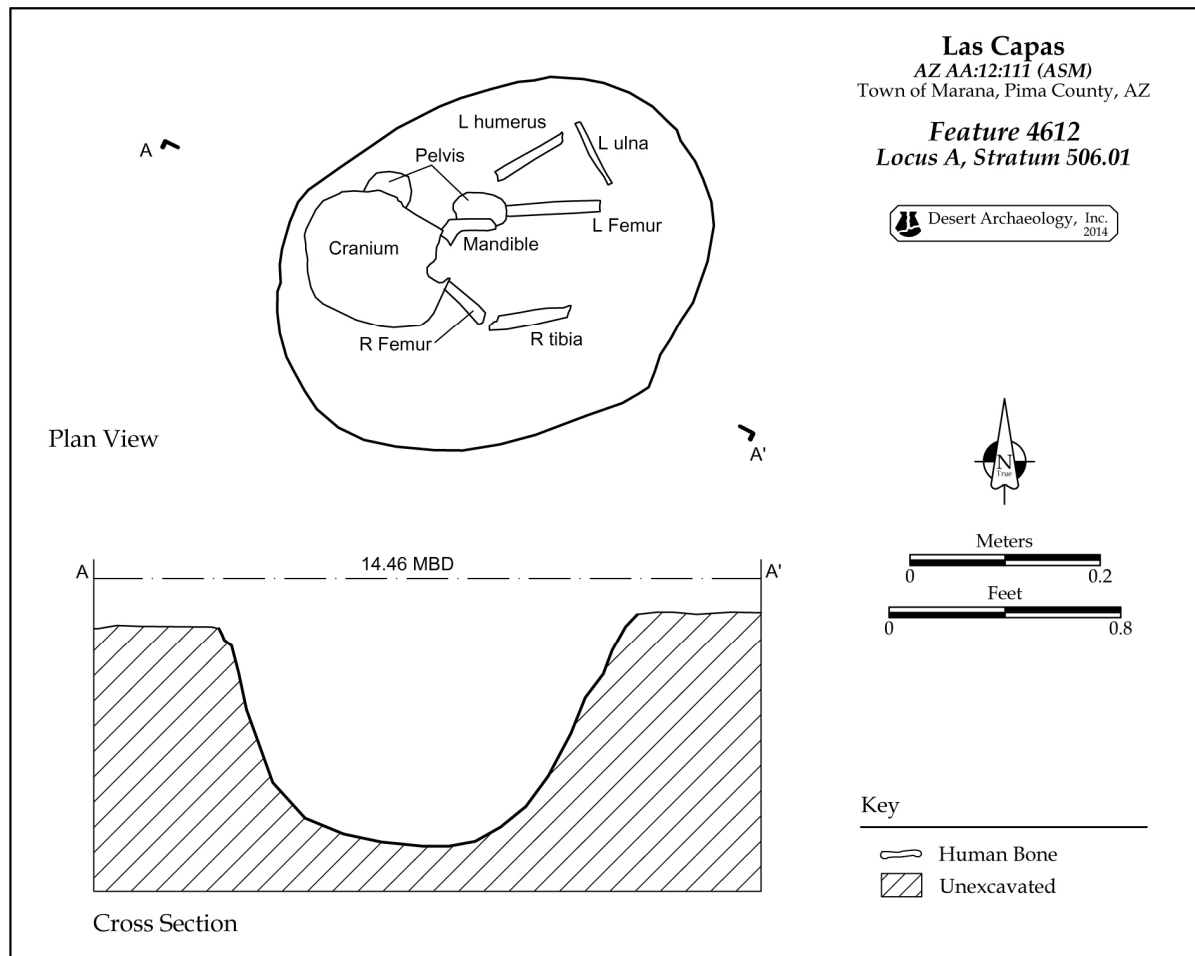
## STRATUM 506.01

### Locus A

#### Feature 4612

*General Description.* This primary inhumation was discovered during mechanical stripping (Figure 3). The remaining fill was subsequently removed by hand, exposing the inhumation. The burial pit was circular in plan view, with a basin-shaped profile; it measured 47 cm north-south by 38 cm east-west, with an average depth of 24 cm. The elevation of the burial was 14.47-14.71 mbd. The burial pit contained a small amount of insect and rodent disturbance, and was slightly impacted by mechanical stripping. Feature 4612 intruded into the burial pit and, when excavated, contained a vertebral fragment that matched the Feature 4615 individual.

The individual interred within the pit represented a primary burial of a child of indeterminate sex. Although the skeletal remains were incomplete, enough elements were present to determine that the body was seated to semi-reclined within the pit. The skull was at the western end of the pit with the face pointing east. The pelvis lay partially below the skull. The left arm lay along the left side, bent at the elbow. The legs extended straight out from the body, with the feet at the eastern side of the pit.



**Figure 3.** Plan view and cross section of Feature 4612, a child primary inhumation found in Substratum 506.01, Locus A, Las Capas, AZ AA:12:111 (ASM).

*Osteological Data.* Feature 4612 represents a partially complete child inhumation (3.5-4.5 years old). The remains are in poor condition and broken, and are exfoliated and brittle with adhering soil.

The cranium is partially preserved, with large portions of the vault, maxilla, and zygomatics present. The left side of the mandible is complete. One fragmentary thoracic vertebra and one complete left rib represent the axial skeleton. Except the complete left ulna diaphysis and fragments of the left clavicle, no other elements from the upper limbs are present. Fragments of the left and right os coxa are present. Portions of both right and left femur and tibia diaphyses are present. Hand elements include one complete metacarpal and two complete phalanges. Foot elements include four complete metatarsals and three complete phalanges.

Deciduous teeth present include maxillary right and left first and second molars, and the mandibular left canine, first molar, and second molar. The first molars are completely developed, and the second molars show initial root formation. The first molars appear to be in occlusion but with minimum dental attrition. No dental pathology is present.

The individual is estimated to have been between 3.5 and 4.5 years old at the time of death based on lack of epiphyseal fusion (proximal left ulna, left and right greater trochanter) and dental development (Ubelaker 1989). The deciduous mandibular first molars exhibit the Delta morphological variation (Scott and Turner 1997). No evidence of pathology is present. Feature 4615, a small pit that cut into Feature 4612, contained complete (unfused) lumbar vertebral body fragments from a child that is almost certainly from the same individual. Age at death was estimated at 3.5-4.5 years because the vertebral arch was not yet fused (Scheuer and Black 2004).

*Internal Stratigraphy and Artifact Content.* The internal fill consisted of a uniform brown loose silty sand that contained small amounts of charcoal flecks throughout, and was representative of a simple redeposit. Artifact content was low, consisting of one piece of flaked stone debitage and four pieces of faunal bone. Artifacts occurred incidentally within the fill and were not associated with the burial. No burial-related artifacts were present.

*Stratigraphic Relationships.* This primary inhumation originated within Substratum 506.01, which dates to the early San Pedro phase, and it buried by additional deposits of this stratum, as well as by deposits from overlying strata. The western portion of the burial pit was intruded upon by Feature 4615, a small pit located within the same stratum. Several extramural pit features and a house-in-pit, Feature 4584, which originated within Stratum 506.01, were located just east of the burial pit.

## **Locus B**

### *Feature 7760*

*General Description.* This primary inhumation was discovered during mechanical trenching (Figure 4). Once human remains were encountered, the remaining cultural fill was removed by hand-excavation, exposing the extent of the burial. The bell-shaped burial pit measured 70 cm northwest-southeast by 30 cm northeast-southwest at the stripped surface and immediately expanded outward to a basal measurement of 1.09 m northwest-southeast by 1.07 m northeast-southwest, with an average depth of 94 cm. The elevation of the pit was 15.30-15.54 mbd. The bell-shaped pit likely had a primary function of storage and was at least partially cleaned out for a secondary usage as a burial pit.

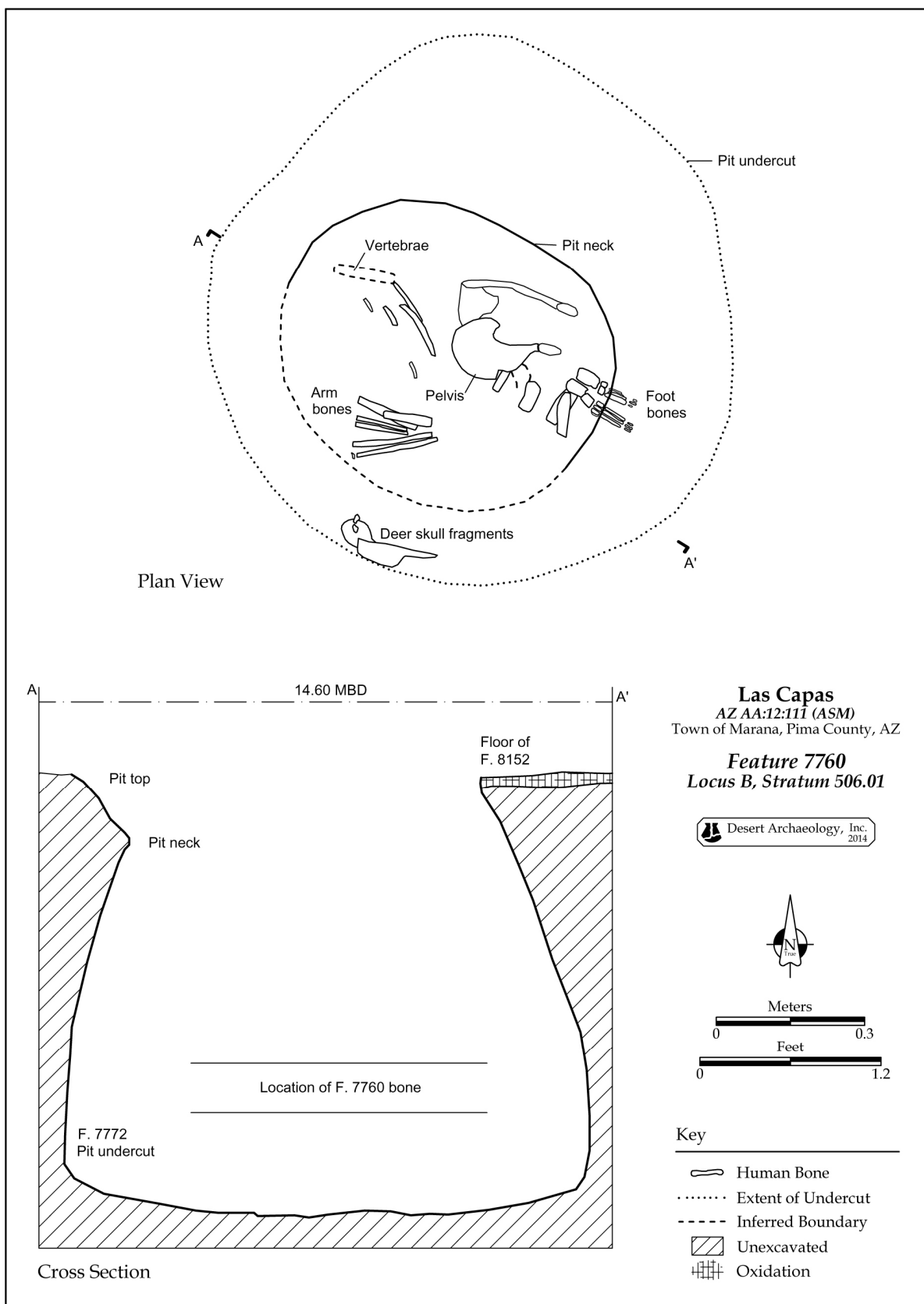
The individual interred within the pit represented an older adult female. The individual was positioned on her stomach with both arms flexed along the left side of the body, the right arm lying beneath the left arm. Both legs were flexed, with the knees toward the torso, the left foot overlying the right foot, and with the bottom of the feet facing upward. The bones were partially articulated but were incomplete. The upper left arm and left hand, as well as most of the left femur, tibia, and fibula, were completely missing, and may have been removed by backhoe trenching. The entire skull was also missing, and may have been removed prior to internment.

*Osteological Data.* Feature 7760 represents a partial old adult female inhumation (50+ years old). Preserved elements are dry and brittle, with significant cracking, breakage, and exfoliation. Staining and adhering soil is present. Some elements have salt crystallization on bone surfaces and between bone elements.

No cranial elements or dentition are preserved. The number of ribs and their sides could not be determined due to fragmentation and poor preservation. A fragment of the fifth lumbar vertebra and one partial sacral vertebra are present; otherwise, no vertebrae are preserved. Fragments of the left and right os coxae are present, including a portion of the right auricular surface. Portions of the right and left humeral diaphyses are present. Right and left radius diaphyses are partially present. The left ulna diaphysis is partially present. The diaphysis of the left femur is partially present, and the right femur is represented by a partial portion of the proximal epiphysis. The right tibia and fibula have partial portions of the distal epiphysis present. No hand elements are preserved. Tarsals are complete except one medial cuneiform. Seven metatarsals and eight phalanges are present. No teeth were present.

The wide left sciatic notch and the wide preauricular sulcus are both indicative of a female individual (Buikstra and Ubelaker 1994). The left maximum femoral head diameter (41.22 mm) is within the range for females (Bass 1995). The preserved right auricular surface appears to be dense without billowing or striae, a developing marginal rim, and increasing retroauricular activity (Stages VI-VIII), suggesting an older adult, aged 50+ years (Lovejoy et al. 1985). The right first metatarsal shows periostitis on the proximal, dorsal surface on the right side (21.00 mm in diameter). The left femur shows periostitis on the posterior, medial surface below subtrochanter (25.00 mm in diameter).

*Internal Stratigraphy and Artifact Content.* The 30 cm of fill above the remains consisted of mildly hard, dark brown, silty clay with high amounts of charcoal flecks throughout. The following 20-25 cm of fill was directly associated with the inhumation, and consisted of mottled light and dark brown, loosely consolidated, silty clay and silty sand, which was representative of a simple redeposit. The remaining fill below the inhumation was a light brown, loose, silty clay, with high amounts of charcoal flecks and cultural trash throughout; this may have been representative of a cultural deposit.



**Figure 4.** Plan view and cross section of Feature 7760, an adult primary inhumation found in Substratum 506.01, Locus B, Las Capas, AZ AA:12:111 (ASM).

Artifact density for the upper portions of the pit fill was high, and consisted of pieces of flaked stone debitage, a core scraper, a fragmentary unspecified point, 65 pieces of faunal bone, and three fragmentary bifaces. The only artifact recovered from the fill directly surrounding the remains was the partial cranium of a deer. In the fill below the remains, was the head and torso of a fired-clay figurine fragment, an Incipient Plain Ware cornucopia rim sherd, pieces of flaked stone debitage, and an Empire point. In all, 314 pieces of debitage were recovered from the fill.

*Stratigraphic Relationships.* The pit in which the remains were placed originated within Substratum 506.01, which dates to the early San Pedro phase, and it was buried by additional deposits of this stratum, as well as by subsequent overlying strata. Feature 7760 was located in close proximity to two houses-in-pits, Features 8417 and 7862, and several extramural pit features that originated within Substratum 506.01.

#### *Feature 7773*

*General Description.* This secondary cremation was discovered during mechanical stripping (Figure 5). The remaining fill was subsequently removed by hand-excavation. The pit in which the remains were discovered was irregular in plan view, with an irregularly shaped base. The pit measured 96 cm north-south by 59 cm east-west, and averaged 31 cm in depth. The elevation of the pit was 14.60-14.91 mbd.

Only two pieces of human bone were present within the internal fill. A complete mandible was found lying flat within the upper fill in the middle of the pit, and a fragment of a right humerus shaft was found upright within the lower fill. One additional bone fragment was found within the fill, which may have been human. All the remains showed signs of having been partially burned, as portions were grayish-black in color.

*Osteological Data.* Feature 7773 represents a fragmentary secondary adult cremation (18+ years old) that is less than 5 percent of a complete individual. Evidence of cracking is present near the mental eminence, and breakage, warping, and adhering soil are present. The mandible is burned unevenly, with some areas black and some unburned and tan.

A complete mandible, consisting of five fitting fragments, is present. It is unevenly burned, with areas of black and tan with postmortem tooth loss. The left side of the mandible has one molar in place. A portion of the distal third of the right humerus diaphysis is present and is white in color.

The maxilla is not preserved, but the mandible is complete. The left side of the mandible has one molar still in place. The second molar has been lost postmortem, and the root cavity of the third molar suggests it was fully developed. A periapical abscess is present on the left first mandible molar. There is possible antemortem tooth loss with alveolar reabsorption, but it cannot be determined with certainty.

The mental eminence appears to be gracile when the fragments are fit together, suggesting a possible female. Based on overall bone development and morphology, in addition to the presence of a third molar root cavity, this individual was likely at least 18 years old. No postcranial pathology is evident.

*Internal Stratigraphy and Artifact Content.* The internal fill consisted of brown, loose, silty sand that contained very high amounts of charcoal flecks throughout. The lower portion of the pit fill contained both a high density of loosely consolidated ash and burned organic material, possibly wood. Both the base and sidewalls of the pit were highly oxidized.

Artifact density within the fill was very low, and consisted of a two pieces of flaked stone debitage and two pieces of jackrabbit bone; one macrobotanical sample was collected from the fill along the sides and base of the pit. The artifacts are not likely related to the remains.

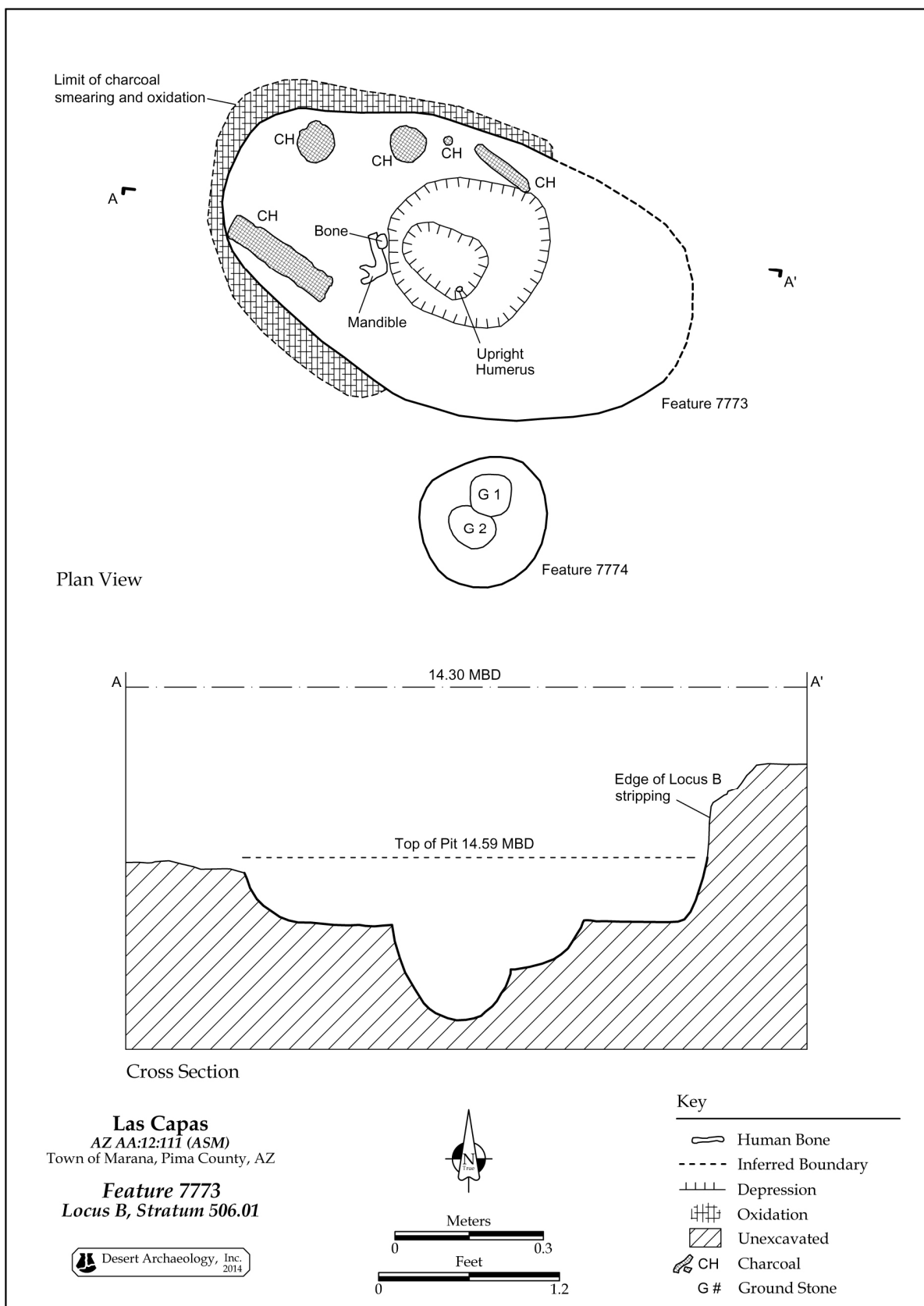
*Stratigraphic Relationships.* Feature 7773 originated within Substratum 506.01, which dates to the early San Pedro phase, and it was buried by additional deposits of this substratum, as well as by deposits from subsequent overlying strata. A few extramural pit features that originated from the same stratigraphic level were located within close proximity. Feature 7774, a small pit that contained a ground stone cache, was located directly south of Feature 7773, and, given its proximity, may be associated with the remains.

#### *Feature 7780*

Sixteen fragments of human bone were found in Unit 7104 in burned pit structure Feature 7780. The remains were not assigned a separate feature number, and were separated from faunal bone in the laboratory. Some of the bone was recovered from the fill of the house and some from a small, shallow floor pit.

*Osteological Data.* Elements from several regions of the body are represented. The deposit contained 16 fragments of bone, including the right temporal body (with zygomatic arch), right petrous portion, medial





**Figure 5.** Plan view and cross section of Feature 7773, an adult secondary cremation found in Substratum 506.01, Locus B, Las Capas, AZ AA:12:111 (ASM).

border fragment of the left scapula, proximal halves of the right tibia and fibula, six cranial vault bones, two fragments of rib shafts, a fragment of the left superior sacrum, and fragments from a cervical and thoracic vertebral arch. This individual is estimated to have been an infant, based on bone size (Scheuer and Black 2004).

*Stratigraphic Relationships.* The remains were in Substratum 506.01, which dates to the early San Pedro phase.

#### *Feature 8479*

*General Description.* This inhumation was discovered during hand-excavation of Feature 8479, which was originally identified as an extramural pit (Figure 6). Pieces of human bone were found near the top of the feature, and the remaining fill was removed by hand-excavation to expose the extent of the burial. The bell-shaped pit in which the remains were located averaged 57 cm in depth. It measured 90 cm north-south by 80 cm east-west at the stripped surface, constricting to a neck diameter of 66 cm before expanding to a basal diameter of 1.20 m. The elevation of the pit was 14.56-15.43 mbd.

The individual interred within the pit represented an infant of indeterminate sex. The skeletal remains were disarticulated and dispersed throughout the depth of the fill. A large fragment of the cranium was lying on the western portion of the pit, 30 cm above the pit base.

*Osteological Data.* Feature 8479 represents a fragmentary primary inhumation of a fetus/infant (8-10 lunar months old). Bone elements present exhibit breakage; soil with charcoal inclusions is adhering to cranial fragments.

The cranium is represented by a complete right temporal. The mandible was not preserved. One partial cervical vertebra, three partial thoracic vertebrae, and a fragmentary lumbar vertebra are present. One partial left rib and three partial right ribs are present. A complete right os coxa is present. The diaphysis of the right humerus is complete, and portions of the left and right radius are present. Two metacarpals represent the hand elements. Three metatarsals and seven phalanges represent the foot elements. No teeth were present.

Based on measurements of the right temporal squamosa and the right humerus width, this individual is estimated to be between 8 and 10 lunar months of age (Fazekas and Kósa 1978). Evidence of pathology is absent.

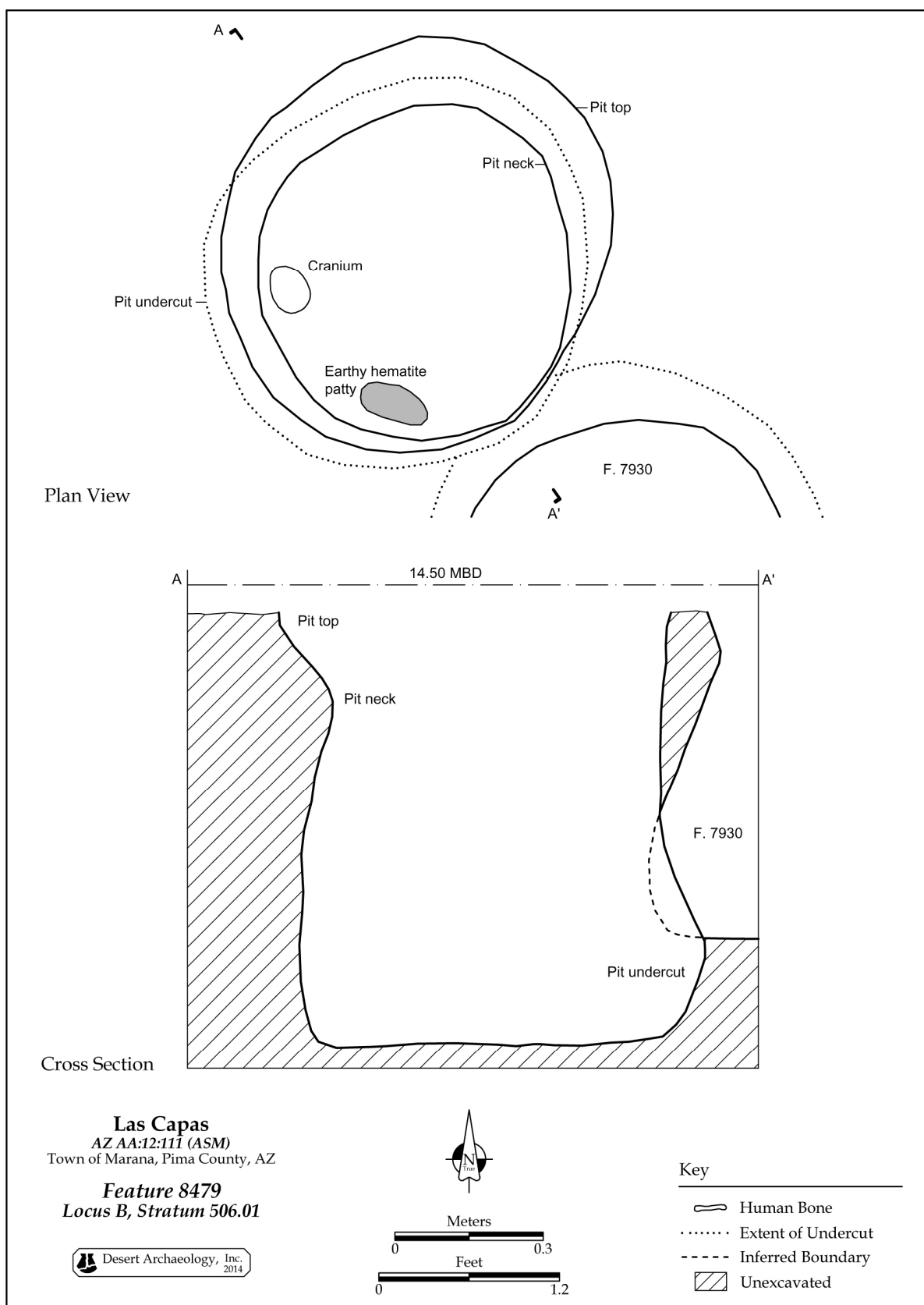
*Internal Stratigraphy and Artifact Content.* The internal fill consisted of a brown, loose silty sand that represented a simple redeposit. The fill contained a small amount of charcoal flecks and 89 pieces of fire-cracked rock evenly distributed throughout. A small amount of loosely consolidated ash rested directly on the pit base, although the pit base and the human remains showed no signs of having burned.

