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APPENDIX D (PART 3)

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SUSITNA HYDROELECTRIC PROJECT

CULTURAL RESOURCES INVESTIGATIONS

1979 - 1985

VOLUME V

APPENDIX D (PART 3)

DRAFT

Report by
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Prepared for
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May 1985

ARLIS
Alaska Resources
Library & Information Services
Anchorage, Alaska

AHRS Number TLM 190; Accession Number UA83-116

Area:	South of the Oshetna River Mouth
Site Map:	Figure D.238
Survey Locale 124:	Figure E.195
USGS Map:	Talkeetna Mts. C-1, Figure E.8
Site Location:	Appendix F

Setting:

The site is located on a discrete kame which forms part of a low ridge descending from the TLM 189 site toward the Oshetna River mouth at an elevation of approximately 716 m asl (2550 feet). The kame measures 10 (north-south) x 15 m (east-west), with a height above surrounding terrain of approximately 5 m and 1.5 m to the north and south, respectively. The site location appears to be oriented toward the following features: the lower 1 km of the Oshetna River and its flood plain, the confluence of the Oshetna River with the Susitna River, the Susitna River, and intervening slopes descending about 91 m to the river. Terrain of similar elevation is in view to the west, as are some areas across both the Susitna and Oshetna rivers. The rim of the Oshetna River valley obstructs the view of the Oshetna River upstream. The site kame is extensively deflated with sparse vegetation including birch and willow shrubs, fireweed, and a thin lichen mat.

Testing:

A surface lithic scatter composed of six basalt flakes and one argillite flake was observed on the summit and north side of the knoll. A test pit was placed in the vegetation mat on the top of the kame (test pit 1), which produced four argillite flakes from the Watana tephra (Table D.305). One additional shovel test on the knoll failed to reveal further cultural material. Estimated site size based on the distribution of artifacts is 12 square meters (Table D.2).

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Anchorage, Alaska

Table D.305.

Artifact Summary, TLM 190

Provenience		Description
Lithic Material		
Surface:	1	Argillite flake
	6	Basalt flakes
Subsurface:		
Test Pit 1	4	Argillite flakes