Artifact density was low, and included 126 pieces of flaked stone, 1 core, 88 pieces of fire-cracked rock, 49 pieces of faunal bone (including 20 pieces of possible bobcat bone), and a burned corncob, all of which were likely not associated with the burial. There was an oval-shaped patty of ground stone processed earthy hematite within the fill along the southern portion of the pit; the patty measured 15 cm in length and 10 cm in width. This pigment was likely associated with the burial. An Incipient Plain Ware bowl body sherd was present.

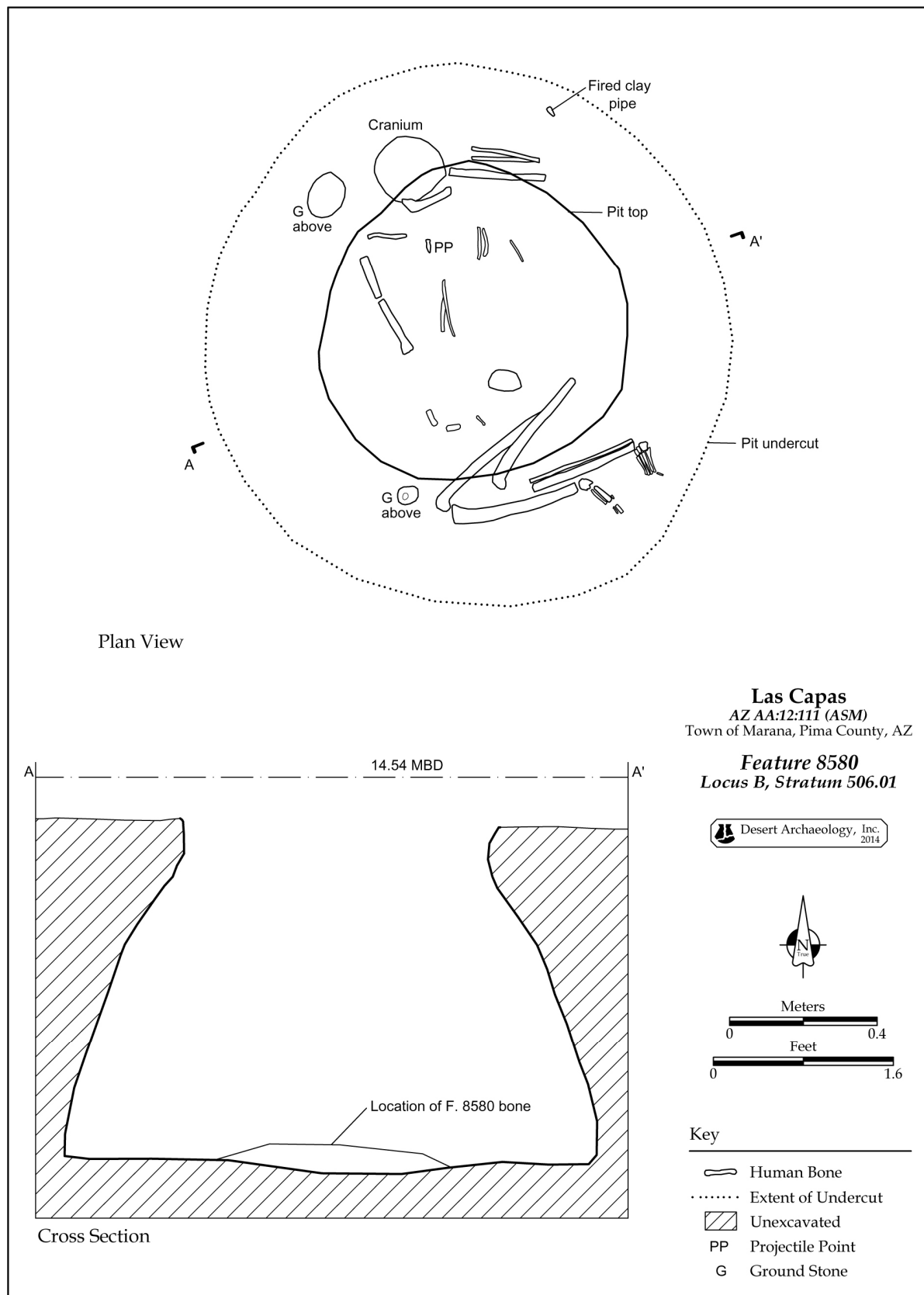
*Stratigraphic Relationships.* Feature 8479 originated within Substratum 506.01, which dates to the early San Pedro phase, and it was buried by additional deposits of this stratum, as well as by deposits from overlying strata. Feature 7930, a bell-shaped pit that originated within the same substratum, intruded into the southeastern portion of Feature 8479. This inhumation was located in close proximity to numerous extramural pit features that also originated within Substratum 506.01.

#### *Feature 8580*

*General Description.* This primary inhumation was discovered during hand-excavation of Feature 8580, a bell-shaped pit (Figure 7). Once human bone was encountered, the remainder of the fill was removed by hand-excavation, exposing the extent of the remains. The bell-shaped pit was likely used for storage before its use as a burial pit. The pit opening measured 85 cm in diameter and expanded outward to a basal dimension of 1.45 m east-west by 1.36 m north-south, with an average depth of 89 cm. The elevation of the pit was 15.30-15.58 mbd. Stratum 506.01 dates to the early San Pedro phase.



**Figure 6.** Plan view and cross section of Feature 8479, a fetus or infant inhumation, type unknown, found in Substratum 506.01, Locus B, Las Capas, AZ AA:12:111 (ASM).



**Figure 7.** Plan view and cross section of Feature 8580, an adult primary inhumation found in Substratum 506.01, Locus B, Las Capas, AZ AA:12:111 (ASM).

The individual interred at the base of the pit was probably male. The remains were supine and flexed, and were orientated with the cranium to the north and the pelvis to the south. The skull lay on its left side, with the face pointing to the east. The right arm was extended out from the body and bent at a 90-degree angle at the elbow, with the radius and ulna parallel to the chest. The left arm was tightly bent at the elbow so that the hand lay close to the front of the face. The legs were flexed and positioned on their right sides, the knees pointing south with the feet next to each other. The bone preservation was poor due to natural environmental processes, as well as from rodent disturbances. The bone fragmented or turned to powder during removal. A projectile point was found in the right chest area and may be indicative of violence.

*Osteological Data.* Feature 8580 is a fragmentary young adult inhumation (16-18 years old). The preserved bone elements are very fragmentary, cracked, and brittle. Some of the elements are turning black due to mineral deposits on the surface. Soil adhering to the bone has charcoal inclusions.

The cranium was very poorly preserved, and what survived was unidentifiable. One fragmentary right rib and fragment of the right clavicle are present. A partial right humeral midshaft (in multiple fragments) is the only preserved element from the upper limb. Only portions of the right femur, tibia, and fibula are present. Two partial metacarpals and three hand phalanges represent the hand elements. Five tarsals, 4 metatarsals, 11 phalanges, and 2 sesmoids represent the feet. All the preserved bones, including the hands and feet, are from the right side of the body. No teeth were present. By comparing the proximal epiphysis breadth of the right tibia with others from the Las Capas sample, it appears relatively large and could be indicative of a possible male individual. Age determination is limited due to poor preservation. The epiphysis on the proximal end of the right tibia is fused, but the epiphyseal line is still visible, indicating the individual is a young adult likely between the ages of 16 and 18 years (Buikstra and Ubelaker 1994). No evidence of pathology is present.

*Internal Stratigraphy and Artifact Content.* The internal fill was a brown, loose silt that contained small amounts of ash and charcoal flecks throughout and was representative of a simple redeposit. Slag was identified within the fill, and three samples were collected. The base of the pit was highly oxidized, although the oxidation did not appear to be related to the interment of the individual.

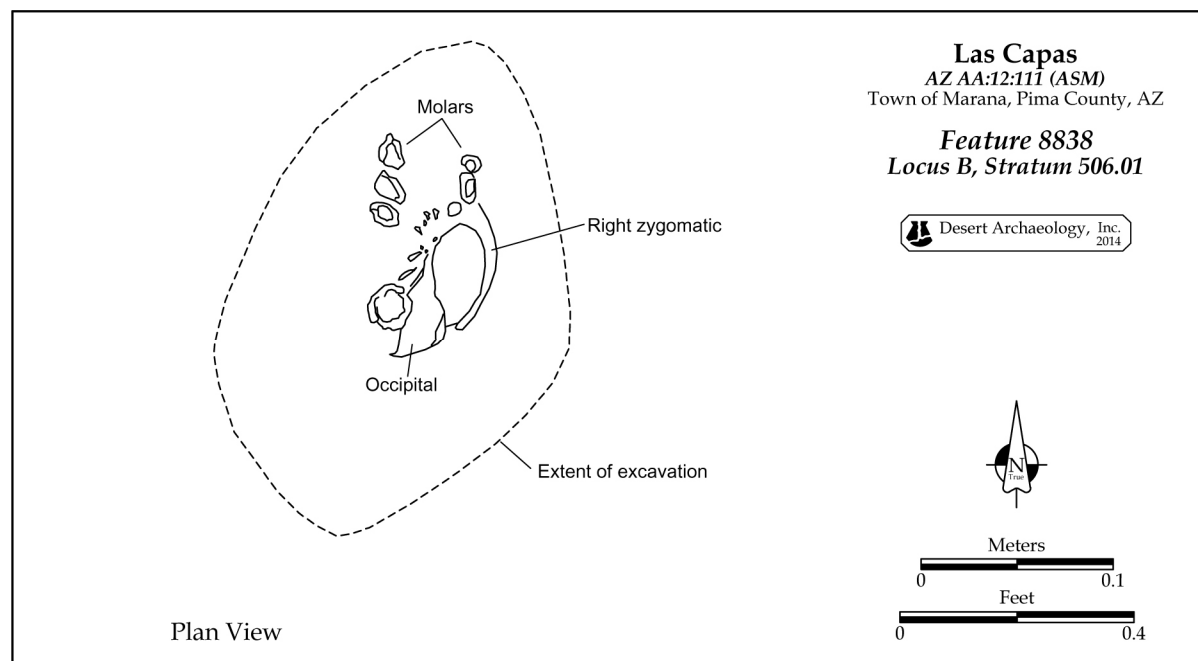
A 33-cm-thick layer of fire-cracked rock, fire-cracked ground stone, and ground stone fragments rested directly on top of the skeletal remains. This dense concentration, which included 182 ground stone fragments, was likely directly associated with the inhumation. While 141 pieces were unidentifiable, 29 came from metates and 12 from netherstones. Two metates and one netherstone were represented by the fragments. These items were used to process red pigment, small pieces of which were present in the fill.

Artifact density within the fill around the remains was very high, and consisted of a 1,405 pieces of flaked stone debitage, 1 fragmentary biface, 2 humpback bifaces, and 273 pieces of faunal bone dispersed throughout, as well as a bone awl fragment, a tabular tool, and two bifaces. These artifacts were likely a result of mixed redeposited fill and were not associated with the burial. One whole clay pipe and one intentionally broken clay pipe were present, along with a piece of unidentified pigment, three projectile points (two Empire and one unspecified early Agricultural period point), and a fire-affected mano. Their association with the burial is possible, but unknown. Several artifacts were in direct contact with the remains and were determined to be associated with the burial. One of the Empire points was recovered from the right chest area, and two whole, but burned flat/concave manos were present, one near the right shoulder and one between the knees.

*Stratigraphic Relationships.* This burial was placed within a preexisting bell-shaped pit that originated within Substratum 506.01, which dates to the early San Pedro phase; it was buried by additional deposits of this substratum, as well as by deposits of overlying strata. Feature 8580 was located in close proximity to several extramural pit features and was directly adjacent to an area of occupational debris, all of which originated within Substratum 506.01. Feature 9015, a primary inhumation, was located approximately 1.5 m north of Feature 8580.

#### *Feature 8838*

*General Description.* This dog/coyote (*Canis* sp.) interment was discovered during hand-excavation of Feature 8059, a house-in-pit (Figure 8). The incomplete skeletal remains consisted of a partial cranium, which rested on the exposed floor surface, although some cranial elements were slightly below the floor elevation. The remains were not within a pit; however, the burial pit may have been removed during hand-excavation of Feature 8059. Because the remains extend partially below the exposed floor surface,



**Figure 8.** Plan view of Feature 8838, a canid burial found in Substratum 506.01, Locus B, Las Capas, AZ:AA:12:111 (ASM).

this feature was likely intrusive into the structure and within a burial pit at one time. The elevation of the remains ranged from 14.50-14.56 mbd.

*Osteological Data.* The dog or coyote was a small- to medium-sized adult. Less than 25 percent of the skeleton was recovered.

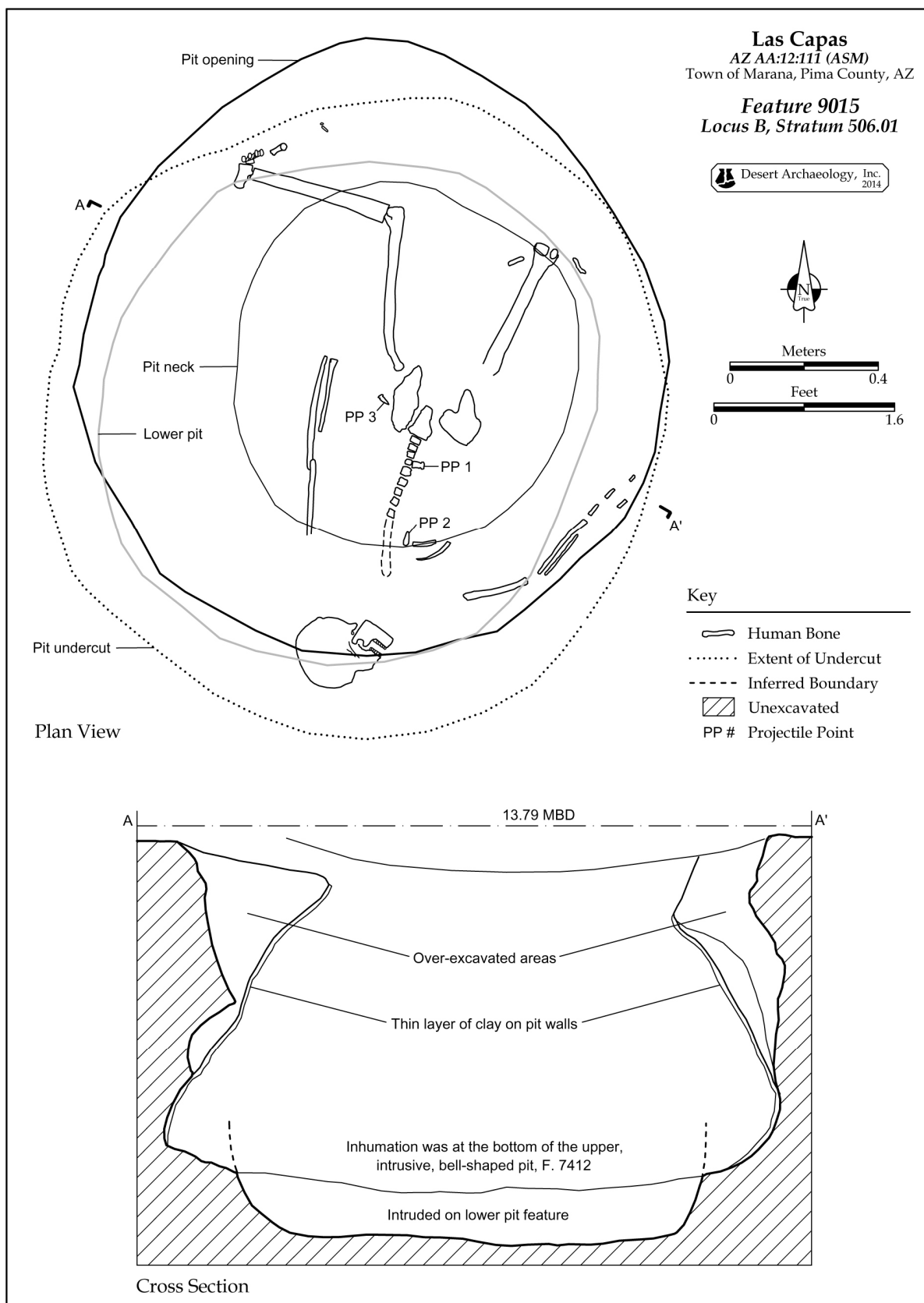
*Internal Stratigraphy and Artifact Content.* Due to the absence of a burial pit, no fill was excavated. No artifacts were associated with the remains.

*Stratigraphic Relationships.* An exact determination of which stratum the burial originated in was difficult to determine. However, given that the house-in-pit Feature 8838 intruded into originated in Substratum 506.01 (which dates to the early San Pedro phase), the burial likely originated within the upper portions of the same stratum. This burial is located in close proximity to several extramural pit features that originated within the same substratum.

#### *Feature 9015*

*General Description.* This primary inhumation was discovered during hand-excavation of a large bell-shaped pit, Feature 7412 (Figure 9). The bell-shaped pit measured 1.63 m northeast-southwest by 1.59 m northwest-southeast at the strip surface and expanded outward to basal dimensions of 1.75 m northeast-southwest by 1.67 m northwest-southeast, with a depth of 1.11 m. The elevation of the pit was 14.64-15.75 mbd. The pit appeared to have been remodeled from an earlier pit that had a narrower base and sidewalls.

The inhumation rested on the base of the later, remodeled pit. The skeletal remains were determined to be from a young adult male. The individual laid facedown, extended across the north-south axis of the pit. The cranium was located in the southern part of the pit with the right side down and the face to the east. An Empire point was found in the lower chest area on the left side of the lumbar vertebrae, the point tip indicating it had entered through the back. A second point was in the thoracic rib area on the left side of the body, again entering through the back, based on the tip orientation. A third point was next to the right side of the pelvis, with the tip suggesting the point entered the body through the front side. The right arm was extended along the right side of the chest. The left arm lay along the left side of the chest, angling away from the body. The upper legs were extended to the north, slightly splayed apart. A broken projectile point was found with the left femur. All four of the points were Empire points. The left lower leg was bent at the knee so that the tibia and fibula were vertical against the pit wall. The right leg bent at a 90-degree



**Figure 9.** Plan view and cross section of Feature 9015, an adult primary inhumation found in Substratum 506.01, Locus B, Las Capas, AZ AA:12:111 (ASM).

angle at the knee, and the right foot was pressed against the west side wall of the pit with the toes pointed upward. Several of the bones of the left foot were displaced within the upper fill of the pit, possibly as a result of insect or rodent disturbance.

*Osteological Data.* Feature 9015 is a fragmentary young adult male primary inhumation (25-35 years old). Cranial remains are in good condition, while postcranial remains are highly fragmented. The remains exhibit cracking, breaking, brittleness, and exfoliation with a large amount of adhering soil. When removing the soil, a broken projectile point was found with the left femur.

The cranial vault is complete, but the face is only partially complete. The left temporomandibular joint, zygomatic, and maxilla are complete; the right mandible and maxilla are fragmented. Three sacral vertebrae are partially present. Fragments of the left and right pubis are present. Fragments of a left femur and left patella represent the limbs. The hands are not preserved. Five tarsals, 4 metatarsals, 7 phalanges, and 1 sesmoid represent the left foot.

A complete left maxilla, fragmentary right maxilla, complete left mandible, and fragmentary right mandible are present. Full maxillary and mandibular dentition is present. Evidence for dental pathology is absent, indicating the individual had good dental health. Teeth show mild to moderate dental attrition. The maxillary right third molar is a peg tooth. The maxillary central incisors exhibit prominent shoveling and winging. The mandibular left central and lateral incisors also show significant shoveling. The mandibular right maxillary third molar shows an unusual morphology on the buccal aspect of the protostylid involving a line of shallow pits in a curved groove.

Cranial features, such as robust mastoid processes, prominent glabella, and squared mental eminence, are indicative of a male individual (Buikstra and Ubelaker 1994). Mild to moderate dental wear indicates a young adult, between 25 and 35 years of age at death (Lovejoy 1985).

In addition to the young adult male, Feature 9015 contained isolated fetus/infant bone (8-10 lunar months old). The remains consisted of a left thoracic neural arch and complete proximal hand phalanx. No dentition was present. Age was estimated based on the morphology, development, and size of the two preserved elements (Scheure and Black 2004). No pathology was observed.

*Internal Stratigraphy and Artifact Content.* The fill of the bell-shaped pit was stratified. The upper 20-25 cm consisted of laminated silt and clay sediments that washed in naturally. The next 10-15 cm of fill consisted of brown sandy silt with a high charcoal content: this represented dumped-in cultural material. The two upper strata were basin shaped, likely as a result of settling that occurred, over time, around the inhumation. The subsequent 65 cm of fill consisted of well-consolidated, brown, sandy silt with a high density of charcoal, and it represented a simple redeposit. The remains were located at the base of this stratum, which appeared to be the base of the remodeled pit. Below the inhumation was a thin layer of ashy, charcoal-stained silt, followed by approximately 10-12 cm of silty sand with charcoal and burned sediment inclusions. The fill below the inhumation appeared to be dumped-in sediments within the earlier pit that was later remodeled. The bell-shaped pit had a thin layer of clay along the perimeter walls, which may have accumulated after the pit fill settled over time.

A high density of artifacts, including flaked stone, fire-cracked ground stone, and faunal bone, was present in the fill of the remodeled pit. The cultural fill within the earlier pit underlying the inhumation had a higher density of the artifacts. Artifacts within this bottommost stratum included flaked stone, a core, a biface, a shell bead, a small amount of an undefined mineral, faunal bone, and worked bone awl fragments. These artifacts appeared to have been dumped into the pit before it was remodeled, and were not associated with the inhumation.

The total number of artifacts recovered from the fill of the pit included 1,196 pieces of flaked stone, 3 bifaces, 73 pieces of faunal bone, and a fire-cracked mano. These artifacts were likely dumped in as refuse or were mixed with the redeposited fill, rather than placed in the pit as grave goods.

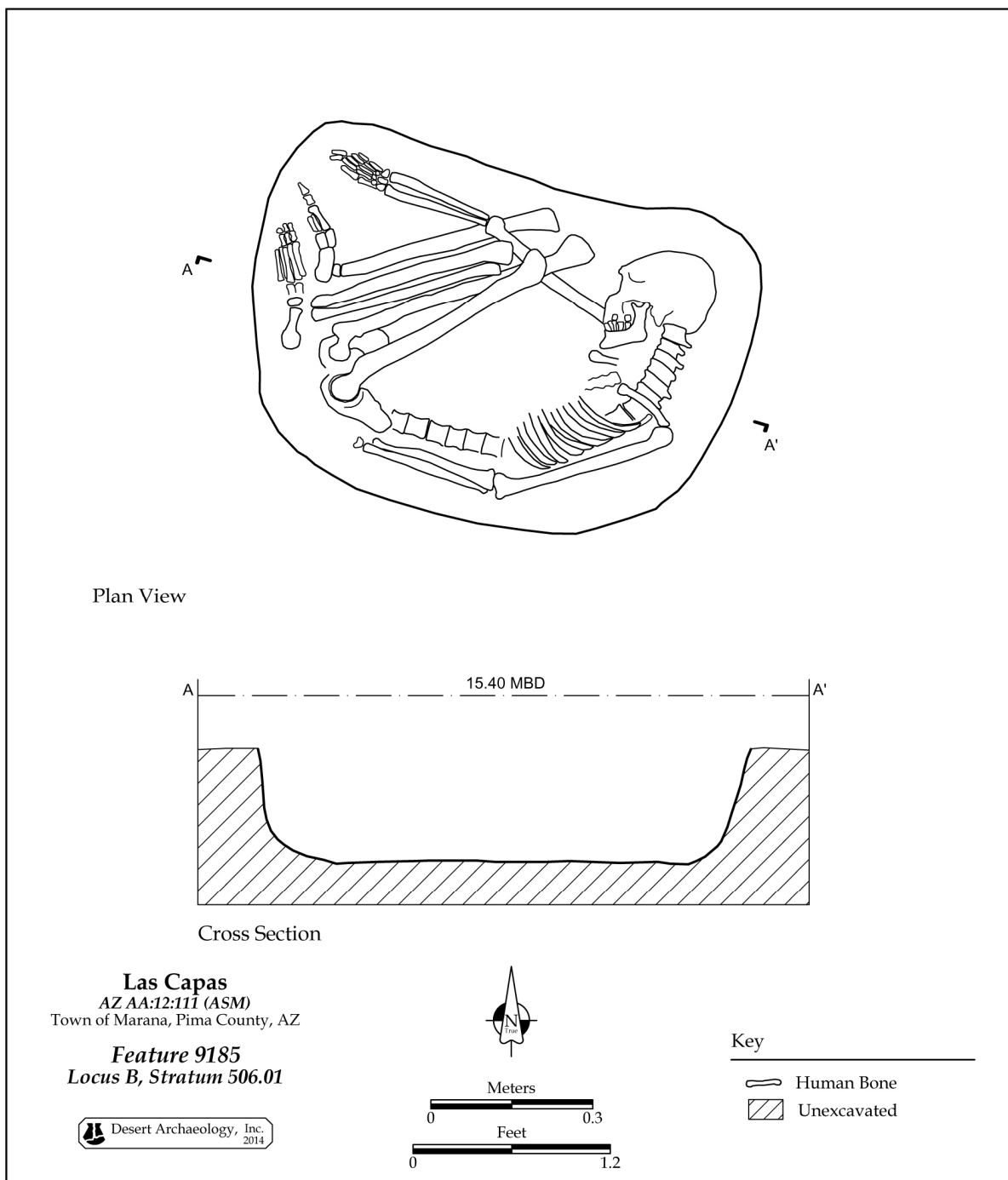
Four Empire points, described above, were found among the skeletal remains and were almost certainly directly associated with the burial. A fifth Empire point was found in the pit fill. A mano was found next to the cranium, although it is unclear if it was directly associated with the inhumation.

*Stratigraphic Relationships.* The pit in which the inhumation was found originated in Substratum 506.01, which dates to the early San Pedro phase. The area immediately surrounding the inhumation was very dense with other cultural features originating within Substratum 506.01. Another inhumation, Feature 8580, was located nearby. Many extramural pits and two areas of occupational debris were located in close proximity to this feature and, based on their originating elevations, may have been contemporaneous. The pit in which the remains were found intruded into the northwestern portion of small pit Feature 9312.



## Feature 9185

*General Description.* This primary inhumation was discovered during mechanical stripping, which struck the pelvis, left humerus, and left femur (Figure 10). The remaining fill was subsequently removed by hand-excavation to completely expose the skeletal remains. The burial pit was oval in plan view, with a basin-shaped profile. The burial pit measured 93 cm east-west by 61 cm north-south, and averaged 57 cm in depth. The elevation of the pit was 15.04-15.61 mbd.



**Figure 10.** Plan view and cross section of Feature 9185, an adult primary inhumation found in Substratum 506.01, Locus B, Las Capas, AZ AA:12:111 (ASM).

The individual interred within the pit was an adult male. The body was lying on its right side, and was tightly flexed within the pit. The cranium was orientated toward the east and the pelvis to the west. The left arm extended along the chest area, with the left hand lying on top of the innominate. The right arm extended away from the chest area, with the elbow below the left knee and over the right proximal tibia. The legs were tightly flexed, with the right elbow between the knees. The knees pointed northeast. The left leg lay over the right leg. The feet were next to each other at the northwestern side of the burial pit.

*Osteological Data.* Feature 9185 includes the human remains from a partial young/middle adult male inhumation (30-40 years old). The bone texture is very chalky and dry. Cracks, breakage, brittleness, and exfoliation are present. There is evidence of root or insect damage, staining, and soil adherence. Calcium carbonate is also present in the adhering soil.

The cranium is very fragmented, and is represented by a partial left temporal and fragmentary right maxilla. The right and left mandible are partially present. Four cervical vertebrae are preserved in partial condition, and fragments of unidentifiable thoracic vertebrae are present. Fragments of the scapula, both clavicles, and both os coxa are present. Fragments of left and right ribs of unknown number are present. Only complete and partial portions of the left upper limb diaphyses are present. Only fragments of the right tibia and fibula diaphyses represent the left leg. A partial left patella is present. Nine carpals, 6 metacarpal, 11 phalanges, and 1 sesmoid are present. Four tarsals, 26 phalanges, and 2 sesmoids are present.

Portions of the right and left mandible and a fragment of the right maxilla are present. The teeth are in poor condition, with many of the crowns and roots broken postmortem. Maxillary teeth present include right and left second and third molars, one root from an unsided first molar, one root from an unsided and unpositioned premolar, and an unsided root of a canine. Mandibular teeth include a right first molar, right first and second premolar, and both canines. The mandibular third molars are congenitally absent. The mandibular right second molar, left second premolar, and left first molar were lost antemortem, and the alveolar bone reabsorbed. The mandibular right first molar may have a large carious lesion on the occlusal surface, but postmortem damage precludes further observation.

Robust cranial features, including the left mastoid process and mental eminence, suggest a male (Buikstra and Ubelaker 1994). The right (49 mm) and left (49 mm) femoral head diameters are also within the range for males (Bass 1985). The left deltoid tuberosity is robust, and the left humeral head diameter (44 mm) is also within the range for males (Bass 1985). Moderate dental wear suggests a middle adult, aged 30-40 years at death (Lovejoy 1985).

Possible healed fractures are present on two middle right foot phalanges. The right femur has subperiosteal bone remodeling on the proximal shaft near the linea aspera.

*Internal Stratigraphy and Artifact Content.* The internal fill consisted of a loose brown silty sand that contained small amounts of charcoal flecks throughout and was representative of a simple redeposit.

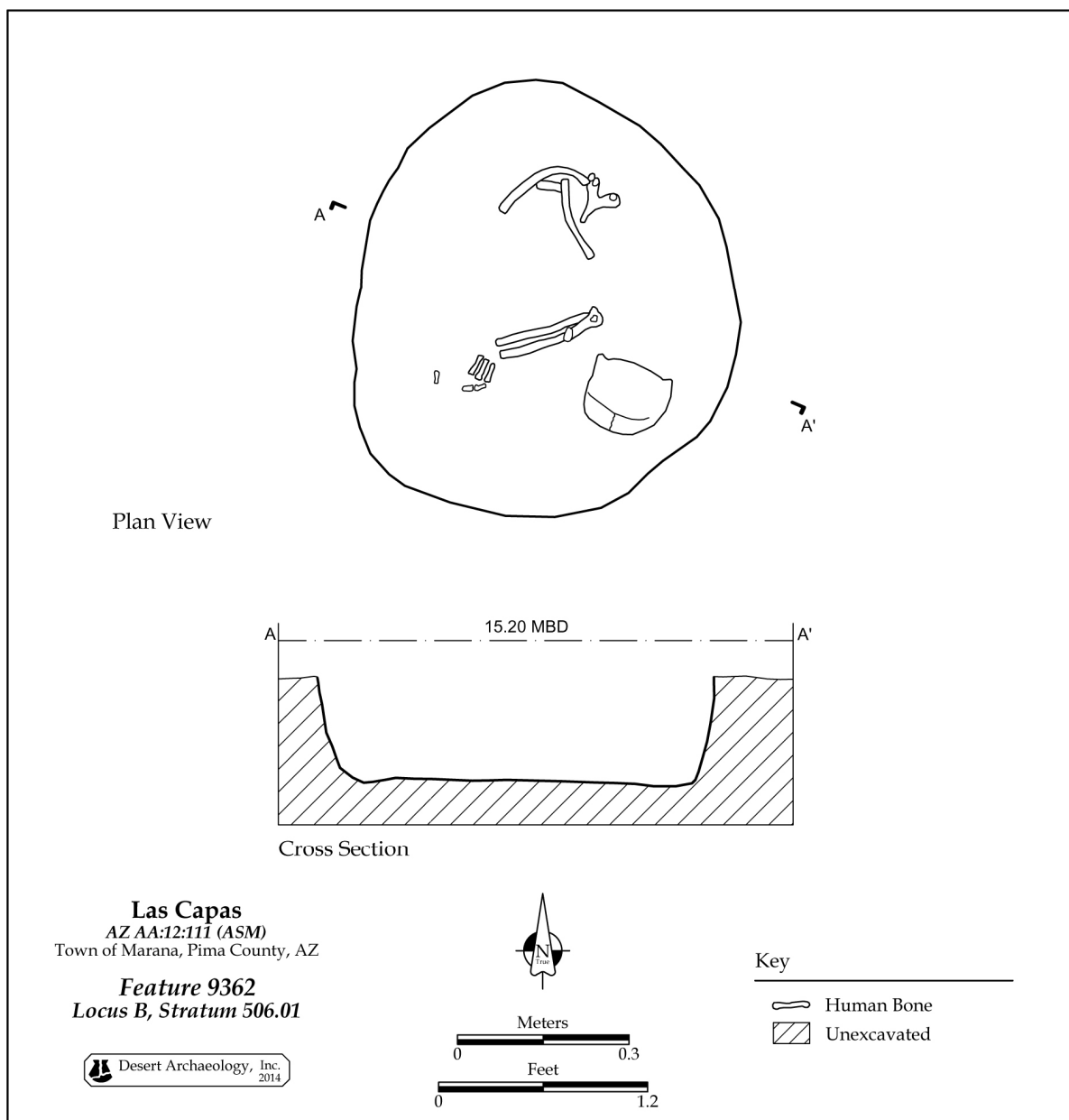
Artifact density within the fill was low, and consisted of a piece of dog/coyote bone, four pieces of flaked stone debitage, and a single piece of fire-cracked ground stone. No artifacts were identified as being associated with the burial.

*Stratigraphic Relationships.* Feature 9185 originated within Substratum 506.01, which dates to the early San Pedro phase, and it was buried by additional deposits from this stratum, as well as from deposits from overlying strata. This primary inhumation was located in close proximity to a few extramural pits that originated within the same substratum.

#### *Feature 9362*

*General Description.* This secondary inhumation was discovered during mechanical stripping (Figure 11). The remaining cultural overburden was subsequently removed by hand-excavation, exposing the remains. The burial pit was circular in plan view, with slightly sloping side walls and a flat bottom. The burial pit measured 77 cm north-south by 70 cm east-west, and was an average depth of 20 cm. The pit elevation ranged from 15.24-15.44 mbd.

The individual interred within the pit was an adult female. The skeleton was incomplete and disarticulated. The cranium was complete and fairly well preserved, lying face down in the southern portion of the burial pit. Other skeletal elements found within the burial pit consisted of four thoracic vertebrae, several ribs, the right clavicle, a fragmentary left humerus that was articulated with the ulna and ulna, and portions of the left hand (four metacarpals and five phalanges).



**Figure 11.** Plan view and cross section of Feature 9362, an adult secondary inhumation found in Substratum 506.01, Locus B, Las Capas, AZ AA:12:111 (ASM).

*Osteological Data.* Feature 9362 represents a fragmentary middle adult probable female individual (30-50 years old). The remains preserved are in poor condition, and are very fragile, exhibiting cracking, breakage, brittleness, exfoliation, root/insect damage, staining, and adhering soil. Dark brown-black mottling is present on most of the remains.

The cranial vault is preserved except the frontal bone. Many fragmented and unidentifiable cranial fragments are present. The mandible is not present. A partial left zygomatic, a complete left maxilla, partial right maxilla, and complete palatine are present. The sphenoid and ethmoid are present, but are encased in the endocranial soil cast. Four thoracic vertebrae are partially represented. One partial right clavicle is also present, as are rib fragments. Only diaphyseal portions of the left upper limb bones are present, including a partial distal portion of the left humerus, partial radius diaphysis, and partial ulna diaphysis. Four metacarpals and five phalanges represent the left hand. Foot elements are not preserved.

A complete left maxilla and partial right maxilla are present. One complete incisor, a canine, a premolar, and two molars are present, all from the left side of the maxilla. All appear to be fully developed with some postmortem damage. Heavy dental wear is present on the left second and third mandibular molars. Due to postmortem damage, pathology is unobservable. Gracile mastoid processes indicate a possible female (Buikstra and Ubelaker 1994). Postcranial elements, including hand phalanges, also appear to be relatively gracile. However, without the preservation of additional osteological sex indicators, it is difficult to estimate sex with certainty. The overall fragmentary nature of the remains inhibits further observations. No pathology is observed.

*Internal Stratigraphy and Artifact Content.* The internal fill consisted of a mildly hard, light-brown silt that contained very small amounts of charcoal flecks throughout, and represented simple redeposit.

Artifact density within the fill was very low, and consisted of a three pieces of flaked stone debitage and one piece of faunal bone that were lightly dispersed throughout the feature, but were not likely associated with the burial itself.

*Stratigraphic Relationships.* This secondary inhumation originated within Substratum 506.01, which dates to the early San Pedro phase, and it was buried by additional deposits of this substratum, as well as by deposits from overlying strata. Several extramural pit features that originated within Substratum 506.01 were located in close proximity to this burial, as was Feature 7820, an extramural surface to the southwest. Feature 7773, a secondary cremation within the same substratum, was located approximately 8 m northeast of Feature 9362.

#### *Feature 9441*

*General Description.* This primary inhumation was discovered during mechanical stripping which exposed the mandible (Figure 12). The remaining fill was subsequently removed by hand-excavation, exposing the skeletal remains. The burial pit was circular in plan view with a basin-shaped profile, and it measured 78 cm north-south by 63 cm east-west, with an average depth of 30 cm. The elevation of the pit was 15.45-15.84 mbd.

The inhumation was an adult male. The skeletal remains were fairly well preserved and nearly complete. The body was positioned on the right side against the southern wall of the pit in a tightly flexed position. The remains were orientated east-west, with the cranium toward the southeast and the pelvis to the west. The left arm lay across the chest and was bent at the elbow at a 90-degree angle. The left forearm lay over the middle of the right humerus (the hand was missing). The right arm extended along the chest, with the right hand next to the left knee and the hand curled and the fingers pointing downward. The legs were tightly flexed, with the left leg lying over the right leg. The knees pointed east. The left foot would have been close to the pelvis. The cranium and left hand had been affected by animal burrowing, either rodent or coyote.

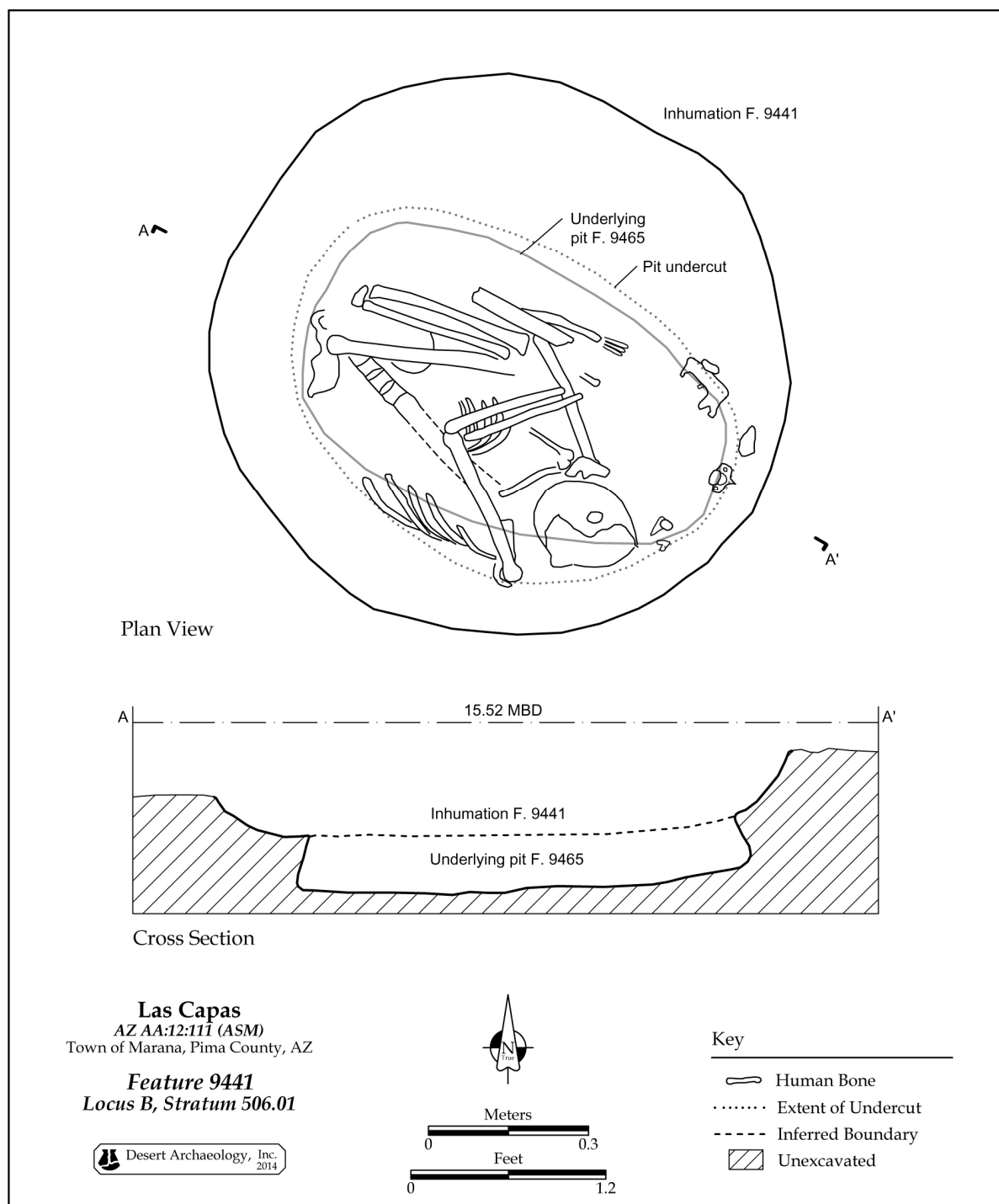
*Osteological Data.* Feature 9441 represents a partial middle adult male individual (30-50 years old). Blunt force trauma is evident on the right parietal. The remains disintegrated when removed from the soil matrix. Red ochre staining is also present on the right parietal. Cracking, breakage, brittleness, and exfoliation affect the remains. Dark mottling, possibly from the charcoal soil inclusions, stain the bone surface. A soil precipitate in the form of crystallized salt is present on the surface of cranial fragments.

The cranial vault is complete, although in many fragments. A partial mandible is present. Complete zygomatics and fragments of the left and right maxilla and sphenoid are present. Five mandibular teeth are present, including a partial canine, two complete premolars, and two partial molars. A partial first cervical, a complete second cervical, and three (3-6) cervical vertebrae are present. Two fragmentary thoracic and lumbar vertebrae are present. Right and left ribs are represented by 75 unsided fragments. A fragmentary right and left scapula, a partial left and complete right clavicle, and partial os coxa are present. The proximal epiphyses and midshaft diaphyses of the left and right humerus are present. Right and left partial radius diaphyses are present. A partial left ulna diaphysis and a complete portion of the right distal ulna are present. The right and left elements of the lower limb are represented by partial diaphyses. Two carpals and one phalange represent the hand elements. One tarsal represents the foot elements.

Only a fragmentary right and left maxilla are present. Partial portions of the left and right mandible are present. No maxillary teeth are preserved. Mandibular teeth include a right canine, two right premolars, and two left molars. One unidentifiable tooth is present. A possible carious lesion is present on the interproximal mesial surface on the mandibular right canine. A large carious lesion obstructing much

of the occlusal surface of the mandibular left first molar with an associated periapical abscess is also observed on the alveolar bone.

Cranial traits, including the supraorbital margin, glabella, and mental eminence, appear to be robust, suggesting a male (Buikstra and Ubelaker 1994). The linea aspera of the posterior left femur is also robust. Moderate dental wear on the left mandibular second molar and heavy dental wear on the right mandibular canine and first premolar suggest a middle-aged adult individual between 30 and 50 years of age.



**Figure 12.** Plan view and cross section of Feature 9441, an adult primary inhumation found in Stratum 506, Locus B, Las Capas, AZ AA:12:111 (ASM).

Cranial traits, including the supraorbital margin, glabella, and mental eminence, appear to be robust, suggesting a male (Buikstra and Ubelaker 1994). The linea aspera of the posterior left femur is also robust. Moderate dental wear on the left mandibular second molar and heavy dental wear on the right mandibular canine and first premolar suggest a middle-aged adult individual between 30 and 50 years of age.

A circular traumatic depression is observed on the middle of the right parietal. It appears to have been caused by the impact of a blunt object, with porosity in the middle of a depression surrounded by an elevated cranial vault table. The porosity measures 12.07 mm at its maximum diameter. The appearance of the porosity suggests it was a least partially healed. Red staining, possibly from ochre, is also present on the right parietal.

*Internal Fill and Artifact Content.* The internal fill of the burial pit was representative of simple redeposit, and it consisted of a brown, loose, silty sand that contained moderate amounts of small charcoal flecks and fire-cracked rock throughout. Small lenses of water-lain sediments were encountered within the fill and were a result of rodent burrows.

Artifact density above the remains was high throughout, and included 137 pieces of flaked stone debitage, faunal bone, a stone pipe fragment, 10 fire-cracked rocks, ground stone, and a core. These artifacts may have been mixed with the redeposit and were not likely directly associated with the burial. A high density of artifacts was also present within the fill directly below the remains, and included 399 pieces of flaked stone debitage, 5 cores, 1 tabular stone tool, 1 handstone, 1 broken mano, and several fire-cracked rocks. In all, 544 pieces of flaked stone, 62 pieces of faunal bone, and 3 ground stone fragments were found throughout the fill of this feature, although no artifacts were interpreted as directly associated with the burial.

*Stratigraphic Relationships.* This burial originated within Substratum 506.01, which dates to the early San Pedro phase. It was buried by additional deposits of this substratum as well as by deposits of overlying strata. Feature 9441 intruded on Feature 9465, a bell-shaped pit located within Stratum 506. Several features that originated within Substratum 506.01 were in close proximity to this burial, including Feature 8417, a house-in-pit, and a few extramural pit features.

#### *Feature 9467*

*General Description.* This interment contained the remains of three dogs or coyotes (*Canis* sp.), a gray fox (*Urocyon cinereoargenteus*), and a bobcat (*Lynx rufus*) (Figure 13). The top of the bell-shaped pit was discovered during mechanical stripping. During excavation of the pit, the mass of bone was located and work stopped until the bone could be documented. The remaining fill was subsequently removed by hand-excavation, exposing the remains of at least three separate canids.

The burial pit was bell shaped, with an oxidized base, and it was likely primarily for storage prior to use as a burial pit. The pit opening measured 64 cm north-south by 62 cm east-west and expanded out to a basal diameter of 85 cm, with an average depth of 71 cm. The elevation of the remains was 14.89-15.15 mbd. The skeletal remains of the three canids were mostly disarticulated, incomplete, and scattered across the base of the pit. Articulated portions included a paired radius and ulna, a tibia and fibula, vertebral columns, and paws. The mandibles were separated from the crania.

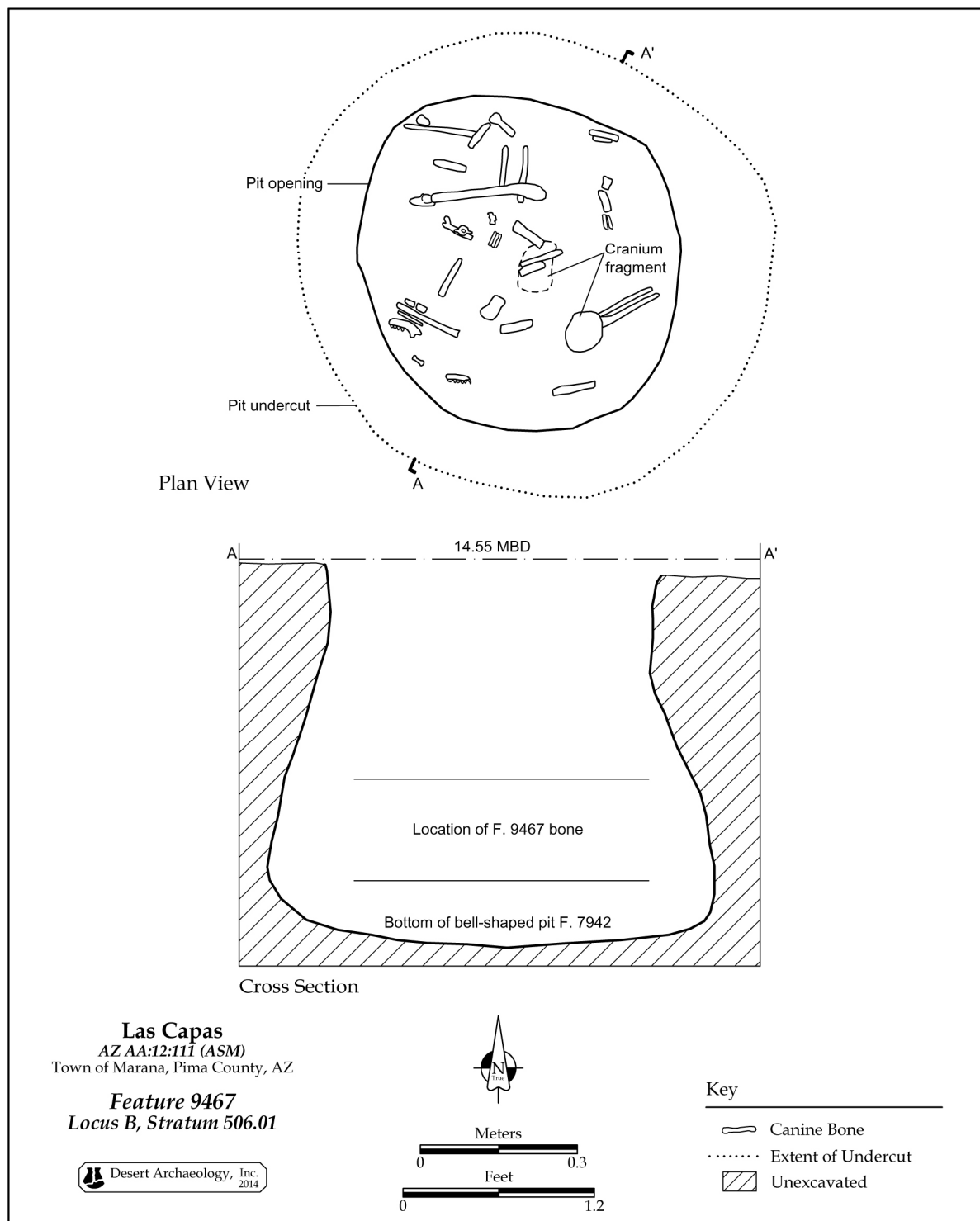
*Osteological Data.* Three dogs or coyotes were represented among the remains. One was a small- to medium-sized adult that was less than 25 percent complete. The second was a small- to medium-sized possible adult, and was less than 25 percent complete. The third was a small- to medium-sized juvenile, aged 12-14 months, and was less than 25 percent complete. The gray fox was an adult and was less than 25 percent complete. The bobcat was immature and was less than 25 percent complete.

*Internal Stratigraphy and Artifact Content.* The internal fill of the burial pit was stratified. The uppermost stratum averaged 28 cm in thickness, and was a grayish-brown, loose, sandy silt that contained small amounts of charcoal flecks throughout.

Artifact density was low, and consisted of six pieces of fire-cracked rocks, flaked stone, and non-canid faunal bone. The next stratum averaged 16 cm in thickness, and was a light brown, loose silt that contained a small amount of charcoal flecks and ash throughout; this stratum appeared to be culturally deposited. Flaked stone and faunal bone was also recovered from this soil.

The following stratum averaged 26 cm in depth and contained the burials. The fill consisted of a brown, loose, silty sand that contained large amounts of small charcoal flecks throughout and represented simple redeposit. Artifact density was low, and consisted of a 42 pieces of flaked stone and 31 pieces of

non-canid faunal bone, which were not associated with the burial. The bottom stratigraphic layer averaged 12 cm in thickness, and consisted of a brown, loose, fine-textured, sandy silt. The fill within this stratum contained a Cortaro point, a biface, and small amounts of non-canid faunal bone and fire-cracked rock; however, this stratum and the associated artifacts were not associated with the burial.



**Figure 13.** Plan view and cross section of Feature 9467, a multiple carnivore burial found in Substratum 506.01, Locus B, Las Capas, AZ AA:12:111 (ASM).

*Stratigraphic Relationships.* These burials were found within the fill of a bell-shaped pit that originated within Substratum 506.01, which dates to the early San Pedro phase. The interments and associated fill were buried by a subsequent cultural deposit, and then capped by a natural alluvial deposit, which carried cultural refuse in low frequencies. The bell-shaped pit in which the burials were located was situated in close proximity to many extramural pit features that originated within Substratum 506.01.

## STRATUM 505

### Locus F

#### Feature 23732

*General Description.* This canid (*Canis* sp.) interment was discovered during mechanical stripping (Figure 14). The remains of an adult male canine were contained within a small, oval-shaped pit with straight walls and a flat base. The pit measured 53 cm northwest-southeast by 45 cm northeast-southwest, with a depth of 15 cm. The elevation of the pit was 13.15-13.30 mbd.

The burial was nearly complete, although the cranium, cervical vertebrae, and legs were impacted by backhoe stripping. The animal rested on its right side in a tightly flexed position. The cranium was located in the northwestern part of the pit, and was oriented with the face toward the south. The pelvis was at the southern end of the pit. The front legs extended away from the body, adjacent to the mandibles, with the left front paw touching the left rear paw. The rear legs were bent at a 90-degree angle, with the left leg lying on top of the right leg. The right rear paw was against the southwest side of the pit. Insect disturbance was noted within the fill of the burial pit.

*Osteological Data.* This domesticated dog was a medium- to large-sized adult. More than 75 percent of the skeleton was recovered. The presence of a baculum indicates this was a male dog.

*Internal Stratigraphy and Artifact Content.* Most of the fill within the burial pit consisted of mildly hard, brown clayey silt, with patches of hard compaction that represented a simple redeposit. There was a thin layer of brown, laminated clay under the inhumation at the base of the pit, which may have represented naturally accumulated deposits. Five non-canid faunal bone fragments were found within the fill, but were not associated with the burial.

*Stratigraphic Relationships.* Feature 23732 originated within Stratum 505, which dates to the late San Pedro phase. It was buried by additional deposits of the same stratum, as well as by deposits of overlying strata. Very few features were located within close proximity to the inhumation, including one extramural pit. Buried canid remains were found within Stratum 505 in several other locations throughout Locus F. An additional isolated canid cranium, Feature 23772, was found within Stratum 506 to the southeast.

#### Feature 23807

*General Description.* This hawk burial was discovered during mechanical stripping (Figure 15). The remains were contained within a small basin-shaped pit. The pit measured 25 cm in diameter and 17 cm in depth. It was at elevation 13.56-13.73 mbd.

Analysis of the skeletal remains identified them as a raptor. The bird was oriented with its head at the southwestern corner of the pit. It was lying on its right side. The wings were flexed, and the legs were tucked in toward the body with the feet next to the skull. No disturbances were identified, and the burial appeared completely intact.

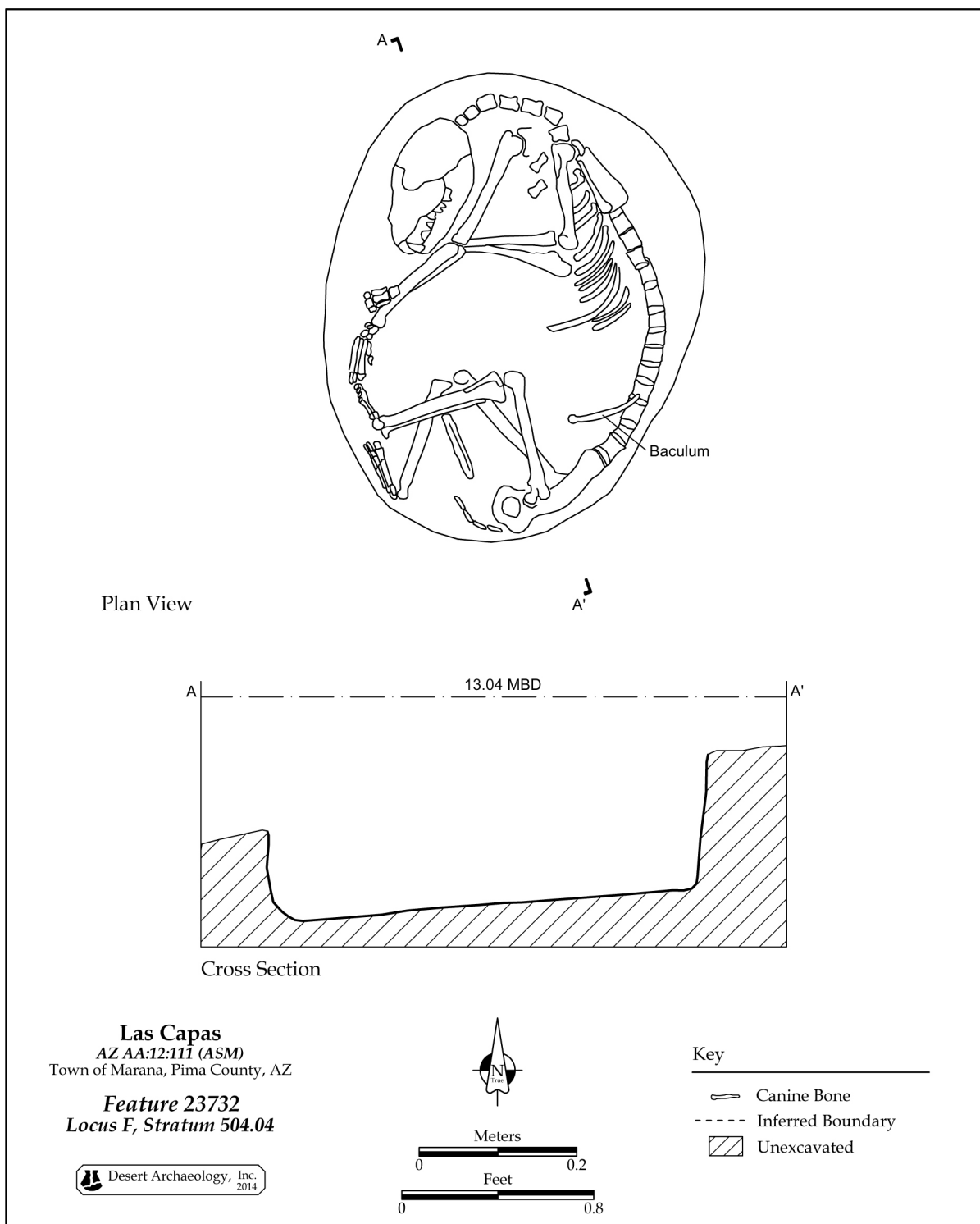
*Osteological Data.* The bird was a hawk, probably a Swainson's hawk. It was an adult, and 50-75 percent of the skeleton was present.

*Internal Stratigraphy.* The remains were located within the upper two-thirds of the fill within the pit. The fill consisted of soft, light brown to tan, silty loam with a very small amount of charcoal flecks located above the bird remains. The fill represented a simple redeposit of sediments. No artifacts were identified within this feature.

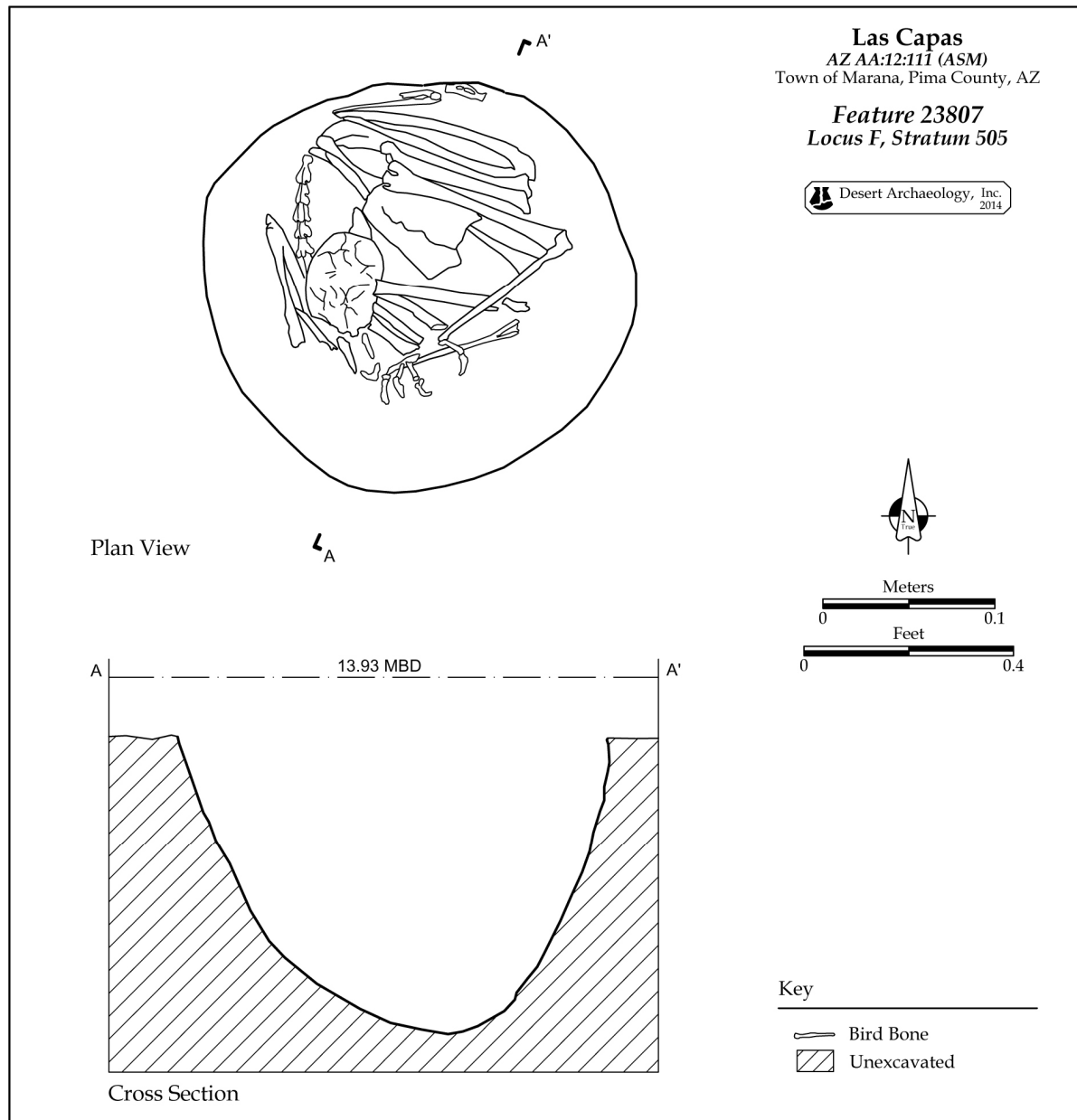
*Stratigraphic Relationships.* This inhumation originated in Stratum 505, which dates to the late San Pedro phase; it was buried by additional deposits from the same stratum. No other features within this stratum were located within close proximity to the inhumation. The bird may have been a natural



death, perhaps representing a hawk that crawled into a hole and died. No other bird burials are currently known from the Early Agricultural period in the Tucson Basin (Jennifer Waters, personal communication 2014).



**Figure 14.** Plan view and cross section of Feature 23732, a canid burial found in Stratum 505, Locus B, Las Capas, AZ AA:12:111 (ASM).



**Figure 15.** Plan view and cross section of Feature 23807, a hawk burial found in Stratum 505, Locus B, Las Capas, AZ AA:12:111 (ASM).

## Locus G

### Feature 3306

*General Description.* This primary inhumation was exposed during mechanical stripping (Figure 16). The remains were found within an oval, basin-shaped pit that measured 28 cm east-west by 20 cm north-south, and averaged 11 cm in depth. The elevation of the pit ranged from 12.19-12.30 mbd.

The remains were articulated, although disturbed and extremely fragile, and they were identified to be from an infant of indeterminate sex. The individual was placed in a tightly flexed position, resting on its right side. The body was oriented east-west, with the cranium in the eastern part of the burial pit and the pelvis to the west. The right arm extended along the front of the chest, and was bent at the elbow at a 90-

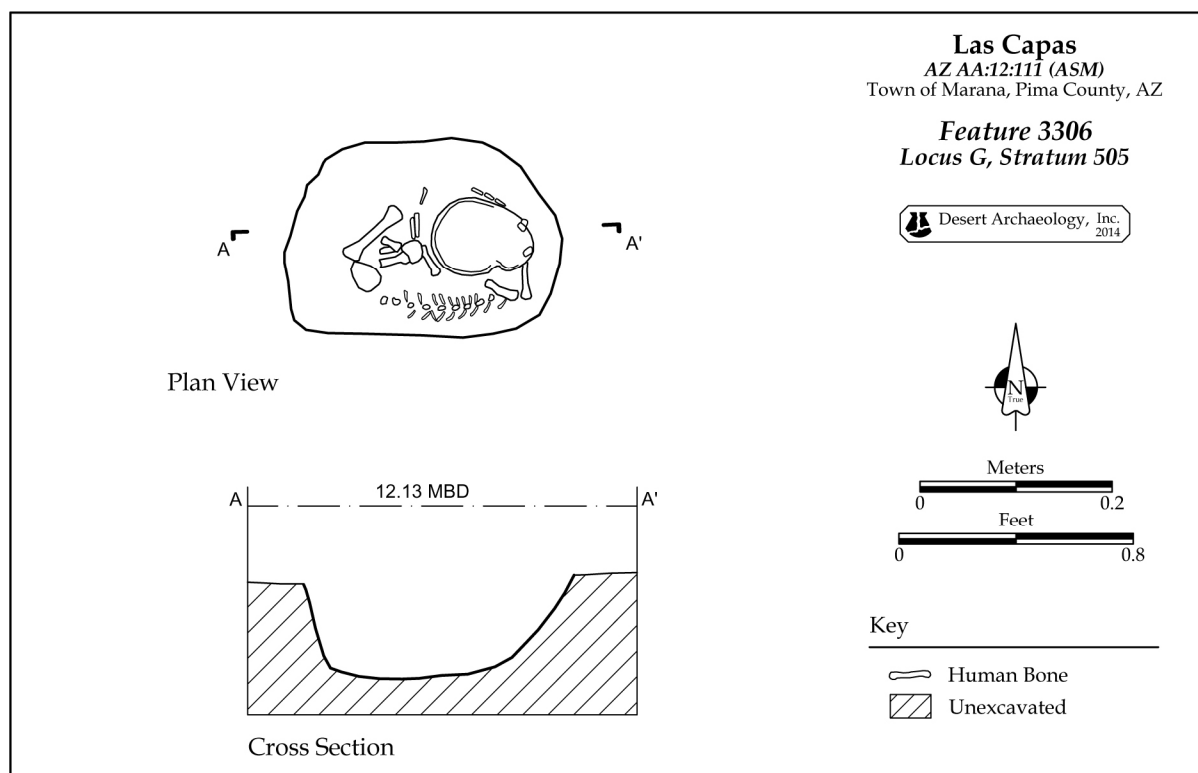
degree angle; the hand was positioned next to the knees. The legs were tightly flexed with the feet originally northwest of the pelvis. The remains were disturbed by the backhoe, which partially removed elements from the left side of the skeleton. Traces of a red mineral pigment were identified on several skeletal elements.

*Osteological Data.* Feature 3306 represents a partially complete infant inhumation (0-2 months old). The remains are in poor condition and show evidence of postmortem cracking, breakage, and brittleness, with adhering soil.

Fragments of the cranial vault, maxilla, and right nasal are present. The vertebral column is well represented with mostly complete vertebrae except for fifth lumbar vertebra, sacrum, and coccyx. The left ribs are complete, and partial right ribs are present. Partial right and left humerus, right radius, and ulna diaphyses are present. Partial portions of the left radius and ulna are present. A complete portion of the right distal femur diaphysis is present, and complete proximal portions of the right tibia and fibula are present. Left leg elements are absent. Hand elements present include seven metacarpals and five phalanges. Foot elements are absent.

A fragmentary portion of the left maxilla is preserved, but the right maxilla and mandible are absent. Maxillary deciduous teeth present include the left central and lateral incisors, left canine, and the left first molar. The crowns of these teeth are 75 percent completely developed. Mandibular deciduous teeth present include the left central and lateral incisors and the left first molar. The crowns of the incisors are 75 percent complete, and the left first molar has a complete cusp outline. None of the teeth present are in occlusion. The maxillary left central and lateral incisors have prominent shoveling. No evidence of dental pathology is observed.

Occipital elements have not yet fused, including the pars lateralis to the occipital squama and basilar portion to the pars lateralis, which usually happens between 1-3 years of age (Scheurer and Black 2004). Vertebral neural arches have not fused to each other or to centra, indicating the individual is less than 1 year of age (Scheurer and Black 2004). The age estimate, then, is based on bone morphology and development. No evidence of pathology is present on either the cranium or postcranial elements.



**Figure 16.** Plan view and cross section of Feature 3306, an infant primary inhumation found in Stratum 505, Locus G, Las Capas, AZ AA:12:111 (ASM).

*Internal Fill and Artifact Content.* The fill within the burial pit consisted of a blocky, dark grayish-brown clay. The fill appeared to be a simple redeposit and contained no artifacts.

*Stratigraphic Relationships.* This primary inhumation was first noted in Stratum 505, which dates to the late San Pedro phase, although it may have originated from the lower portions of Stratum 504. The burial pit was buried by deposits from Stratum 504, as well as by deposits from overlying strata. The inhumation was located approximately 4 m southeast of a large cluster of extramural features that originated in Stratum 505. Further, several small pits and a bell-shaped pit that originated in the same stratum were located in close proximity to the inhumation. A primary inhumation of an adult female, Feature 3464, was located roughly 6 m northwest of Feature 3306 within Stratum 505.

#### *Feature 3464*

*General Description.* This primary inhumation was discovered during mechanical stripping (Figure 17). The inhumation was found within a bell-shaped pit that averaged 39 cm in depth. The burial pit measured 84 cm northwest-southeast by 67 cm northeast-southwest at the stripped surface and expanded outward to a basal dimension of 90 cm north-south by 84 cm east-west. The overall pit elevation was 12.58-12.97 mbd.

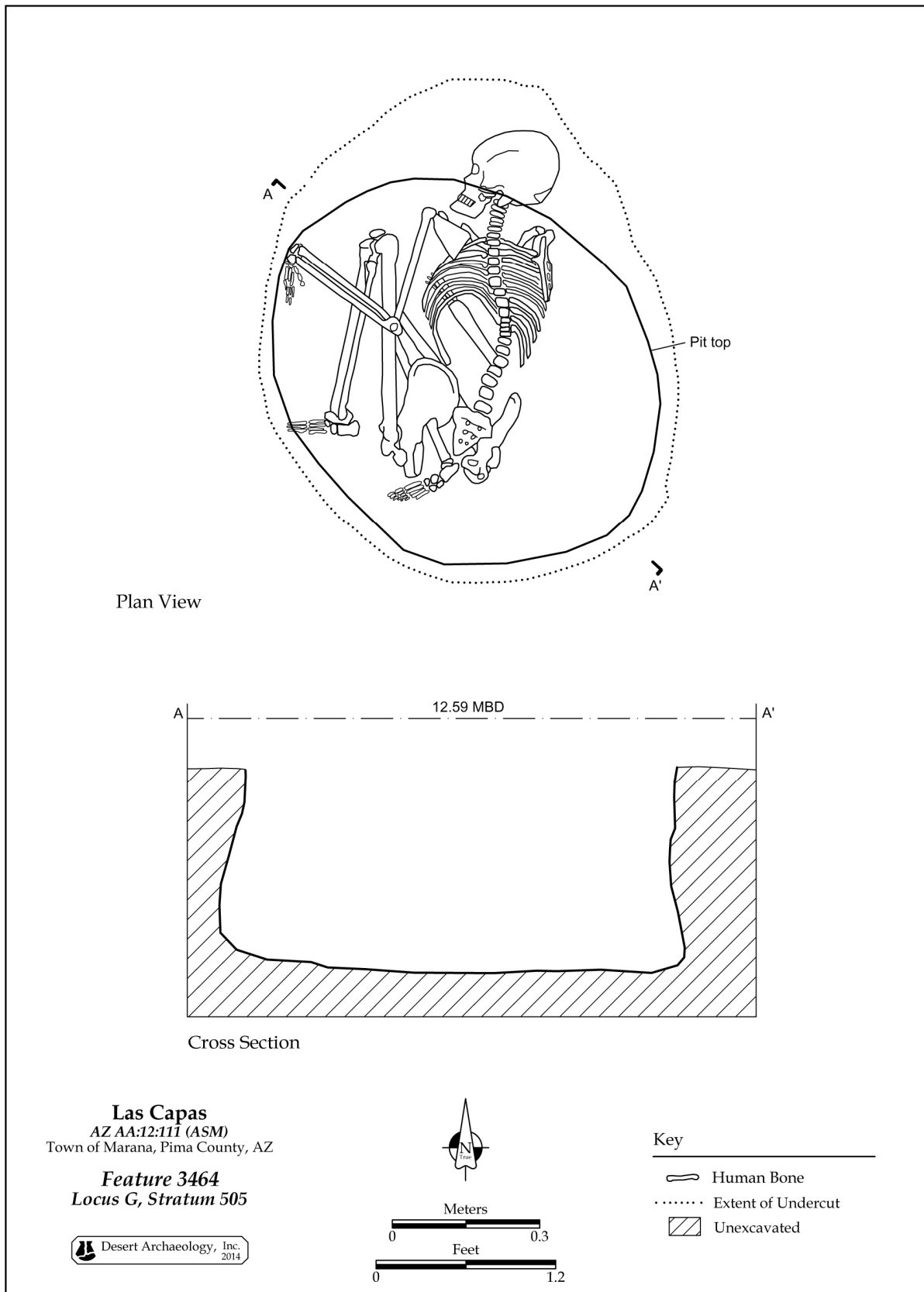
The individual was placed in a tightly flexed position on her right side. The skull was at the northern end of the grave and the pelvis at the southern end. The left upper arm was positioned in front of the chest, bent at the elbow at a 90-degree angle, with the elbow lying on the left femur shaft and the forearm extending across the left tibia and fibula shafts. The left hand was against the west side of the pit. The right upper arm lay beneath the right side of the chest, and was bent at the elbow such that the forearm crossed beneath the left side of the chest, with the hand beneath the left ribs. The legs were tightly flexed, with the left leg over the right leg. The right foot lay beneath the pelvis, and the left foot was positioned with the toes against the western wall of the pit. The skeletal remains were complete and articulated, but were extremely fragile. Most bones were stained with red ochre. While rodent activity was identified within the burial pit, the remains did not appear to have been impacted by any disturbances.

*Osteological Data.* Feature 3464 represents a partially complete adult female (40-50 years old). The cranium is in good condition, but the postcranial remains exhibit cracking, breakage, and brittleness, with adhering soil.

The cranium consists of many fragments and is complete except the right zygomatic and partial left and right maxilla. The axial skeletal elements include fragmentary cervical and partial thoracic vertebrae. Both sets of right and left ribs are represented by fragments. The scapulae, clavicles, and os coxae are present but fragmentary to partially preserved. Both right and left humeri are partially present. Both right and left radii and ulnae have diaphyses present but are missing the epiphyses. Right and left elements from the lower limb have partial diaphyses present and are poorly preserved. Two carpals and small fragments of phalanges represent the hand elements. Six partial tarsals and nine phalanges represent the foot elements.

The maxilla is partially complete, and the mandible is complete. A full set of permanent maxillary dentition is present. Mandibular teeth include the right canine, left first and second premolars, left first molar, left and right second molar, and right third molar. The mandibular left third molar is congenitally absent. Maxillary right second and third molars exhibit cervical carious lesions at the cemento-enamel junction. One is on the distal side of the second molar, and the other is on the mesial side of the third molar.

Evidence of non-carious pulp exposure is present on the maxillary right first and second premolars and the left canine. Evidence of six antemortem enamel chips is observed on maxillary teeth, and two chips are on the mandibular teeth. Mild periodontal resorption is present on the alveolar bone at the maxillary right second and third molars and the mandibular left canine. Severe periodontal resorption is evident on the alveolar bone at the mandibular right second and third molars, left second premolar, and first and second molars. One periapical abscess is present where the mandibular first premolar was originally located, but appears to have been lost antemortem. Two small periapical abscesses are present on the buccal surface of the alveolus at the mandibular left second molar. Heavy dental attrition is present on the maxillary and mandibular teeth, excluding the maxillary right and left third molar, which show moderate dental wear.



**Figure 16.** Plan view and cross section of Feature 3464, an adult primary inhumation found in Stratum 505, Locus G, Las Capas, AZ AA:12:111 (ASM).

Cranial sex indicators, including the gracile supraorbital margin and glabella, indicate a possible female. The right sciatic notch appears ambiguous; however, absence of a pronounced preauricular sulcus supports a female sex estimation. The right femoral head diameter is 40.52 mm and the left is 40.92 mm, both within the female range (Bass 1995). The diaphyses and muscle attachments of the long bones are very gracile. This evidence supports the assessment of a female individual. The left and right auricular surfaces have dense surfaces without billowing and a loss of granularity (Phase V-VI), indicating an age range of 45-47 years (Lovejoy et al. 1985). Vertebral annular epiphyses are completely fused. Heavy tooth wear, although highly variable, indicate an age of 40-50 years. Minor degenerative joint lipping was observed on the articular margins of the tarsals. Mild osteophytosis was observed on the superior margin on the left side of the sacral base (stage b) (Ubelaker 1989).

*Internal Stratigraphy and Artifact Content.* The internal fill consisted of mildly hard, tan, sandy silt. The fill represented a simple redeposit, and contained a low density of artifacts that were not associated with the inhumation. Artifacts collected included 17 pieces of flaked stone debitage, a fragmentary biface, six fire-cracked rock fragments, and a single large mammal shaft fragment.

*Stratigraphic Relationships.* This primary inhumation originated within Stratum 505, which dates to the late San Pedro phase; it was buried by additional deposits from the same stratum, as well as by deposits of overlying strata. Several extramural pits that originated within Stratum 505 were located in close proximity to Feature 3464, mostly to the east and northwest. An inhumation of an infant, Feature 3306, was located approximately 6 m northwest of Feature 3464.

## STRATUM 504

### Locus D

#### Feature 14188

*General Description.* This primary inhumation was discovered during mechanical stripping (Figure 18). The remaining cultural overburden was subsequently removed by hand-excavation, exposing the remains. The burial pit was not clearly discernable, but may have been oval shaped in plan with a basin-shaped bottom. The burial area was defined by the limits of the remains, which measured 24 cm east-west by 21 cm north-south, and averaged 6 cm in depth. The elevation of the burial was 13.96-14.02 mbd.

The individual interred represented an infant of indeterminate sex. The individual was probably buried in a seated position, tightly flexed within the burial pit. The cranium was located at the northwestern end of the pit, facing east. The right arm was extended along the right side of the body, with the forearm lying over the pelvis. The left arm was lying along the side of the chest, tightly bent with the hand at the shoulder. The only element of the left leg present was the femur, which extended straight out. The entire right leg and the lower left leg are missing.

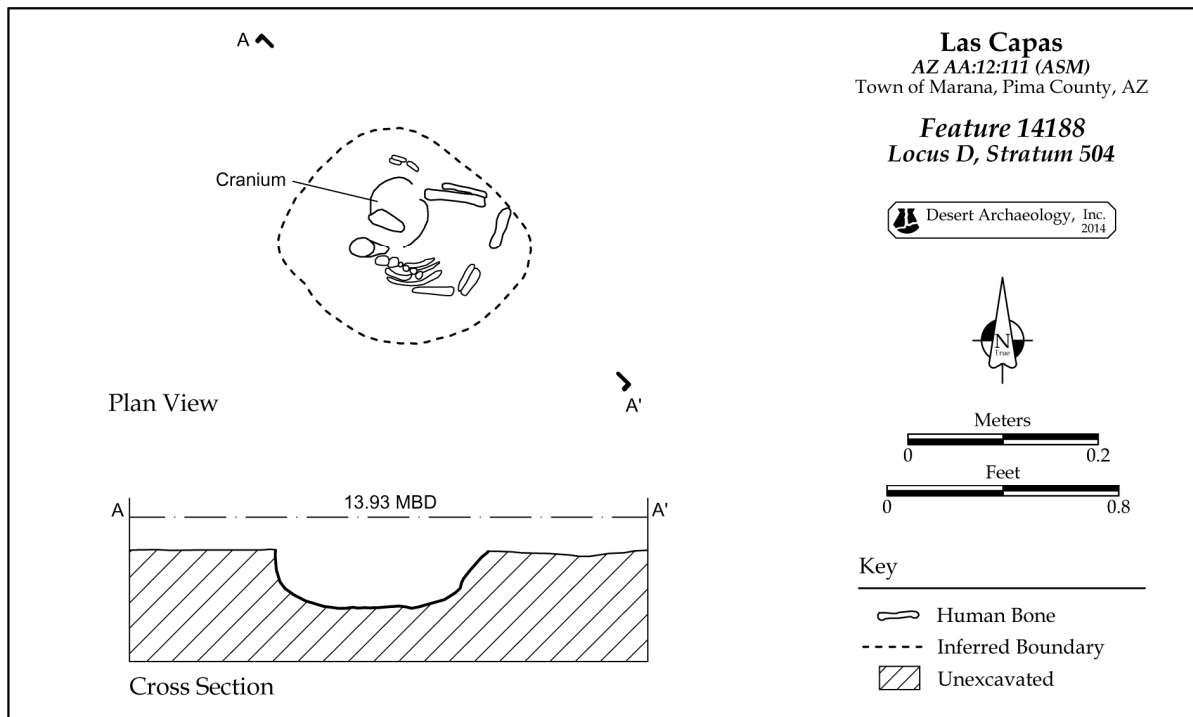
*Osteological Data.* Feature 14188 includes a partially complete fetal/newborn individual (8-10 lunar months old). All the elements are very fragmented, with cracking, breakage, brittleness, and adhering soil.

The cranium consists of a fragmentary frontal, parietal, occipital (basilar portion), and temporal bones. Two partial incisors are present. Seven sternal rib ends are present yet could not be sided. The vertebral column is represented by a partial first cervical, 3 cervical centrums, 9 partial thoracic vertebrae, 3 lumbar, and 2 sacral vertebrae. Partial right and left humeral diaphyses and distal epiphyses are present. The left radius, ulna, and femur diaphyses are present along with many unidentified appendicular fragments. The hands are represented by two complete metacarpals and seven phalanges.

The maxilla and mandible are not preserved. One deciduous maxillary central and one lateral incisor are present. Both are too damaged to give a development score, and only a small portion of the developing crown is present.

The basilar portion length and width and right petrous portion length indicate an age of 8-10 lunar months (Fazekas and Kósa 1978). No evidence of pathology is present.

*Internal Stratigraphy and Artifact Content.* The fill consisted of mostly a blocky textured, dark brown, silty clay with small amounts of charcoal flecks throughout and coarse reddish sand inclusions in the western portion of the feature. The fill was representative of deposits from a field berm. No artifacts were present.



**Figure 18.** Plan view and cross section of Feature 14188, a fetus or infant primary inhumation found in Stratum 504, Locus D, Las Capas, AZ AA:12:111 (ASM).

*Stratigraphic Relationships.* This feature originated within Stratum 504, which dates to the late San Pedro phase, it was buried by additional deposits of this stratum, as well as by deposits from overlying strata. This primary inhumation intruded upon a field berm. Feature 14188 was also located in close proximity to several extramural pit features that originated within the same stratum, just north of a dense cluster of houses-in-pits and extramural features.

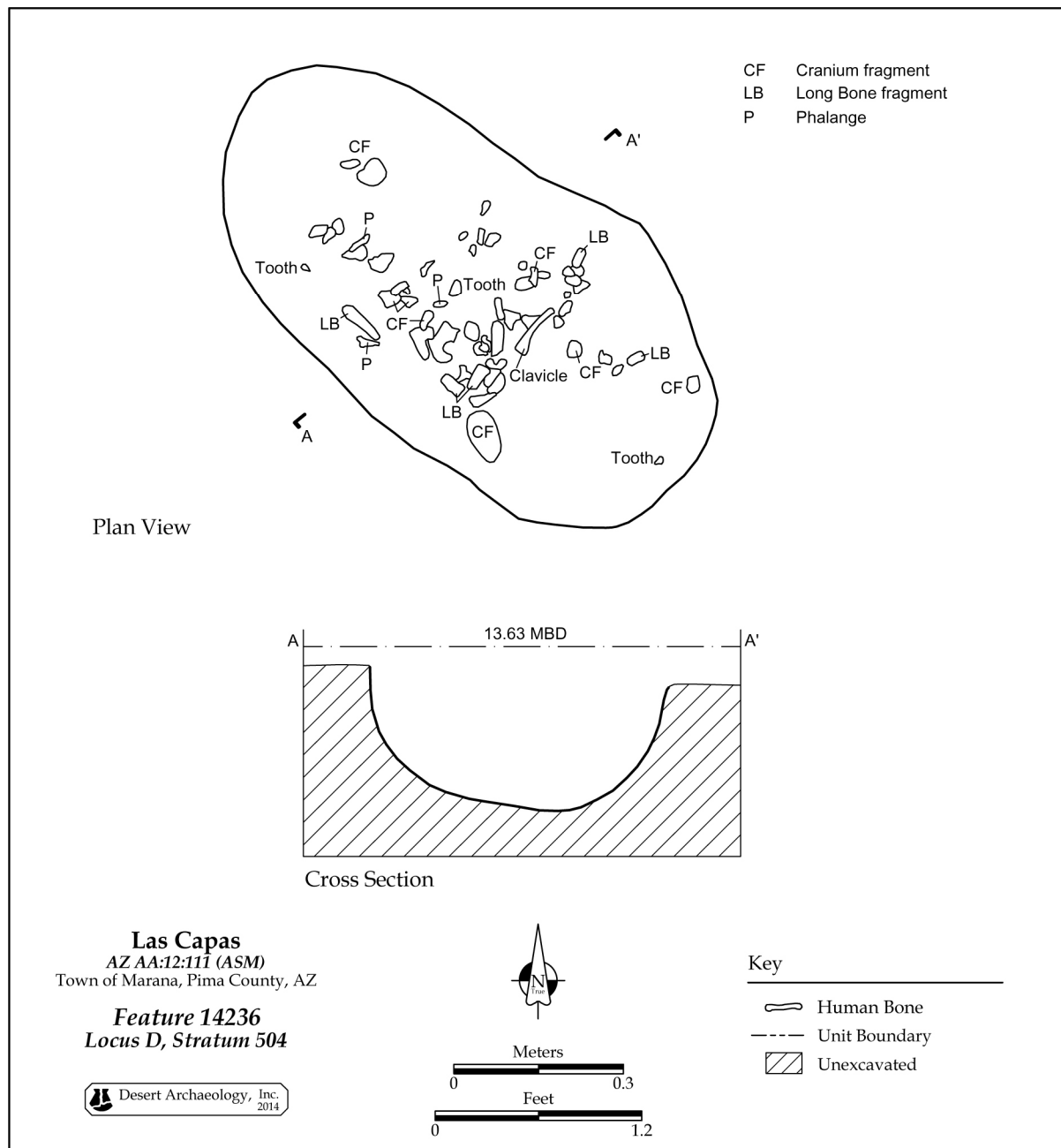
#### Feature 14236

*General Description.* This secondary cremation was found during mechanical stripping (Figure 19). A hand-excavated unit was placed around the cremation to expose the extent of the bone. The cremation was mostly contained within a small, slightly irregular to oval-shaped pit, although small amounts of human bone fragments were found outside the pit boundary. The basin-shaped pit measured 1.02 m northwest-southeast by 57 cm northwest-southeast and had a depth of 32 cm. The elevation of the pit was 13.60-13.92 mbd.

The bone ranged from black to blue-gray in color and varied in hardness. The bone was scattered and fragmented. While some elements were identifiable, they were neither articulated nor in anatomical position. Several areas with substantial rodent disturbance were noted within the pit.

*Osteological Data.* Feature 14236 is a secondary cremation representing a middle adult male (35-50 years old). The majority of the remains (90 percent) are black in color, and some 10 percent are calcined white. Five teeth are tan and unburned. Remains from all skeletal regions exhibit longitudinal cracking, yet many large, identifiable fragments are present.

Many cranial fragments are present, including fragments of the cranial vault, left petrous portion, left maxilla, and left palate. The right mandibular condyle and left ascending ramus are present. Few axial elements are preserved, including four rib fragments, the dens of the second cervical vertebra, and fragments of cervical, thoracic, and lumbar vertebrae. Appendicular elements include the acromial ends of the right and left clavicles. The left patella is present and appears to be very large. Fragments of all long bone diaphyses are present. One unsided first metatarsal, a partial talus, and a proximal foot phalanx represent the extremities. Many small fragments ( $n = 630$ ) are unidentified, and cannot be differentiated between axial and appendicular skeletal elements.



**Figure 19.** Plan view and cross section of Feature 14236, an adult secondary cremation found in Stratum 504, Locus D, Las Capas, AZ AA:12:111 (ASM).

A partial left maxilla and fragments of the mandible are present. Permanent maxillary teeth include the right canine, right lateral incisor, left canine, and right central incisor. Permanent mandibular teeth include the right first premolar, right canine, left canine, left lateral incisor, and an unsided central incisor. Five teeth are burned a charred black color, and five teeth are unburned and tan in color. Antemortem chipping on the maxillary right lateral incisor, mandibular left lateral incisor, and canine is present. Two enamel hypoplasias are observed on three of the four canines (the other was damaged postmortem). The maxillary left canine has two Type III enamel hypoplasias, classified as being composed of linear horizontal pits (Ortner, 2003). The mandibular left and right canines have two Type I enamel hypoplasias composed of linear horizontal grooves. The hypoplasias are the same color as the rest of the crown.



Moderate dental attrition is present on all the teeth (Lovejoy 1985). The maxillary right lateral incisor and left central incisor are prominently shoveled. The maxillary left canine exhibits double shoveling.

The right mandibular condyle and left patella are very large. Long bone shaft morphology and muscle attachments appear robust, suggesting the individual is a possible male. There is mild lipping on the posterior right mandibular condyle, and the teeth are fully developed but moderately worn, indicating a middle adult 35-50 years of age (Buikstra and Ubelaker 1994; Lovejoy 1985).

*Internal Stratigraphy and Artifact Content.* The internal fill of the pit contained two distinct strata. The upper 15 cm of fill consisted of hard, compacted, light brown silty clay with small pebble inclusions, which represented naturally accumulated field deposits. This stratum contained a low density of artifacts, including flaked stone, unburned faunal bone fragments, and fire-cracked rock.

The lower 10-15 cm of fill represented a simple redeposit of fine-textured, light reddish-brown sandy silt that contained lumps of burned sediment, as well as small charcoal flecks and small pieces of daub throughout. The burned sediment, daub, and charcoal were mottled, and appeared to have been deposited with the cremated bone rather than burned in situ. A small amount of freshwater snail shell fragments was found in the fill, which may have been associated with an adjacent distribution canal, Feature 19.

This stratum also contained a low density of artifacts, including flaked stone and unburned faunal bone fragments. In all, 11 pieces of animal bone and 22 pieces of flaked stone debitage were found within the fill of the pit, but these were not directly associated with the burial.

*Stratigraphic Relationships.* This cremation originated within Stratum 504, which dates to the late San Pedro phase. It was buried by additional deposits of this stratum, as well as by deposits of overlying strata. The burial was located within a dense cluster of extramural pit features that originated within the same stratum. The pit that contained the cremated remains intruded into the berm of Feature 19, a distribution canal that was in use within the Substrata 504.02-.01 interval. Feature 14236 also intruded into Feature 14240, a primary inhumation of a child.

#### *Feature 14240*

*General Description.* This primary inhumation was discovered during excavation of secondary cremation Feature 14236 (Figure 20). The cremation was located directly above the inhumation, and rodent disturbance caused the two features to be slightly intermixed.

The inhumation was contained within a shallow, oval-shaped pit. The pit measured 50 cm northwest-southeast by 45 cm northeast-southwest, and was approximately 8 cm in depth. The elevation of the burial was 13.90-14.06 mbd.

Although poorly preserved and fragmentary, the skeletal remains were determined to be from a child, aged 2-3 years. The body was in a flexed position sitting in the burial pit. The cranium was in the southeastern portion of the pit, with the face upright, facing northwest. The right humerus was positioned below the cranium, while the left arm lay across the ribs. The only leg elements identified appeared to be tightly flexed, with the knee pointing north. This inhumation was severely disturbed by rodent activity, including one burrow that significantly damaged the cranium. Two unburned adult teeth were found in the child's inhumation, suggesting a third individual may have been interred nearby.

*Osteological Data.* Feature 14240 is represented by a fragmentary child inhumation (2-3 years old). All bone elements are very fragmented and poorly preserved except the complete deciduous dentition. Cracking, breakage, brittleness, and exfoliation are present. The bones are encased in soil and broke apart and disintegrated upon removal. The bones are stained light brown from the adhering soil.

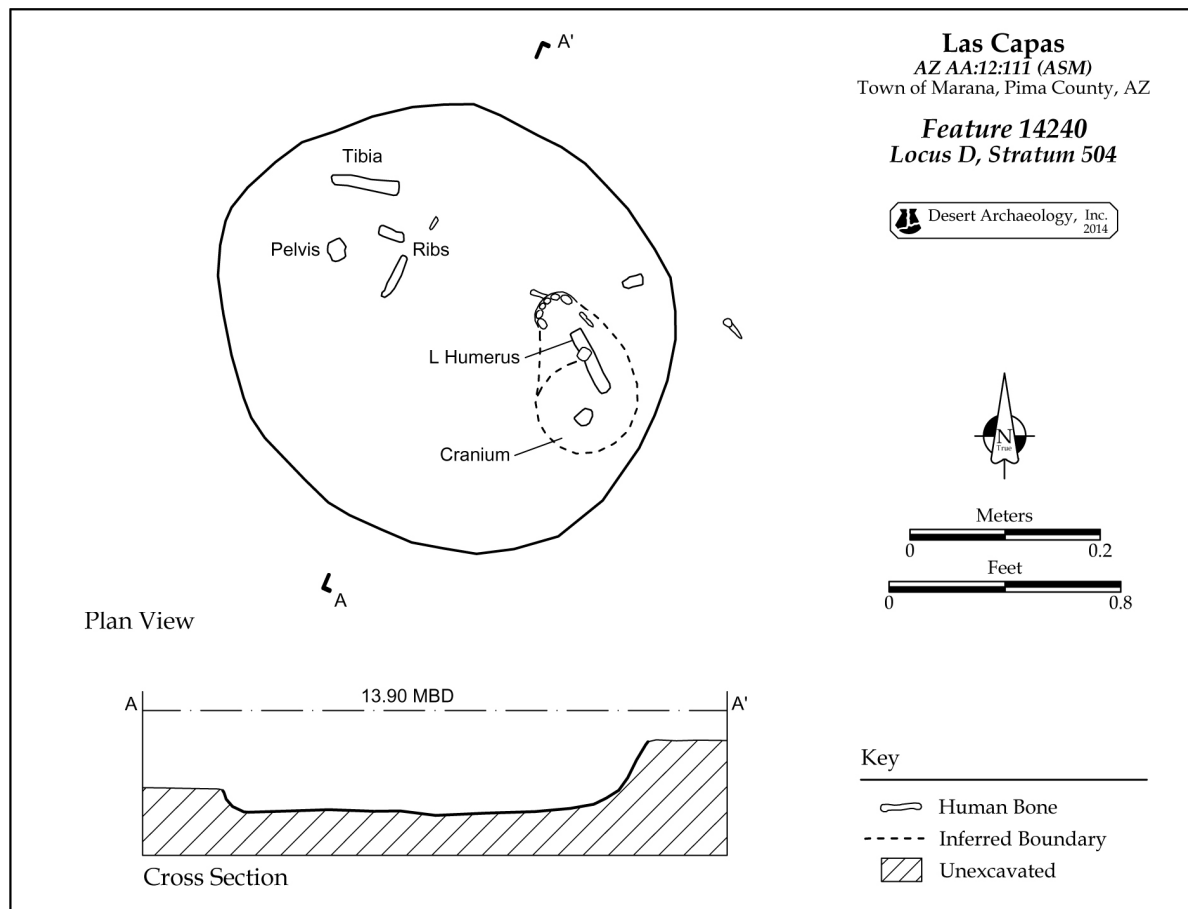
The cranium is represented by a partial unsided parietal and fragmentary right and left temporal bones. The left mandible is partially complete, and the right mandible is fragmentary. Six permanent teeth and a full set of deciduous dentition are present. One fragmentary rib and five unsided ribs are present. A partial second cervical vertebra is present. Partial portions of midshaft diaphyses of an unsided humerus, femur, tibia, and fibula are present. The hand extremities include four phalanges.

The partial right and fragmentary left mandible are present, including a full set of deciduous dentition and six permanent teeth. The mandibular deciduous incisors are fully developed. The deciduous first molars show very mild wear, and the second molars have fully developed crowns but were not yet in occlusion. Permanent maxillary teeth include a right first molar, right central incisor, left canine, and left first molar. Permanent mandibular teeth include right and left first molars. No pathology is present. The neural arches are not fused to the cervical centra. The mandibular symphysis is completely fused, which

happens around six months of age (Scheuer and Black 2004). Permanent maxillary molar crowns are half complete, the maxillary right central incisor crown is half complete, and the mandibular first molar is 75 percent complete, indicating an individual 3-4 years of age (Ubelaker 1989). No pathology is observed.

*Internal Stratigraphy and Artifact Content.* The pit in which the skeletal remains were found was filled with uniform, brown sandy silt. A small number of artifacts were found within the fill, including 10 pieces of flaked stone debitage and eight unburned faunal bone fragments. These artifacts were not considered to be associated with the burial, but rather, were intermixed with the redeposited sediments that buried the remains.

*Stratigraphic Relationships.* The inhumation originated within Stratum 504, which dates to the late San Pedro phase. It was buried by additional deposits of the same stratum. The burial was located among a dense cluster of extramural pit features. The burial pit intruded into the berm of Feature 19, a distribution canal that was in use within the Substrata 504.02-.01 interval. Feature 14236, the intrusive secondary cremation, also originated in Stratum 504.

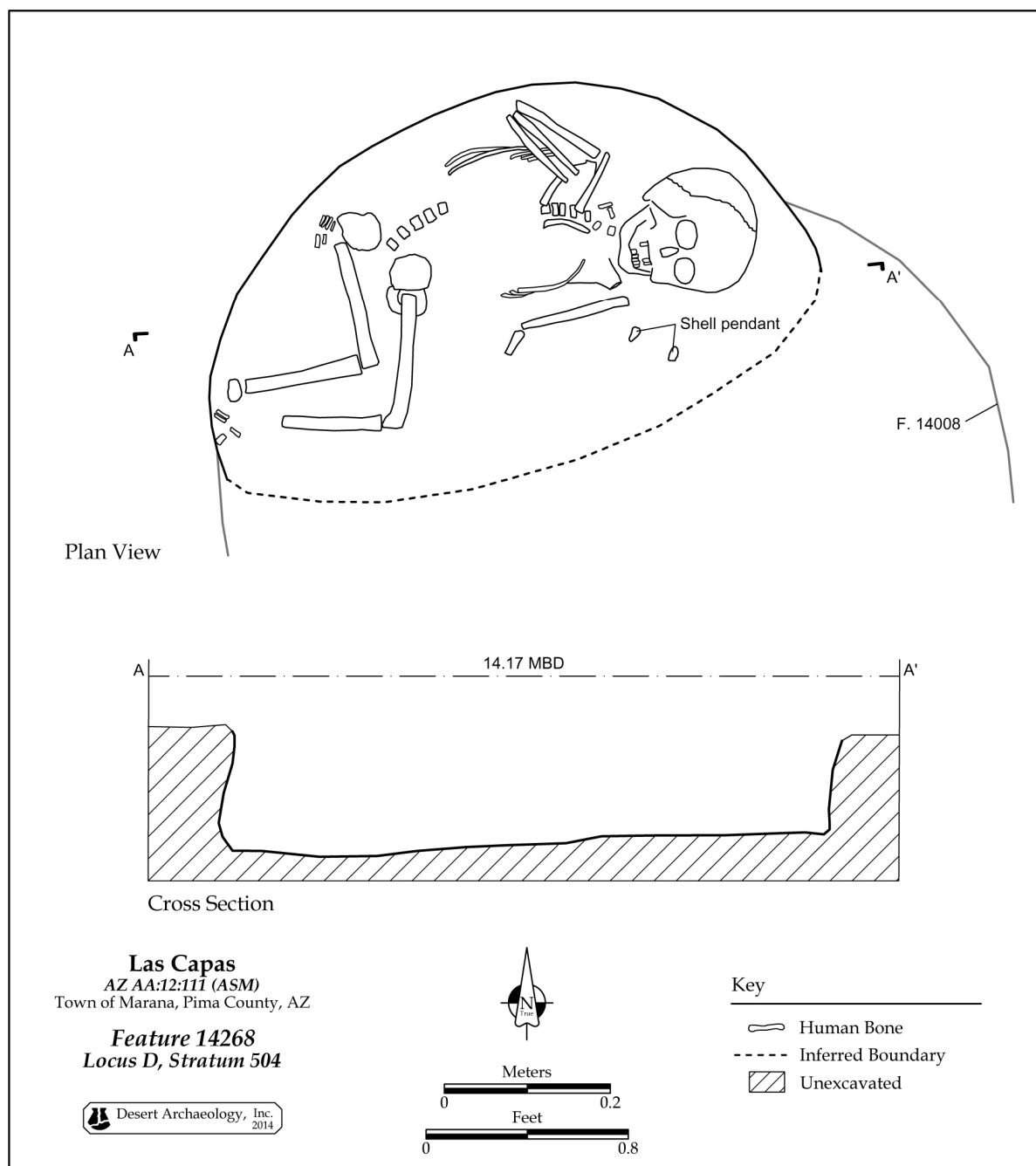


**Figure 20.** Plan view and cross section of Feature 14240, a child primary inhumation found in Stratum 504, Locus D, Las Capas, AZ AA:12:111 (ASM).

#### *Feature 14268*

*General Description.* This primary inhumation was discovered during hand-excavation of a bell-shaped pit, Feature 14008 (Figure 21). The bell-shaped pit may have been modified before the remains were interred, as the northern edge of the pit walls appeared to have been extended toward the northeast. The bell-shaped pit measured 50 cm northeast-southwest by 45 cm northwest-southeast at the stripped surface, with basal dimensions of 1.03 m northeast-southwest by 95 cm northwest-southeast, and a depth of 73 cm. The burial ranged in elevation from 14.21-14.35 mbd.

The skeletal remains were nearly intact and were well-preserved. The individual interred was a child of indeterminate sex, aged 2.5-4.5 years. The body lay with the head at the eastern end of the grave and its pelvis at the western end. The cranium faced upward, the face looking slight to the south. The right upper arm lay along the upper portion of the chest, was bent tightly at the elbow, and the hand would have been on top of the upper right ribs. The left arm was extended along the left side of the chest and was apparently bent at the elbow, although most of the forearm was missing. The legs were loosely flexed and lay next to each other, with the knees pointing to the south. The feet were against the western side of the pit. Insect disturbance was noted throughout the fill of the pit.



**Figure 21.** Plan view and cross section of Feature 14268, a child primary inhumation found in Stratum 504, Locus D, Las Capas, AZ AA:12:111 (ASM).

*Osteological Data.* Feature 14268 includes a complete child inhumation (2.5-4.5 years old). Some cracking and breakage is present, especially along the long bone epiphyses. Ten permanent teeth are present, and a full set of deciduous dentition is present and well-preserved. Soil is adhering to most of the elements. No pathology is observed.

The cranium vault is completely represented but in many fragments. Partial left and right maxilla sides are present. The sphenoid and inferior nasal concha, ethmoid, and vomer are complete. A partial right palatine and hyoid are present. The mandible is complete. A full set of deciduous teeth and 10 permanent teeth are present. Cervical vertebrae are complete. Thoracic and lumbar vertebrae are partially present. Seven partial left ribs and five partial right ribs are present. Partial right and left scapulae, clavicles, and os coxae are present. The right and left humerus are complete except the fragmentary epiphyses. The distal end of the left radius and complete diaphyses of the right radius are present. A partial left ulna and mostly complete right ulna are present. Left and right femoral diaphyses are complete, with fragmentary epiphyses. The left tibia is fragmentary, and the right proximal tibia is complete with a fragmentary distal epiphysis. Both fibulae have complete midshafts with broken epiphyses. Hand elements include four metacarpals and 12 phalanges; foot elements include five metatarsals and four phalanges.

The right and left maxillae are partially complete, and the mandible is complete. A full set of deciduous mandibular teeth and 10 permanent teeth is present. Most of the deciduous teeth are near fully or fully developed, with minimal dental wear. The permanent teeth are either loose or still in their alveolar crypts; none are fully erupted or in occlusion. No pathology is observed. The permanent left central and lateral incisors exhibited significant shoveling.

Based on the fully developed crowns of the maxillary right first molar and the mandibular left first molar and various stages of development of other permanent and deciduous teeth, the individual is estimated to be 2.5-4.5 years of age (Ubelaker 1989). Long bone epiphyses are not fused to diaphyses and central neural arches have fused together but not to the centra, supporting this age estimation (Scheuer and Black 2004). No pathology is observed.

*Internal Stratigraphy and Artifact Content.* The fill within the bell-shaped pit was stratified and composed of three distinct layers. The upper 10 cm of fill consisted of compact, dark brown silty clay, which represented natural alluvial deposits. The middle stratum, which comprised the next 55-60 cm of fill, consisted of pale grayish-brown sandy silt, with a small amount of charcoal flecking. The inhumation was found within the lower portion of this stratum, which represented a simple redeposit. The remaining 2-4 cm of fill, underlying the inhumation, consisted of loose, dark brown silty clay.

A cut-shell pendant was found adjacent to the left shoulder of the interred individual, and was collected as a burial assemblage. One piece of flaked stone debitage was found within the fill of the pit, but was not associated with the burial.

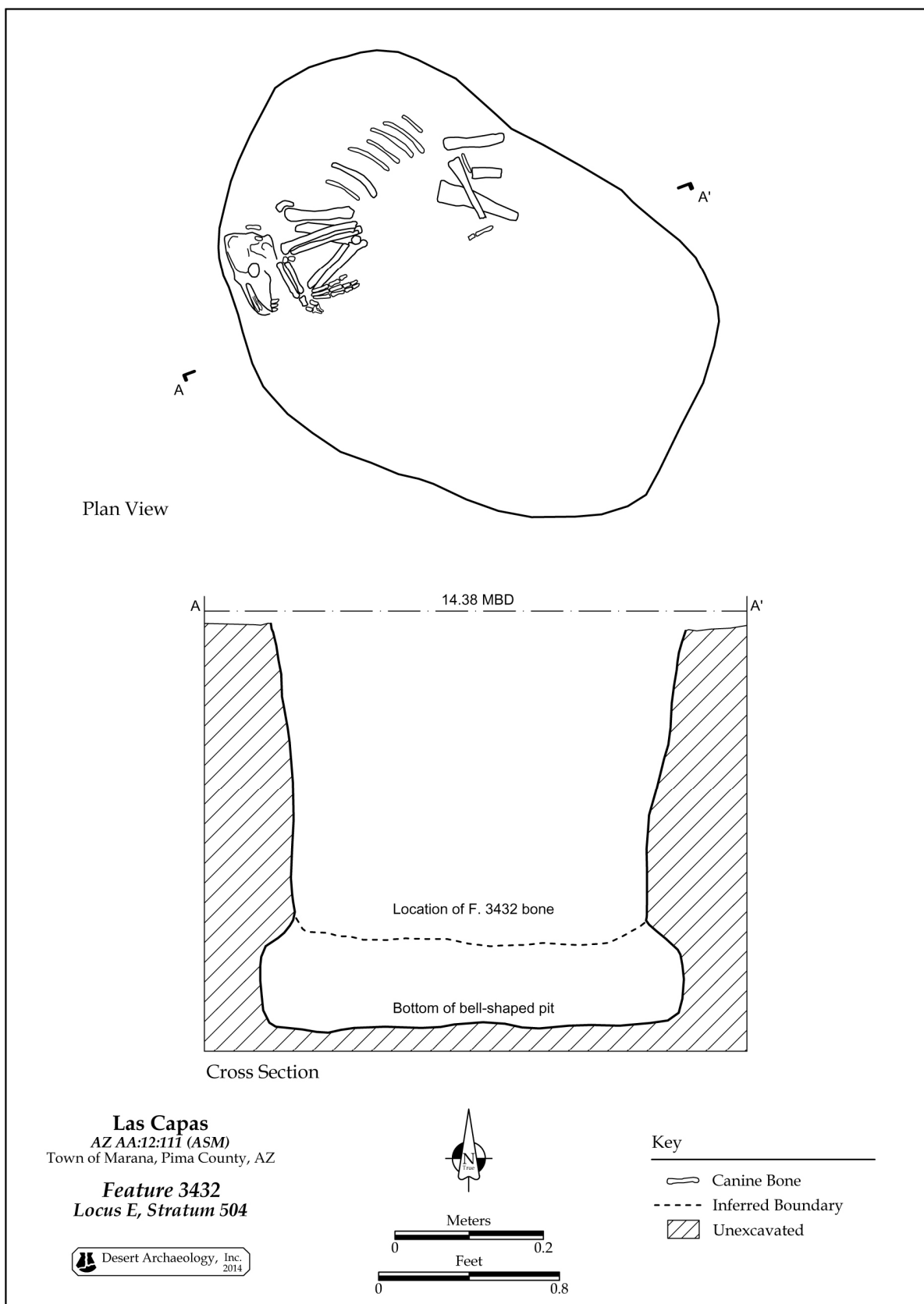
*Stratigraphic Relationships.* The pit in which the inhumation was found originated in Stratum 504, which dates to the late San Pedro phase; it was buried by additional deposits of this stratum, as well as by deposits from subsequent overlying strata. Only a few features in close proximity to Feature 14268, including a small number of extramural pits that originated within Stratum 504.

## **Locus E**

### *Feature 3432*

*General Description.* This probable domesticated dog (*Canis cf. lupus familiaris*) inhumation was found during excavation of a bell-shaped pit (Figure 22). The pit measured 1.04 m east-west by 86 cm north-south at the stripped surface, with basal measurements of 1.14 m east-west by 96 cm north-south. The elevation of the bell-shaped pit was 14.46-15.32 mbd. This feature was likely used for storage prior to the interment of the canid and subsequently used for refuse disposal.

The canid rested on its right side in a semi-flexed position, with the head located in the western portion of the pit and the pelvis toward the northeastern part of the pit. The skull lay slightly on its right side, with the face pointing to the south. The front legs were flexed, with the left foot positioned to the left of the right foot. The rear legs were flexed, and the left leg apparently lay over the right leg. The skeletal remains measured 64 cm east-west by 35 cm north-south; they were nearly complete, but were poorly preserved and fragmented upon excavation.



**Figure 22.** Plan view and cross section of Feature 3432, a canid burial found in Stratum 504, Locus E, Las Capas, AZ AA:12:111 (ASM).

*Osteological Data.* This probable domesticated dog was a medium-sized adult. Approximately 50-75 percent of the skeleton was present.

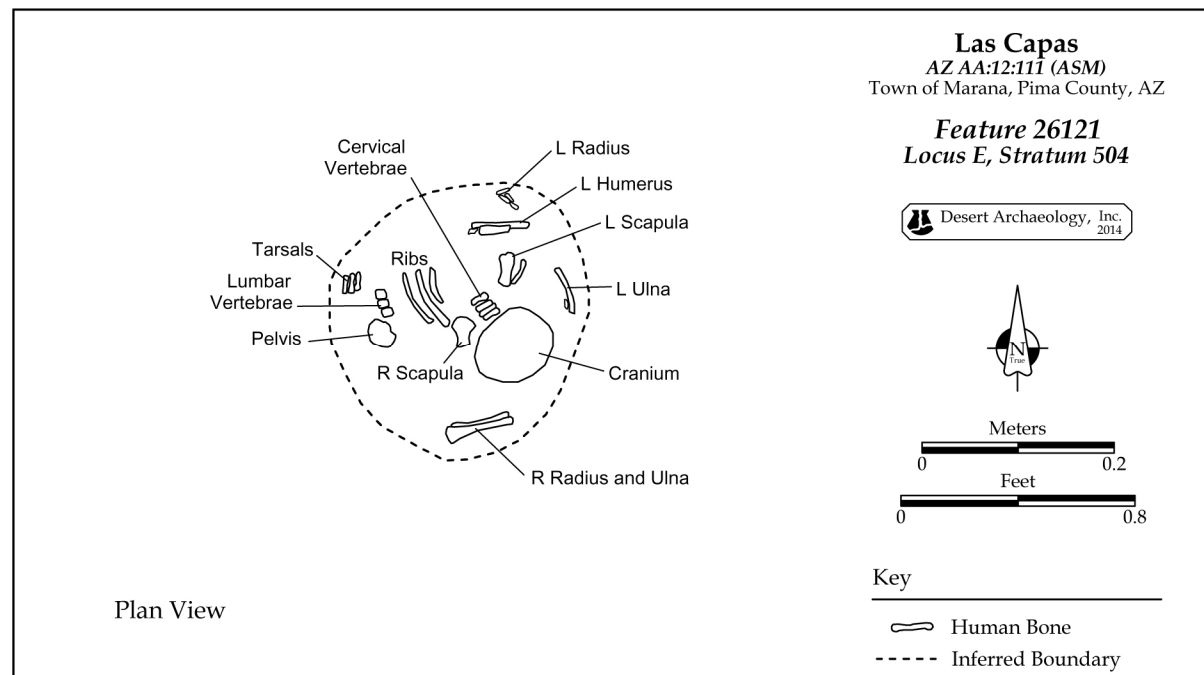
*Internal Stratigraphy and Artifact Content.* The fill within the pit was stratified. The top 50-55 cm of fill consisted of blocky textured, brown, sandy clay loam, with ashy lenses and charcoal inclusions, which may have represented a simple redeposit mixed with hearth clean-out. The canid remains were discovered approximately 55 cm below the top of the pit. The fill directly above the bones was ashy with small charcoal inclusions. Approximately 25 cm of fill remained below the burial, which consisted of reddish-brown sandy loam, with a small amount of ash and charcoal inclusions. A low density of artifacts was found within the fill, but the artifacts were not associated with the burial. Artifacts consisted of two pieces of flaked stone (a core and a piece of debitage), six non-canid faunal bone fragments, and a single piece of fire-cracked ground stone.

*Stratigraphic Relationships.* The pit in which the burial was found originated in Stratum 504, which dates to the late San Pedro phase. It was buried by additional deposits of this stratum, as well as by deposits of overlying strata. The pit intruded into a house-in-pit, Feature 3407, which originated within the same stratum. Feature 3432 also intruded into the northern portion of Feature 3157, a bell-shaped pit that originated in Stratum 504. The surrounding area was dense with extramural pit features that originated in Stratum 504, and a large house-in-pit, Feature 3155, was located just northwest of the burial.

#### Feature 26121

*General Description.* Feature 26121 was an infant inhumation located inside a larger bell-shaped pit, Feature 26071 (Figure 23). The burial area measured 55 cm in length by 53 cm in width, and was only 5 cm deep. It was located in the eastern half of the bell-shaped pit. No formal pit outlines could be discerned for the burial. The bone was at elevation 14.84-14.89 mbd within the pit.

The infant lay face down and flexed. The cranium was to the southeast and the pelvis to the west. The face pointed downward. The upper arms extended along the chest, and were bent tightly at the elbow, with the hands positioned on either side of the skull. The left hand was further away from the skull than the right hand. The legs were flexed, with the knees drawn up toward the ribcage. The left foot was close to the pelvis; the right foot was missing. The bone was in poor condition.



**Figure 23.** Plan view of Feature 26121, an infant primary inhumation found in Stratum 504, Locus E, Las Capas, AZ AA:12:111 (ASM).

*Osteological Data.* Feature 26121 was a partially complete skeleton of a newborn infant. The elements are in good condition but partially fragmented. Although fragmented, elements from several regions of the body are represented. The deposit contained approximately 84 fragments of bone. The cranium was represented by petrous portions, the left pars lateralis, the left greater wing of the sphenoid, and roughly 40 fragments from the cranial vault. Additionally, the partially formed crowns of the upper right central and lateral incisors are present. The remaining axial skeleton consists of 16 vertebral arch fragments, 18 vertebral body segments, and 17 rib fragments. The upper appendicular skeleton consists of both clavicles (largely complete) and the right scapula, both radii and ulnae, and much of the left humerus. The lower appendicular skeleton was only represented by both ilia and the left ischium and pubis. The extremities include two small hand digital segments and seven foot digital segments.

This individual is estimated to be a newborn infant (0-3 months old), based on bone size and dental development (Ubelaker 1989). All the remains are consistent with a single individual, but the lower limbs are missing.

*Internal Stratigraphy and Artifact Content.* The soil around the burial was a moderately compact, gray-brown fine sandy silt, with a slightly higher clay content close to the bones. A small amount of charcoal was present. No artifacts were recovered with this burial.

*Stratigraphic Relationships.* Feature 26121 originated in Stratum 504, which dates to the late San Pedro phase. This was the only inhumation recovered in the area.

## STRATUM 504.01

### Locus B

#### Feature 7059

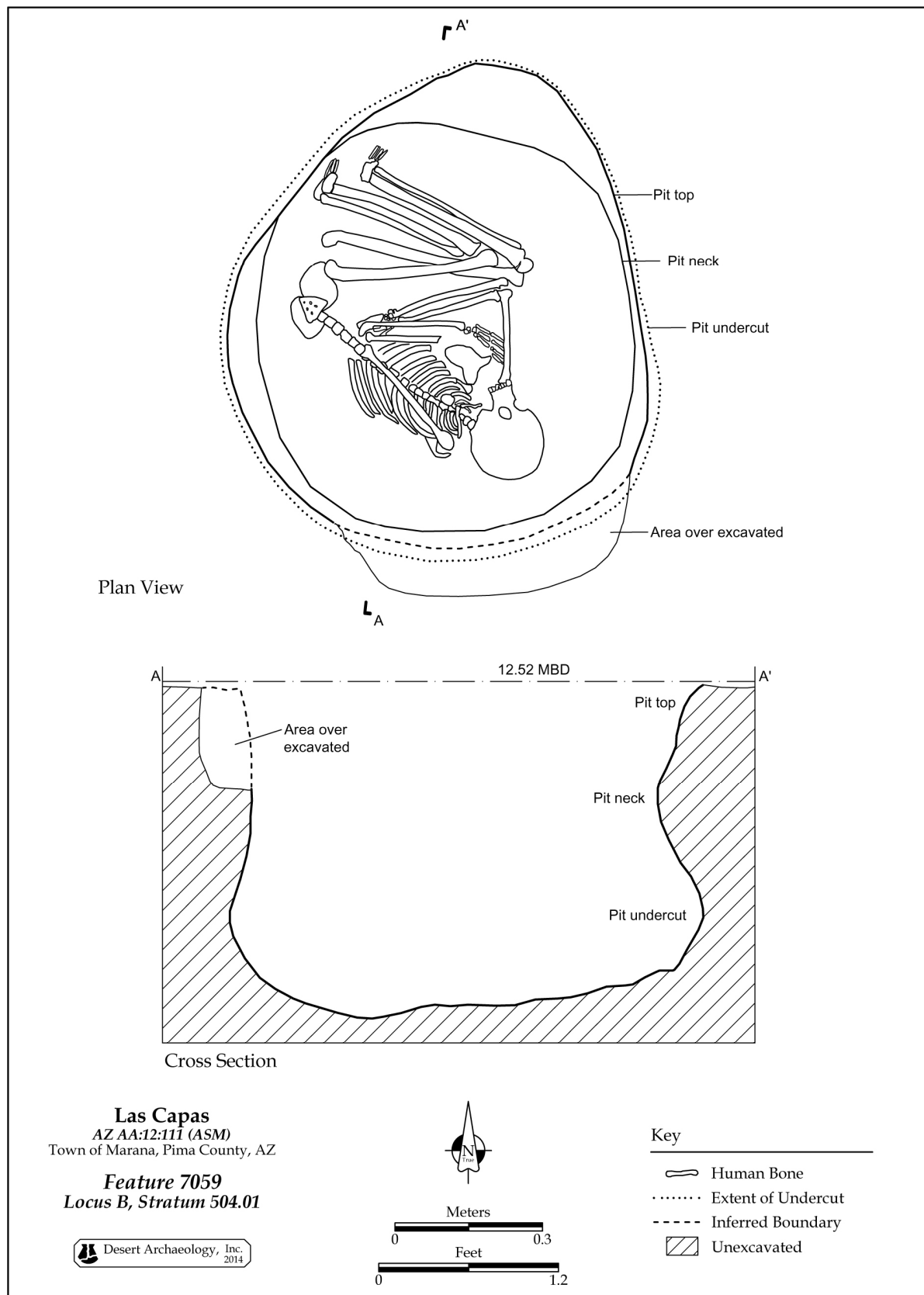
*General Description.* This primary inhumation was discovered during mechanical stripping (Figure 24). The remaining fill was subsequently removed by hand-excavation, exposing the remains. The burial pit was bell shaped, averaging 67 cm in depth. The pit measured 98 cm north-south by 83 cm east-west at the stripped surface, constricted to a neck diameter of 84 cm, then expanded to a basal measurement of 1.09 m north-south by 90 cm east-west. The elevation of the pit was 12.53-13.20 mbd. The burial pit may have originally functioned as a storage pit before being used to inter the burial.

The individual interred within the pit represented a young adult female. The skeletal remains were nearly complete, well-preserved, and articulated. The individual was lying on their right side at the base of the pit in a tightly flexed position. The cranium was orientated to the southeast, with the face pointing to the north and the pelvis to the northwest. The arms were bent, with the right humerus extending outward from the body, and the right forearm lying in the pelvic area. The left humerus lay on top of the ribcage, with the lower arm bent at the elbow and the hand lying in the vicinity of the middle of the right humerus. Both legs were bent near the chest area, with the right leg lying on top of the left leg. Due to the confinement of the bell-shaped pit, the cranium and portion of the upper torso were propped slightly upright against the pit side wall, and the left foot was bent backward against the wall of the pit.

*Osteological Data.* Feature 7059 represents a complete young adult female inhumation (20-23 years old). Condition of the remains involves cracking, breakage, exfoliation, staining, and adhering soil. Ochre staining is present on some rib fragments.

The cranium is fragmented with some vault and maxilla fragments present. The mandible is complete. The left wing of the hyoid is also preserved. A complete set of left ribs and 10 partial right ribs are present. A complete manubrium is preserved. All cervical and thoracic vertebrae are complete, but only one lumbar vertebra is present. Fragmentary left and right scapulae, complete clavicles, fragmentary left and right os coxae, and complete right and left patellae are present. All long bone elements are present, yet many of the epiphyses are missing or in fragmentary condition. Three carpals, 2 metacarpals, and 23 phalanges represent the hand elements. Eight tarsals, 8 metatarsals, and 9 phalanges represent the foot elements.

The right and left maxilla are fragmentary, and the mandible is complete. A full set of maxillary and mandibular teeth are present. Moderate dental wear is present on the first molars, and mild dental wear is



**Figure 24.** Plan view and cross section of Feature 7059, an adult primary inhumation found in Substratum 504.01, Locus B, Las Capas, AZ AA:12:111 (ASM).



present on the second molars. The third molars are in occlusion, but with only minimal dental wear. The third molar roots are full length, but the apex is not yet closed. The maxillary right second molar has a large carious lesion that destroyed much of the crown. No carious lesions or abscesses are present on the mandibular teeth, although the third molars appear to be impacted diagonally against the second molars. Prominent shoveling and mild double shoveling is present on the maxillary and mandibular incisors.

The wide right sciatic notch and right (37.8 mm) and left (38.2 mm) femoral head diameter are within the female range (Bass 1995). The right humeral head diameter (37.0 mm) is also within the female range (Bass 1995). Interestingly, the deltoid tuberosities are very robust, with significant torsion of both humeral diaphyses. A pronounced costoclavicular ligament and pectoralis muscle attachment ridge on the medial right clavicle is also observed, which may suggest repetitive activities including elevating the upper arms (Saladin 2008). The sternal epiphyses of the clavicles are not fused. The superior and inferior thoracic annular epiphyses are minimally fused. The first and second sacral vertebra and right ischial tuberosity are not fused, and the iliac crest exhibits significant fusion. These indicators, along with moderate dental wear, suggest 20-23 years of age at death.

The costal groove of a few ribs is stained orange-red, possibly indicating the postmortem application of ochre (red hematite). Vertebrae are free of osteophytes, and there is no evidence of degenerative joint disease or other pathology. Stature is calculated from the maximum length of the right tibia (314 mm), indicating the individual was 145.00 cm  $\pm$  5.95 cm, or 4 feet, 9 inches in height (Auerbach and Ruff 2010).

*Internal Stratigraphy and Artifact Content.* The internal fill consisted of a dark brown, mildly hard, blocky textured silty clay that contained a small amount of charcoal flecks throughout and was representative of simple redeposit.

Artifact density within the fill was low and consisted of four pieces of faunal bone, seven pieces of flaked stone debitage, a piece of worked calcite, a broken crystal, an unworked shell fragment, and a mineral sample. These artifacts may not have been associated with the inhumation. Upon first exposure, a faint purple pigmentation was observed on the pit base and on the skeletal remains, but this quickly dissipated upon exposure. This may have been representative of ochre associated with the inhumation.

*Stratigraphic Relationships.* The bell-shaped pit that housed the remains originated within Substratum 504.01, which dates to the late San Pedro phase. It was buried by additional deposits of this substratum, as well as by deposits from overlying strata. Only a few extramural pit features that originated within Substratum 504.01 were in close proximity to Feature 7059, and were all located north of the inhumation.

## STRATUM 504.02

### Locus A

#### Feature 4159

*General Description.* This domestic dog (*Canis lupus familiaris*) burial was discovered during mechanical stripping. The incomplete and fragmented canid skeletal remains were displaced in the process of mechanical stripping. Due to that disturbance, neither complete dimensions nor interment orientation could be identified. The elevation of the remains was 12.99 mbd.

*Osteological Data.* This domestic dog was a medium-to-large-sized adult. Less than 25 percent of the skeleton was preserved.

*Internal Stratigraphy and Artifact Content.* Fill was completely removed during mechanical stripping, and no fill remained. The bone fragments were scattered on the stripped surface of Substratum 504.02, which was a brown, mildly hard silty clay. No artifacts were present.

*Stratigraphic Relationships.* Based on elevation, this feature likely originated within Substratum 504.02, which dates to the late San Pedro phase; it was buried by additional deposits of this substratum, and by deposits from overlying strata. Very few extramural pit features that originated within Substratum 504.02 were located in close proximity to this feature.

**Locus C***Feature 12021*

*General Description.* This primary inhumation was discovered during mechanical stripping (Figure 25). The remaining fill was subsequently removed by hand-excavation, exposing the remains. The burial pit was oval in shape, with a basin shaped-profile. The informally prepared pit measured 1.30 m north-south by 1.00 m east-west and averaged 11 cm in depth. The elevation of the inhumation was 12.51-12.62 mbd.

The individual was an adult male. The skeleton was nearly complete and articulated, although the bones were brittle and friable. The upper portion of the body was lying on the stomach, with the cranium orientated to the south, lying slightly on its left side, and the face pointing to the west. The pelvis was on the north side of the grave. The right arm was tightly flexed and paralleled the side of the chest, with the hand beneath the shoulder. The left humerus extended behind the body at a 45-degree angle, with the elbow bent so that the hand lay below the left lower ribcage. Both legs were tightly flexed, with the right leg on top of the upper portion of the left leg. The knees pointed to the southwest. The right foot was behind the left foot, both on their left sides. Many of the remains showed signs of having been coated in red ochre.

*Osteological Data.* Feature 12021 is a complete middle-old adult male (35-55 years old). Cracking, breakage, brittleness, and exfoliation are present. The remains have surface root damage, staining, and adhering soil. Longitudinal splitting is present down the long bone diaphyses. Small charcoal inclusions were found in the soil matrix associated with the remains.

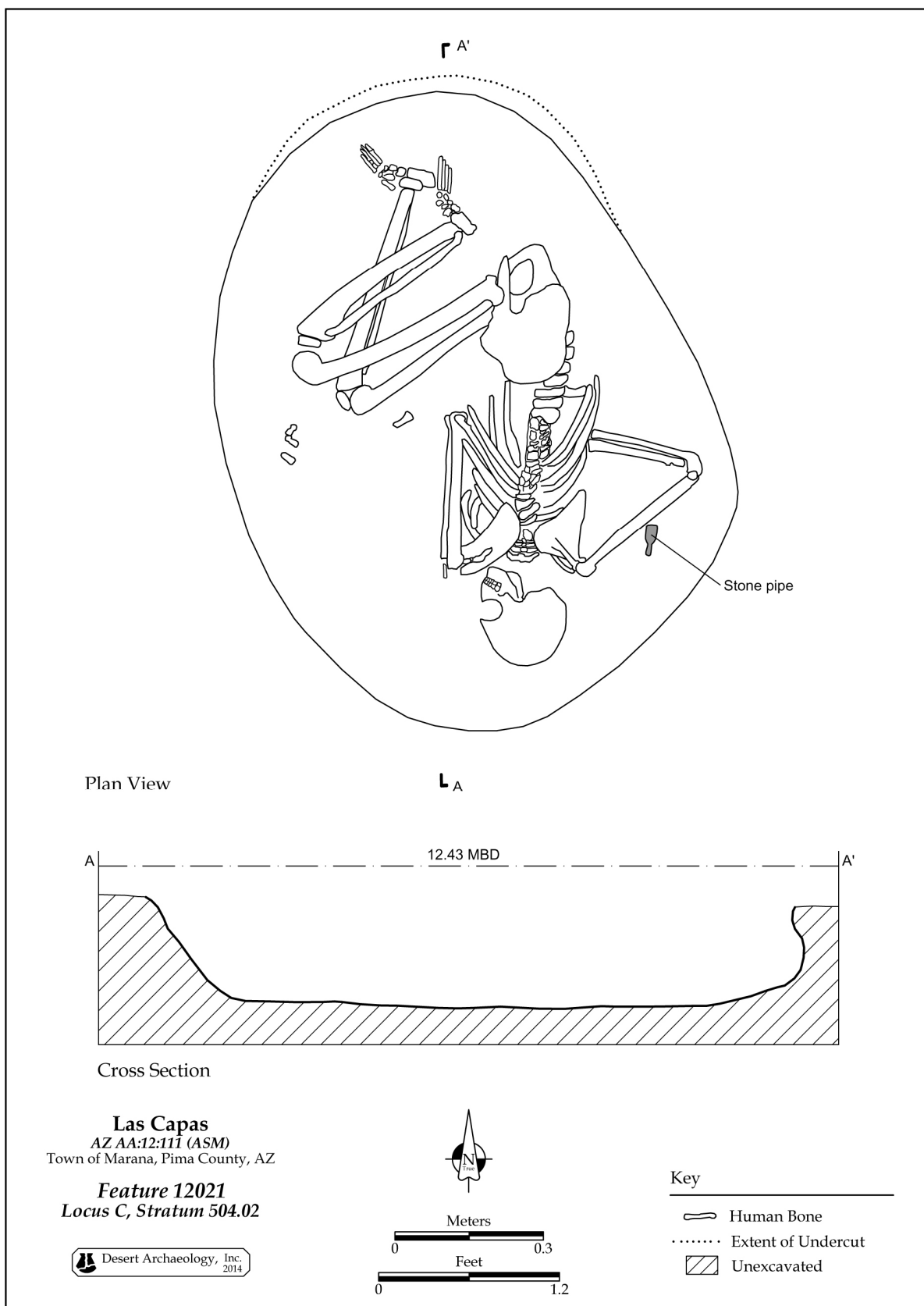
The cranium is partially present, with complete left but fragmented right frontal, partial parietals, and complete temporal and occipital bones. Zygomatics and the left maxilla are complete, and the right maxilla is partially complete. The palatine and sphenoid are complete. The left mandible is fragmented, and the right mandible is partially complete. The cervical vertebrae are not well-preserved, with only a fragment of the first cervical present. Thoracic vertebrae are completely represented, and lumbar vertebrae are partially represented. Many fragments of left and right ribs are present, but are of an unidentifiable number. The left and right scapulae are both fragmented. A partial left clavicle and complete right clavicle are present. Both os coxae are in fragmentary condition. The elements of the right upper limb are more complete and better preserved than the left. A complete left femur is present, and the right femur is partially present, with the proximal end broken postmortem. Right and left tibial diaphyses and distal ends are complete, with damaged proximal ends. Five carpals, 6 metacarpals, and 13 phalanges represent primarily the left hand, but also one finger from the right hand. Seven tarsals, 8 metatarsals, 2 phalanges, and 1 sesmoid represent the right and left foot.

The left maxilla is complete, and the right is partially complete. All permanent teeth are present except the left mandibular third molar, which is congenitally absent. Moderate dental attrition is observed on the incisors, canines, and second and third molars. Heavy dental wear is observed on the maxillary premolars and first molars. Occlusal surface carious lesions are present on the maxillary left first molar. Periapical abscesses are present on the buccal surface of the alveolar bone associated with these teeth. Antemortem chipping is observed on the right maxillary first molar, left premolars and molars, and the right mandibular central incisor. Severe periodontal resorption is present on the left maxillary alveolar crest. Heavy calculus is present on the central maxillary incisors and on the mandibular left incisors and canines.

Robust cranial traits, including nuchal crest, mastoid processes, and supraorbital margin, are indicative of a male individual. Robust deltoid tuberosities and anterior tibial crests also support a male sex assessment. Age is based on moderate to heavy dental attrition and mild osteophytic growth on the articular margins of the thoracic and 5th lumbar vertebrae, indicating a middle-older adult individual (35-55 years).

Mild spinal osteophytosis (Stage I-II) is present on the superior and inferior margins of the 10th-12th thoracic vertebrae. Moderate spinal osteophytosis (Stage III-IV) is present on the superior margin of the 5th lumbar vertebra, with mild osteophytosis on the inferior margin (Ubelaker 1989). There is also moderate osteophytic growth on the articular surfaces of the vertebral ends of two right ribs.

The right proximal ulna shows small deposits of bone on the articular surface. A small osteophytic growth was also observed on the midshaft interosseous crest of the right fibula.



**Figure 25.** Plan view and cross section of Feature 12021, an adult primary inhumation found in Substratum 504.02, Locus C, Las Capas, AZ AA:12:111 (ASM).

*Internal Stratigraphy and Artifact Content.* The fill represented a simple redeposit, and consisted of a dark brown, mildly hard silty clay that contained small amounts of unconsolidated ash and large amounts of small charcoal flecks. Fifteen pieces of fire-cracked rock, as well as a small amount of red ochre, was distributed throughout the fill. A single stone pipe was present directly near the right arm, and was likely associated with the remains. No other artifacts were present within the burial pit.

*Stratigraphic Relationships.* This feature originated within Substratum 504.02, which dates to the late San Pedro phase; it was buried by additional deposits of this substratum, as well as by deposits from overlying strata. This primary inhumation is located in close proximity to several extramural pit features originating within Substratum 504.02, as well as Feature 12036, a canid burial located approximately 4.5 m to the west.

#### *Feature 12036*

*General Description.* This dog (*Canis lupus familiaris*) burial was discovered during mechanical trenching (Figure 26). The remaining cultural overburden was subsequently removed by hand-excavation, exposing the extent of the burial.

The bell-shaped burial pit averaged 41 cm in depth, and measured 77 cm east-west by an estimated 60 cm north-south on the stripped surface, with a basal diameter of 87 cm. The elevation of the pit ranged from 12.54-12.95 mbd. This pit may have had a primary use of storage before it was used for burial purposes. The canid remains were disarticulated, incomplete and clustered in the western portion of the pit, approximately 5- 6 cm above the pit base. Bone preservation was poor, and the remains recovered were extremely fragile.

*Osteological Data.* The domestic dog was a medium- to large-sized adult. Less than 25 percent of the skeleton was present.

*Internal Stratigraphy and Artifact Content.* The internal fill represented a simple redeposit, and consisted of a brown, mildly hard silt that contained small amounts of charcoal flecks and fire-cracked rock throughout. Artifact density was low, and consisted of two pieces of flaked stone debitage and one piece of ground stone, none of which appeared to be associated with the remains.

*Stratigraphic Relationships.* Feature 12036 originated within Substratum 504.02, which dates to the late San Pedro phase. It was buried by additional deposits of this substratum, as well as by deposits from overlying strata. Feature 12037, a bell-shaped pit, partially intruded on the eastern portion of Feature 12036. Feature 12036 was located in close proximity to several additional extramural pit features within the same substratum, as well as to Feature 12021, a primary inhumation located approximately 4.5 m to the east.

#### *Feature 12105*

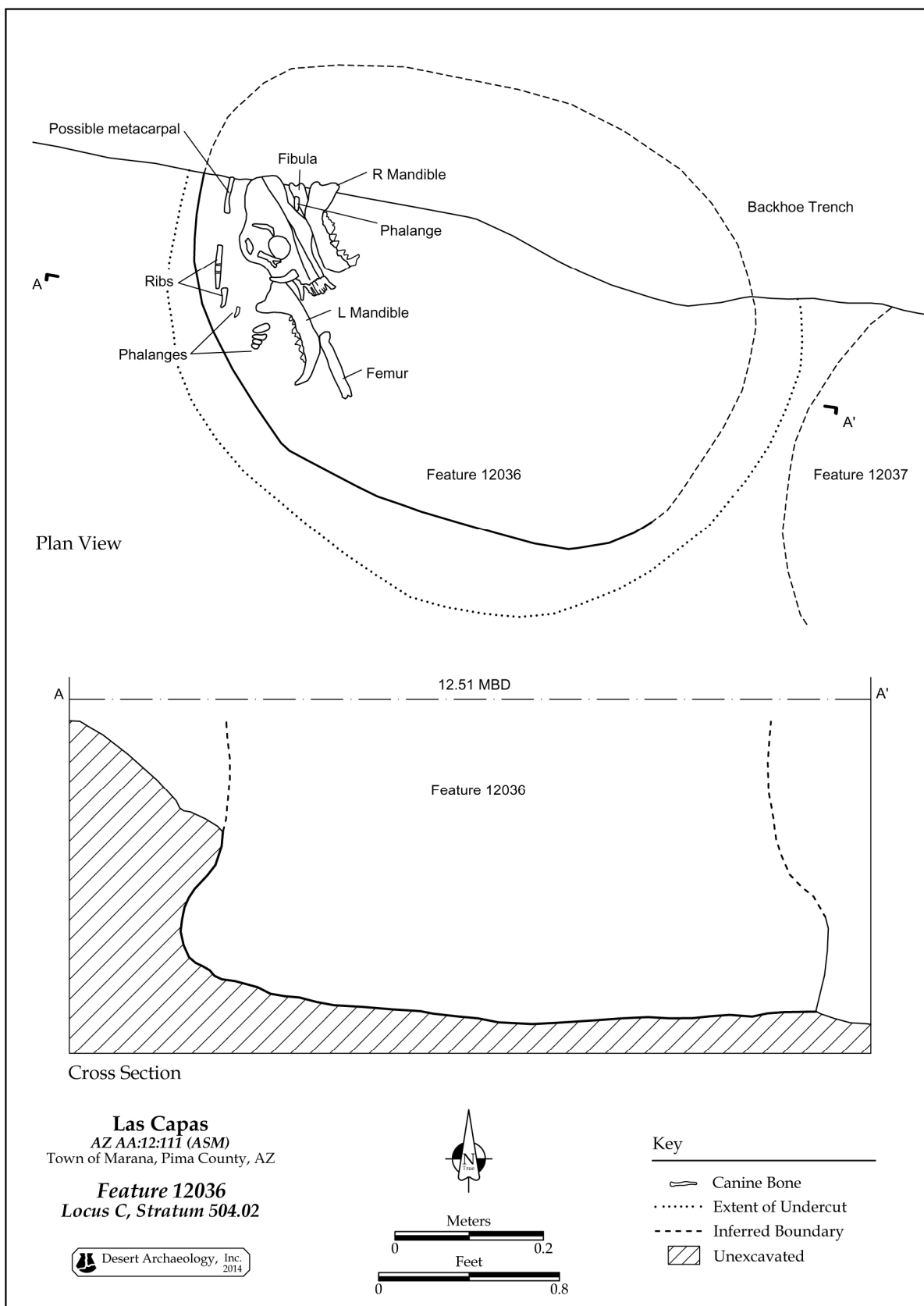
*General Description.* This dog or coyote (*Canis* sp.) burial was discovered during mechanical stripping (Figure 27). The remaining cultural fill was subsequently removed by hand-excavation, exposing the remains. The burial pit was irregular in plan view, with an undulating, irregular base. The pit measured 1.20 m north-south by 1.00 m east-west, and had an average depth of 30 cm. The elevation of the pit was 12.48-12.78 mbd.

The canid remains were located in the approximate center of the pit within the internal fill. The skeleton was poorly preserved, incomplete, and disarticulated, likely due to visible rodent burrowing. The cranium was complete, and was located on the western side of the pit, with the face looking south. The canid lay on its right side and was tightly flexed. The front legs were bent inward, while the rear legs were missing.

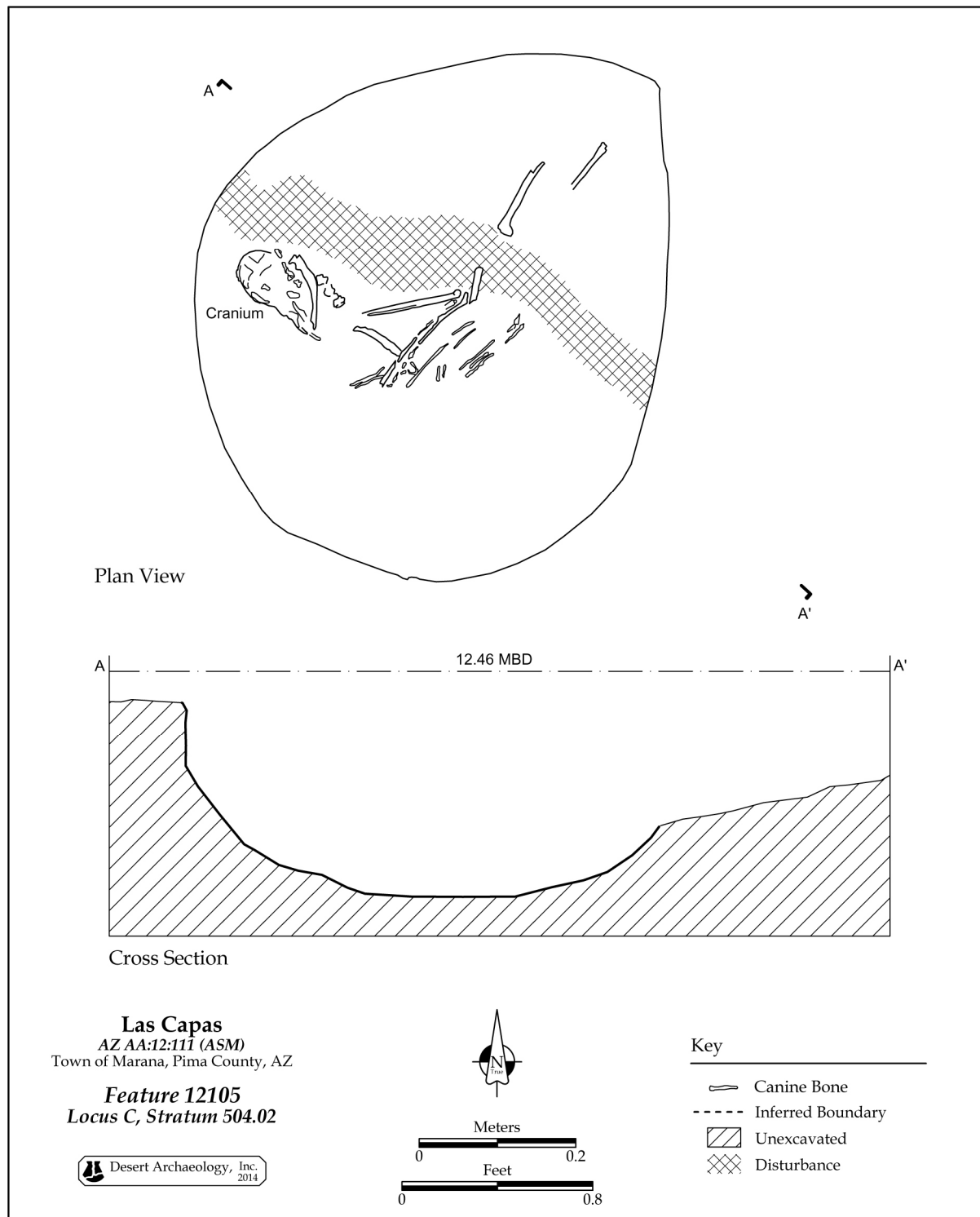
*Osteological Data.* The skeletal remains were from either a dog or coyote. It was probably small- to medium sized, and was possibly an adult. Less than 25 percent of the skeleton was preserved.

*Internal Stratigraphy and Artifact Content.* The internal fill consisted of a light brown, loose, silty sand. No artifacts were present within the fill.

*Stratigraphic Relationships.* Feature 12105 originated within Substratum 504.02, which dates to the late San Pedro phase; it was buried by additional deposits of this substratum, as well as by deposits from overlying strata. Feature 12105 was located in close proximity to several extramural pit features that originated within the same stratigraphic layer.



**Figure 26.** Plan view and cross section of Feature 12036, a canid burial found in Substratum 504.02, Locus C, Las Capas, AZ AA:12:111 (ASM).



**Figure 27.** Plan view and cross section of Feature 12105, a canid burial found in Substratum 504.02, Locus C, Las Capas, AZ AA:12:111 (ASM).

## Locus D

### Feature 13706

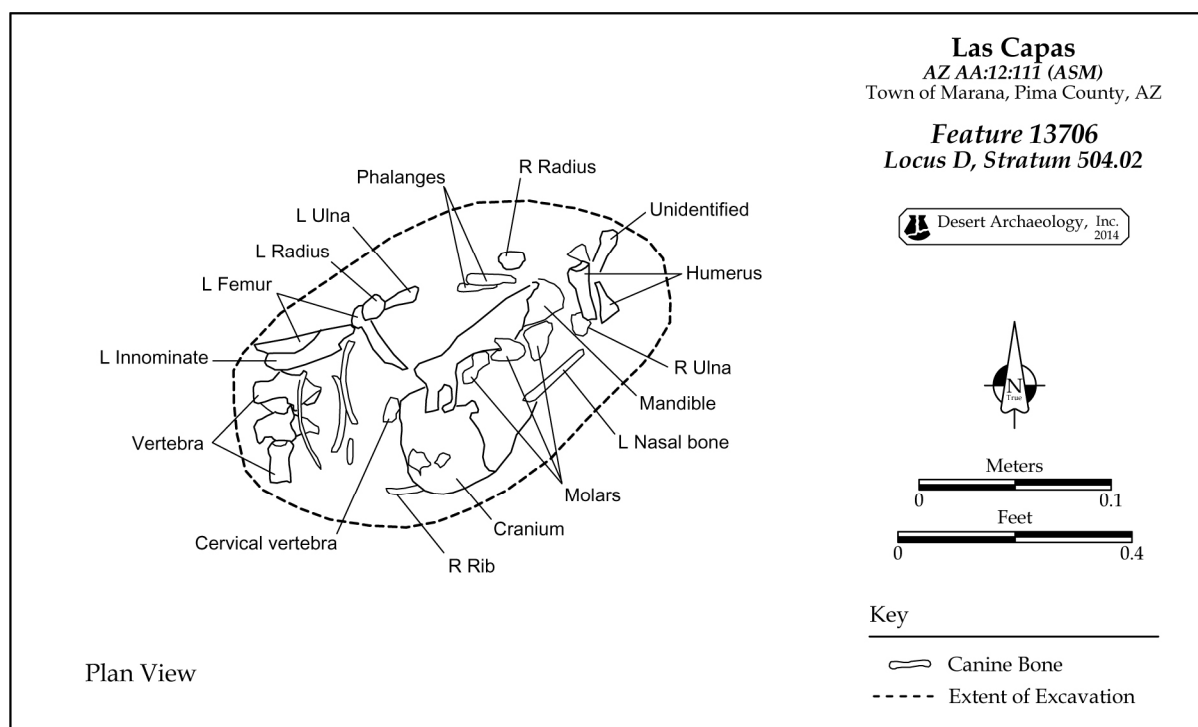
*General Description.* This dog/coyote (*Canis* sp.) skeleton was discovered during excavation of a shovel trench (Figure 28). The bones may have been contained within a narrow pit or animal burrow, but the pit did not appear to be cultural. The area measured 24 cm in length by 14 cm in width, and was 38 cm deep. The elevation of the burial was 13.82-14.20 mbd.

The skeleton was flexed and lying on its right side. The skull was at the southeastern corner of the area, lying on its right side with the face pointing northeast. The legs were bent, with the front legs extending upward. Several hind elements were out of place. The remains did not appear to be intentionally interred, and may represent a natural death. A large rodent run was noted on the northwestern edge of the burial, and a small amount of insect disturbance was observed.

*Osteological Data.* The dog or coyote was a pup, aged 4-5 months at death. It was a small- to medium-sized canid; roughly 25-50 percent of the skeleton was recovered.

*Internal Stratigraphy and Artifact Content.* The fill immediately around the skeleton consisted of soft, granular, dark brown, clayey silt loam and did not appear to be associated with cultural activity. The fill around the remains may have been discolored due to body decomposition. The surrounding matrix consisted of laminated silty loam that ranged in color from reddish-brown to gray-brown to nearly black. These laminated sediments represent water-lain flood deposits. Artifacts found in proximity to the burial consisted of a piece of flaked stone, a non-canid faunal bone fragment, and a complete shell bead. The exact location of these artifacts in relation to the canid remains is unknown because they were found in the screen, although they are not likely associated with the skeleton.

*Stratigraphic Relationships.* The skeleton was found within Substratum 504.02, which dates to the late San Pedro phase, in an area of Locus D that was greatly impacted by erosion and flooding. The remains were found within a dense concentration of irregularly shaped features that were initially thought to be cultural, but that were later determined to be natural erosional features. The southwestern portion of Locus D had several large sinkholes, piping vents, and natural channels related to erosion. This cluster of erosional features was located near several canals. Feature 21 was located to the northeast, while Features 27 and 48 ran south and west, respectively, of the cluster of features in which Feature 13706 was found.

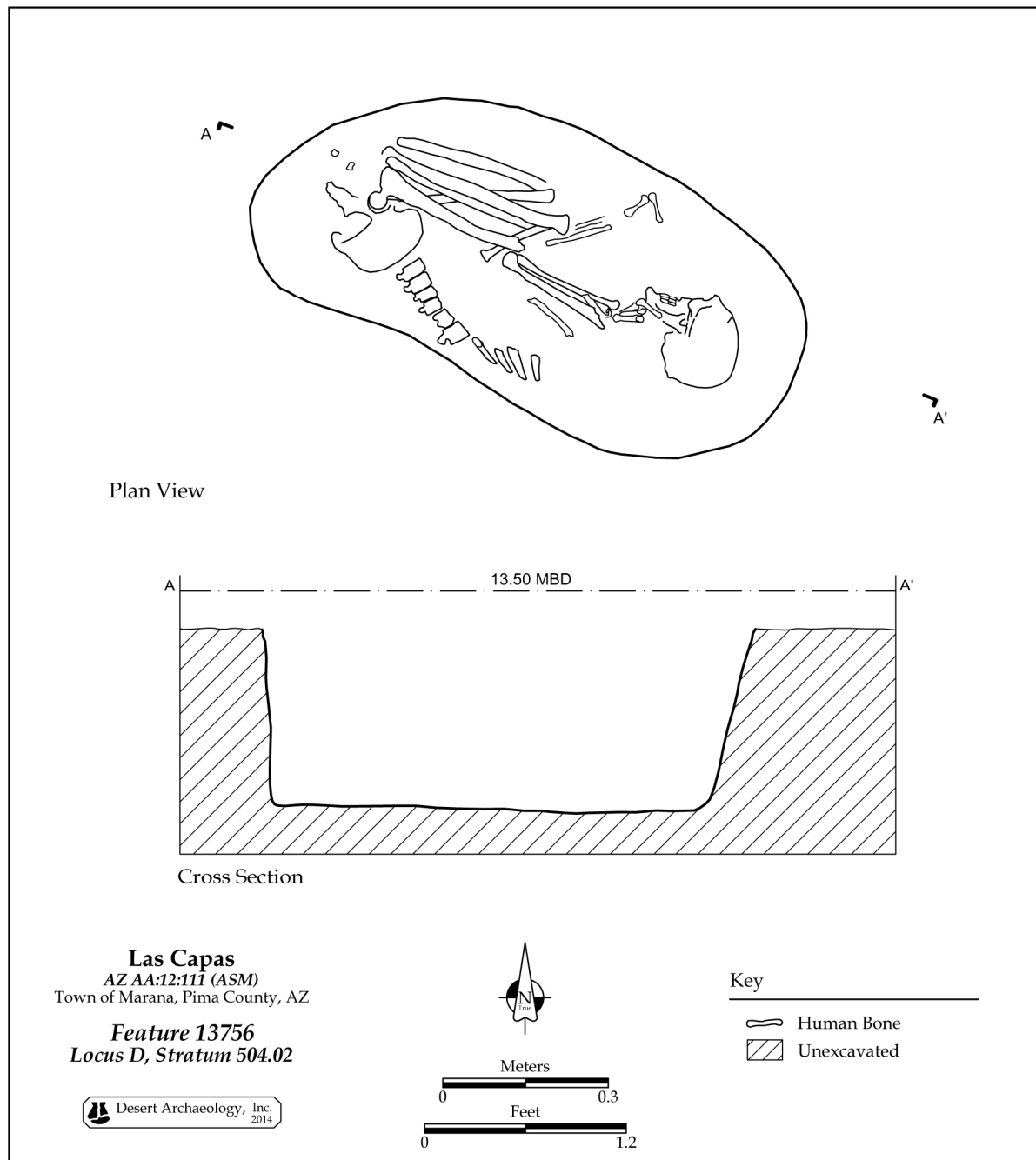


**Figure 28.** Plan view of Feature 13706, a canid burial found in Substratum 504.02, Locus D, Las Capas, AZ AA:12:111 (ASM).

*Feature 13756*

*General Description.* This primary inhumation was discovered during mechanical stripping (Figure 29). The remaining fill was removed by hand-excavation, exposing the remains. The burial pit was oval shaped in plan view, with straight side walls and a flat bottom. The burial pit measured 1.07 m east-west by 50 cm north-south, and averaged 34 cm in depth. The elevation of the pit was 13.57-13.91 mbd.

The individual interred within the pit represented a probable female. The individual was lying on the right side, with the cranium at the southeastern end of the grave and the pelvis at the northwestern end. The



**Figure 29.** Plan view and cross section of Feature 13756, an adult primary inhumation found in Substratum 504.02, Locus D, Las Capas, AZ AA:12:111 (ASM).



skull lay on its right side with the face looking north. The right arm was tightly flexed, with the right hand near the mandible. The left upper arm extended along the chest and was bent at the elbow at about 45 degrees, with the hand positioned close to the northern side of the burial pit. The legs were very tightly flexed, drawn up toward the chest area, with the knees pointing east. Bone preservation was fair, and the skeleton was nearly complete, although it was missing several ribs and the right portion of the pelvic girdle.

*Osteological Data.* Feature 13756 is a fragmentary middle-aged adult, possibly female (35-50 years old). No cranial or dental remains are present. Poor, fragmentary preservation greatly reduces accurate sex and age assessment for this individual. All associated elements are fragmented except metacarpals and metatarsals. Cracking, breakage, brittleness, and exfoliation are extensive. Staining and adhering soil are present.

The individual is represented exclusively by postcranial remains. Three partial cervical vertebrae are present, yet only fragments of the thoracic and lumbar vertebrae. The sacrum is partially present. Rib fragments represent both left and right ribs, but could not be individually sided. A left fragmentary clavicle is present. A partial left os coxa is present, although the pubis was not preserved. The right os coxa is very fragmented and in poor condition. The left appendicular skeleton is preserved, including mainly the diaphyses with missing epiphyses. A fragment of the proximal epiphysis of the right ulna is also present. Five carpals and five phalanges represent the hand elements. One calcaneus, 1 talus, 9 phalanges, and 1 sesmoid represent the foot elements. No dentition was present.

The left femoral head diameter (43.1 mm) fits with the female range as reported by Bass (1995), yet it is near the indeterminate sex range. Minor osteophytic lipping is present on the articular margin of the left acetabulum. The left articular surfaces of the three cervical vertebrae appear to be fused together along with the right articular surfaces of the 4th and 5th lumbar vertebrae. Small osteophytes are present on the inferior margin of the lumbar body and on the superior articular facets of the sacrum. There also appears to be some mild osteophytic growth on the spinous processes of the thoracic vertebrae fragments. The overall bone morphology and development, namely the extent of the minor osteophytic lipping and vertebral fusion, suggests a middle-aged adult between the ages of 35-50 years.

*Internal Stratigraphy and Artifact Content.* The internal fill of the burial pit consisted of a brown, loose sandy silt that contained small amounts of charcoal flecks throughout. Rodent disturbances were also identified throughout the burial pit, but these only minimally impacted the skeletal remains.

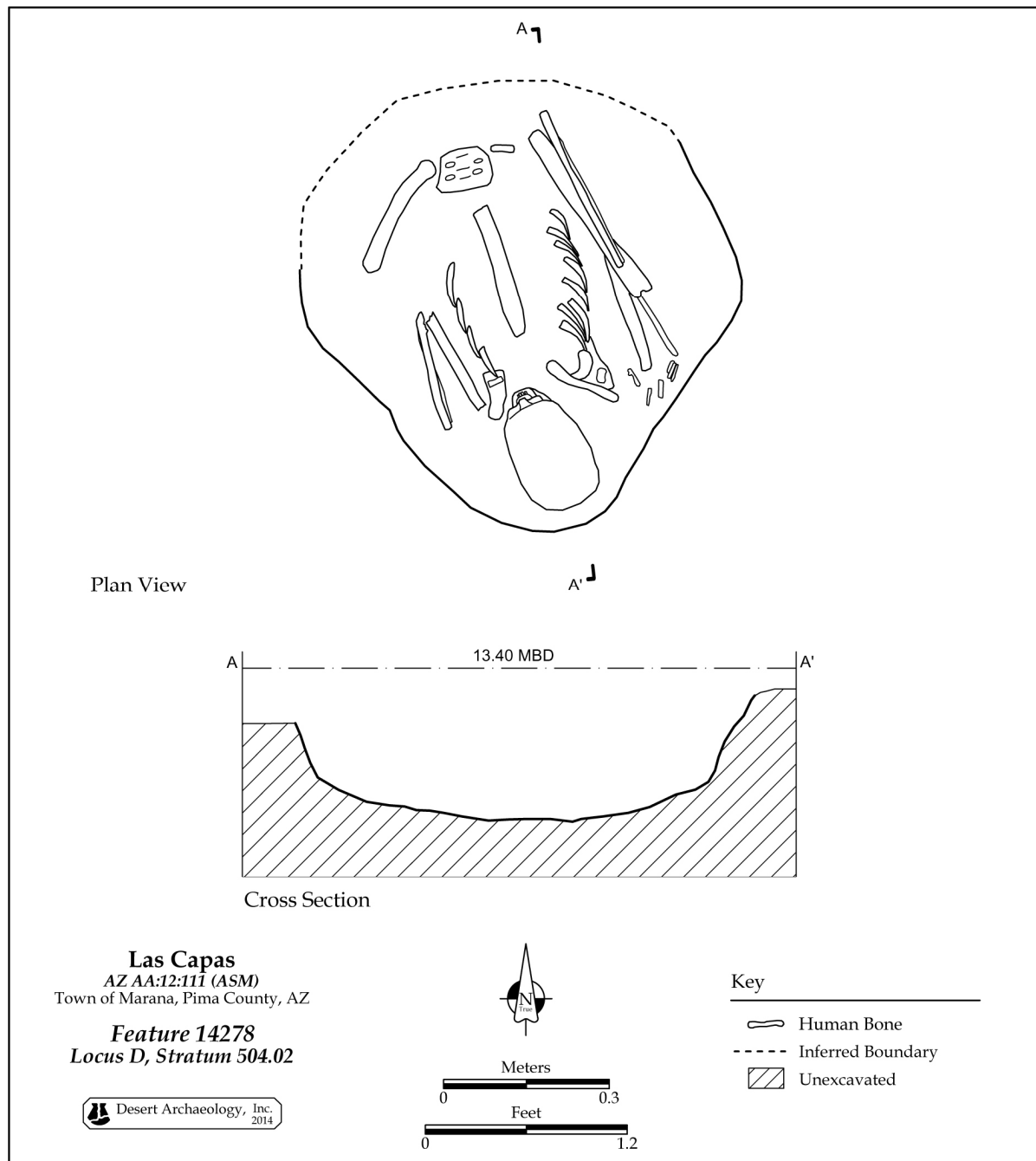
Artifact density was low and consisted of one faunal bone and 16 pieces of flaked stone debitage throughout the fill. No artifacts directly associated with the burial were recovered.

*Stratigraphic Relationships.* This primary inhumation originated within Substratum 504.02, which dates to the late San Pedro phase; it was buried by additional deposits of this substratum, as well as by deposits from overlying strata. Feature 13756 was located within close proximity to several extramural pit features that originated within the same substratum, most of which were concentrated north and west of the inhumation.

#### *Feature 14278*

*General Description.* This primary inhumation was discovered during hand-excavation of roasting pit Feature 14196 (Figure 30). The inhumation was contained within a small, oval-shaped pit with steeply sloping walls. The pit measured 87 cm east-west by 60 cm north-south, and 27 cm in depth. The elevation of the pit was 13.40-13.67 mbd.

The skeletal remains were poorly preserved, but were determined to be from an adult male. The supine, tightly flexed body lay with its head at the southern end of the grave and the pelvis at the northern end. The skull was upright, with the face pointing slightly northwest. The right arm extended along the side of the chest, was tightly bent at the elbow, and the right hand lay on top of the right shoulder. The left upper arm lay along the side of the chest, with most of the left forearm missing, likely as a result of rodent disturbance. The legs lay next to each other, tightly flexed, with the right leg lying over the left leg. The knees pointed to the south, and the feet were against the north side of the pit. There was evidence of insect and rodent disturbance, which may be responsible for the slight displacement of some of the teeth away from the cranium.



**Figure 30.** Plan view and cross section of Feature 14278, an adult primary inhumation found in Substratum 504.02, Locus D, Las Capas, AZ AA:12:111 (ASM).

*Osteological Data.* Feature 14278 includes a partial middle-aged adult male (35-50 years old). The remains are very fragmented, with the bone surface severely eroding. Cracking, breakage, and brittleness are present, and the bones have a powdery texture. The bones are light tan in color, with some staining from adhering soil.

The cranial vault elements are very fragmented. The left zygomatic is partially present, the right zygomatic is fragmentary. Cervical vertebrae are partially present, and a fragment of the sacrum is present. Scapulae are fragmentary, clavicles are partially represented, and os coxae are fragmentary. The midshaft portions of the humeral diaphyses are complete. Lower left and right arm bones consist only of midshaft

fragments. A fragmentary left femur midshaft and partial right femur are present. The lower left leg consists of midshaft fragments. Four carpals, 5 metacarpals, and 11 phalanges represent the right and left hand elements. No foot elements are present.

A fragment of unsided maxilla is present, and the mandible is complete. A full set of permanent maxillary dentition is present, excluding the maxillary left incisor. A full set of mandibular dentition is present, excluding the right central and lateral incisors. Large carious lesions with pulp exposure affecting the occlusal surfaces of the maxillary right and left third molars are present. These likely affected the alveolar bone, although this cannot be confirmed without associated maxillary alveolar bone. A large carious lesion with pulp exposure is also observed on the mandibular left first molar, with only the roots remaining. An associated periapical abscess is present on the buccal mandibular alveolar bone. Minor calculus is present on the maxillary right and left canines, central and lateral incisors, and left first molar. Antemortem chipping is observed on the maxillary right second premolar, first molar, and the left canine. The maxillary and mandibular dentition exhibits moderate dental attrition. The maxillary central and right lateral incisors both exhibit prominent shoveling.

Robust cranial features, including a prominent nuchal crest, a square mental eminence, and large right and left deltoid tuberosities, are indicative of a male individual. The superior and inferior cervical annular epiphyses are completely fused, indicating an individual at least 25 years old (Krogman and Iscan 1986). Moderate dental attrition is observed on the dentition, suggesting a middle adult (Lovejoy 1985). Slight osteophytic growth and lipping on the medial, inferior articular surface of the right clavicle is present. Also, slight osteophytic growth on the left occipital condyle and on the superior and inferior articular surfaces of the cervical vertebrae is present. These lesions suggest this individual was a middle-aged adult between the ages of 35-50 years.

*Internal Stratigraphy and Artifact Content.* The fill within the burial pit consisted of gray-brown, clayey sandy silt, which represented a simple redeposit. Brown sand inclusions were present directly around the bones. A low density of artifacts was present within the fill. Artifacts consisted of five pieces of flaked stone debitage and three faunal bone fragments, but these were not considered associated with the inhumation.

*Stratigraphic Relationships.* This inhumation originated in Substratum 504.02, which dates to the late San Pedro phase. It was buried by additional deposits of this substratum, as well as deposits from overlying strata. Several extramural pit features that originated in Substratum 504.02 were located south and east of the inhumation. A roasting pit, Feature 14196, that originated in Stratum 504 intruded into the northwestern part of the burial pit, and its construction may have removed part of the left leg. A primary inhumation of a child, Feature 14240, and a secondary cremation, Feature 14236, were located 7-8 meters southeast of Feature 14278. Both Features 14240 and 14236 originated in Stratum 504.

## STRATUM 504.04

### Locus F

#### Feature 23731

*General Description.* This neonate inhumation was discovered during mechanical stripping, which may have removed the majority of the feature. Part of the cranium and cervical vertebrae were preserved, and these were initially identified as the remains from an infant canine. The remains were identified in the laboratory as human.

Because the inhumation was disturbed by the backhoe and relatively little was left intact, it was unclear if the remains were contained within a pit. The remains were at elevation 13.32-13.35 mbd.

*Osteological Data.* The bone from Feature 23731 consisted of 46 fragments of cranial vault, an unfused segment of vertebral arch, a petrous portion, and pars lateralis. Age is estimated as an neonate aged 6 to 9 lunar months based on bone size and fusion (Scheuer and Black, 2004).

*Internal Stratigraphy and Artifact Content.* The matrix around the bones consisted of brown, sandy silt with no charcoal inclusions. No artifacts were identified in relation to this feature.

*Stratigraphic Relationships.* Feature 23731 was located within Substratum 504.04, which dates to the late San Pedro phase. It was buried by additional deposits of this substratum, as well as by deposits from

overlying strata. Feature 23732, a nearly complete primary inhumation of a canine, was found within Stratum 505 approximately 6 m to the east. An additional canid cranium inhumation, Feature 23802, was located within Stratum 505 in Locus F, but was not found within close proximity to Feature 23731. Feature 23731 was relatively isolated within Locus F, with no other features located nearby.

### ISOLATED BONE

A small amount of isolated human bone was recovered from pits, pit structures, and a non-feature context. These remains are summarized here.

(1) Feature 7475: a bell-shaped pit located in Substratum 506.01, Locus B; two fragments of cranial vault bone from an adult individual; age is generalized based on size and morphology.

(2) Feature 7629: a bell-shaped pit in Substratum 506.01, Locus B; contained the partial head of a radius. Based on size, it is possibly from an adult individual. Additionally, the center of the articular surface displays a small erosive lesion, suggestive of decay in the joint associated with soft tissue degeneration.

(3) Feature 7908: a bell-shaped pit in Substratum 506.01, Locus B; contained a fragment of an unfused segment of vertebral arch from an infant. The child was less than 1 year old, based on bone size and fusion (Scheuer and Black 2004).

(4) Feature 8245: a pit structure in Substratum 506.01, Locus B; contained a fragment of an unfused infant digital bone (metatarsal). The infant was less than 1 year old, based on bone size and fusion (Scheuer and Black 2004).

(5) Feature 8808: a bell-shaped pit in Substratum 506.01, Locus B; contained fragments of an articular process from a vertebra and an unspecified juvenile long bone from an infant less than 1 year old.

(6) A nonfeature context in Locus E (FN 16551) yielded approximately 38 fragments of cranial vault from a juvenile of indeterminate age.

### SUMMARY

Archaeological excavations at Las Capas in 2008, 2009, and 2013 located 23 burial features containing the remains of 24 individuals. Two secondary cremations and 22 inhumations were identified. Twelve of the human burial features date to the early San Pedro phase, 1200-1000 B.C., and 12 date to the late San Pedro phase, from about 1000-800 B.C. Ten animal burial features, containing 14 individual animals, were also located. Three, including the mass burial feature, Feature 9467, date to the early San Pedro phase, and six canid burials and a hawk burial date to the late San Pedro phase.

### HUMAN BURIAL FEATURES

Data were collected on 21 of the 23 human burial features, with one other recovered from a pit structure and not recognized as human bone at the time and the other being completely disturbed. Of the 21, eight were in bell-shaped pits with a narrow opening, a constricted neck, and a wider base. These were almost certainly preexisting pits that were reused for the inhumation burials. Eleven pits were basin shaped, with sloping walls and a flat to slightly rounded base. Two other pits had vertical walls and a flat base. The bell-shaped pits tended to be larger than the basin-shaped pits. Adult inhumations required larger pits than child or infant burials.

### Human Body Positioning

Body positioning could be determined for 17 burials (the others were either disarticulated or were cremations). Sixteen were flexed, and one individual was extended, albeit this latter burial, Feature 9015, was unusual. The flexed individuals lay on their right side ( $n = 6$ ), left side ( $n = 2$ ), back, supine ( $n = 4$ ), seated ( $n = 2$ ), and stomach ( $n = 2$ ).

The location of the head within the burial pit also varied considerably, with the most common location at the southeastern corner of the pit ( $n = 7$ ). Heads were also at the north ( $n = 2$ ), northwest ( $n = 3$ ), east ( $n = 3$ ), and west ( $n = 2$ ) portions of the burial pit.

The position of the arms and hands was also quite variable, with hands sometimes placed closed to the chin or upper chest and sometimes in the pelvic area. Legs were mostly bent and pulled up toward the chest. The exceptions were one of the seated burials and the extended burial. Feet were sometimes drawn up close to the pelvis or were against the pit wall.

The tight flexure of most bodies suggests they were wrapped or bound in a perishable material, probably fabric or leather, before being placed in the grave.

## Human Osteology

Twenty-four individuals were analyzed from 23 mortuary features. The total sample includes seven fetus/infants (less than 2 years), three children (2-12 years), three young adults (16-35 years), eight middle-aged adults (35-50 years), and two old adults (50+ years). Fetus/infants account for 30 percent of the individuals, while children and young adult age groups each account for 13 percent of the total individuals. No adolescents (12-15 years) were present. Middle adults account for 35 percent and old adults account for 10 percent of the total individuals. When separated by sex, six females and seven males were identified, although the identification of three females and three males is not conclusive due to missing or poor preservation of os coxae and crania. It was not possible to identify the sex for the fetuses, infants, or children.

Preservation varied, and only half the individuals were more than 50 percent complete. Rodent gnawing, animal burrowing, roots, insects, exposure to water, and the development of crystals on the bone surface are all factors in the poor preservation. Juveniles were much more likely to be poorly preserved.

Five individuals had evidence of red or purple pigment on their bone surfaces during analysis, or the presence was noted during excavation.

Two secondary cremations represent 8 percent of the total features analyzed. The remains do not appear to be heavily processed and are not evenly burned. Feature 7773 only represents a small, fragmentary portion of an individual. Feature 14236 has many different-sized fragments from all anatomical regions. Most of the remains are charred black, and only small amounts are calcined. Some of the remains are unburned and tan-brownish in color, possibly due to uneven burning temperatures or duration of heat exposure. Based on bone colors ranging from tan, brown, black, and white/calcined, the cremation fire temperatures ranged from 200-800°C (Walker et al. 2008). The uneven burning may have been caused when bones, such as the teeth, fell away from the body during the cremation process. Feature 7773 and Feature 14236 appear to be secondarily deposited into external pits and surrounded by fill that includes some burned charcoal and daub. These features are important, because they represent the earliest evidence of cremation mortuary practices during the San Pedro phase in the Tucson Basin.

One middle adult male individual, Feature 9441, has evidence of cranial trauma on the right parietal. The roughly circular ectocranial depression has porosity in the middle, which indicates blunt force trauma, with some healing occurring either antemortem or perimortem. Mild to moderate spinal osteophytosis is observed on four individuals (two males and two females), affecting vertebrae to varying degrees. Two individuals had two different pathological lesions affecting foot elements. Feature 3464, a middle-aged adult female, has mild degenerative joint lipping on the articular surface of the tarsals. Feature 7760, an old adult female, exhibits evidence of periostitis on the right first metatarsal, near the proximal dorsal surface. This individual also has periostitis on the left femur inferior to the subtrochanter.

Three unique pathologies, possibly related to trauma or repetitive motion, are present on middle-aged adult males. Feature 12021 has osteophytic growth on the vertebral articular surfaces of two right ribs and on the right fibula interosseous crest. The fibula osteophytic growth may be from stress at the origin of the Tibialis Posterior muscle, used to invert the foot and control plantar flexion or pronation when walking (Saladin 2008). Feature 14236 has slight lipping on the posterior mandibular condyle, possibly indicative of mild temporomandibular joint disorder. Feature 14278 has some lipping on the medial inferior articular surface of the right clavicle. Stress at the origin of the Pectoralis muscle, which flexes, adducts, and medially rotates the humerus may have influenced osteophytic growth and lipping (Saladin 2008).

Among the individuals analyzed, nine have well-preserved dentition. Dental pathology commonly observed among adults were carious lesions, antemortem tooth loss, and alveolar abscesses. Three individuals exhibit good dental health and did not experience any dental pathology. Observed rates were calculated by dividing the number of teeth total by the number of teeth afflicted with a dental pathology. The mouth mean was calculated by dividing documented pathology with the number of individuals. Males appear to have near twice the observed rate of carious lesions and antemortem tooth loss compared to females. Abscesses appear to have affected both sexes relatively equally. Mild to moderate periodontal resorption affected more than half the nine individuals (56 percent) with preserved alveolar bone.

Two other individuals appear to have been the victims of violence. The male buried in Feature 9015 had four Empire points inside or close to his body, with two of the points apparently thrust in from the rear and one possibly from the front. The woman in Feature 9463 was partially burned and had three awls associated with her body, including one protruding into her ribcage. Evidence for violence among Early Agricultural period individuals is rare in the Tucson Basin. The exception is a male found at the Sweetwater site, who had at least two (and possibly four) Cienega points lodged in his upper body (Freeman 1998).

The recovered remains are important as they increase the sample size of San Pedro phase burials excavated from Las Capas (Mabry 2008; Whittlesey et al. 2007). These individuals help build upon the biocultural understanding of the Early Agricultural period along the Santa Cruz River in the Tucson Basin.

### **Artifacts Associated with Human Burials**

A small number of Early Agricultural period inhumations were buried with grave goods, with about half the burials from Las Capas having associated artifacts. Of these, five burials had evidence for red or purple pigment and one fetus or infant had a patty of red pigment. The only piece of jewelry found was a shell pendant placed with a child. An older female was buried with a deer cranium. The male buried in Feature 8580 had 1 Empire point, 2 manos, 1 whole clay pipe, and 1 broken clay pipe, and was covered with a variety of broken ground stone pieces, including reconstructible metates. The Feature 9015 adult male had a mano next to his head, although this may not be an intentionally placed item.

Two burials had associated artifacts that relate to their deaths. The Feature 9015 adult male had four Empire points, three of which were almost certainly inside his body when he died, indicative of his being killed by these spear points. The Feature 9463 adult female had three bones awls, one of which was inside her ribcage. Burning patterns on her bones and the awls matched, indicating she may have sought refuge inside a burning pit structure after being attacked.

### **ANIMAL BURIALS**

Ten animal burials contained the remains of 14 animals identified as 3 domestic dogs, 1 possible domestic dog, 7 dogs or coyotes, 1 hawk, 1 gray fox, and 1 bobcat. Most were placed in shallow, basin-shaped pits. The exception was five animals in Feature 9467, which was a bell-shaped pit. No associated artifacts were identified with the animal burials.

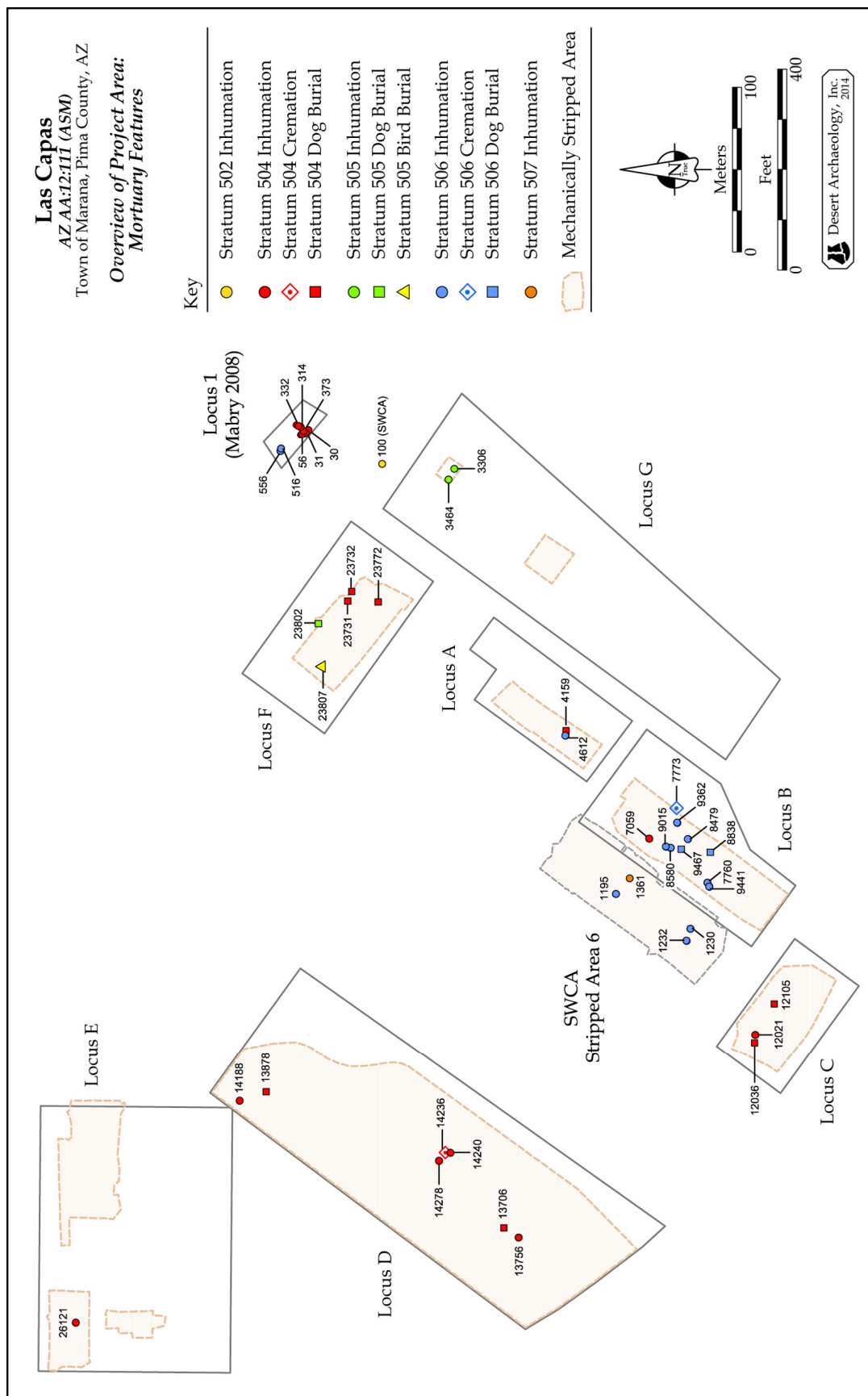
Animal burials varied in preservation. The four best-preserved canids were flexed, lying on the right sides. The hawk burial was tightly flexed and may actually represent the natural death of a bird that climbed into an animal burrow.

Two canid burial features, Features 8838 and 23772, contained only skulls. A pair of canid skulls was located in a pit feature in Locus 2 during the 1999 excavations. These skulls were found in Stratum 505, dating to the late San Pedro phase (Ruble et al. 2008:129). The canid skulls likely received special treatment for ritual purposes.

**OVERVIEW MAP OF PROJECT AREA:  
MORTUARY FEATURES**







**Figure A.1.** Overview map of the project area showing locations of mortuary features, Las Capas, AZ AA:12:111 (ASM).



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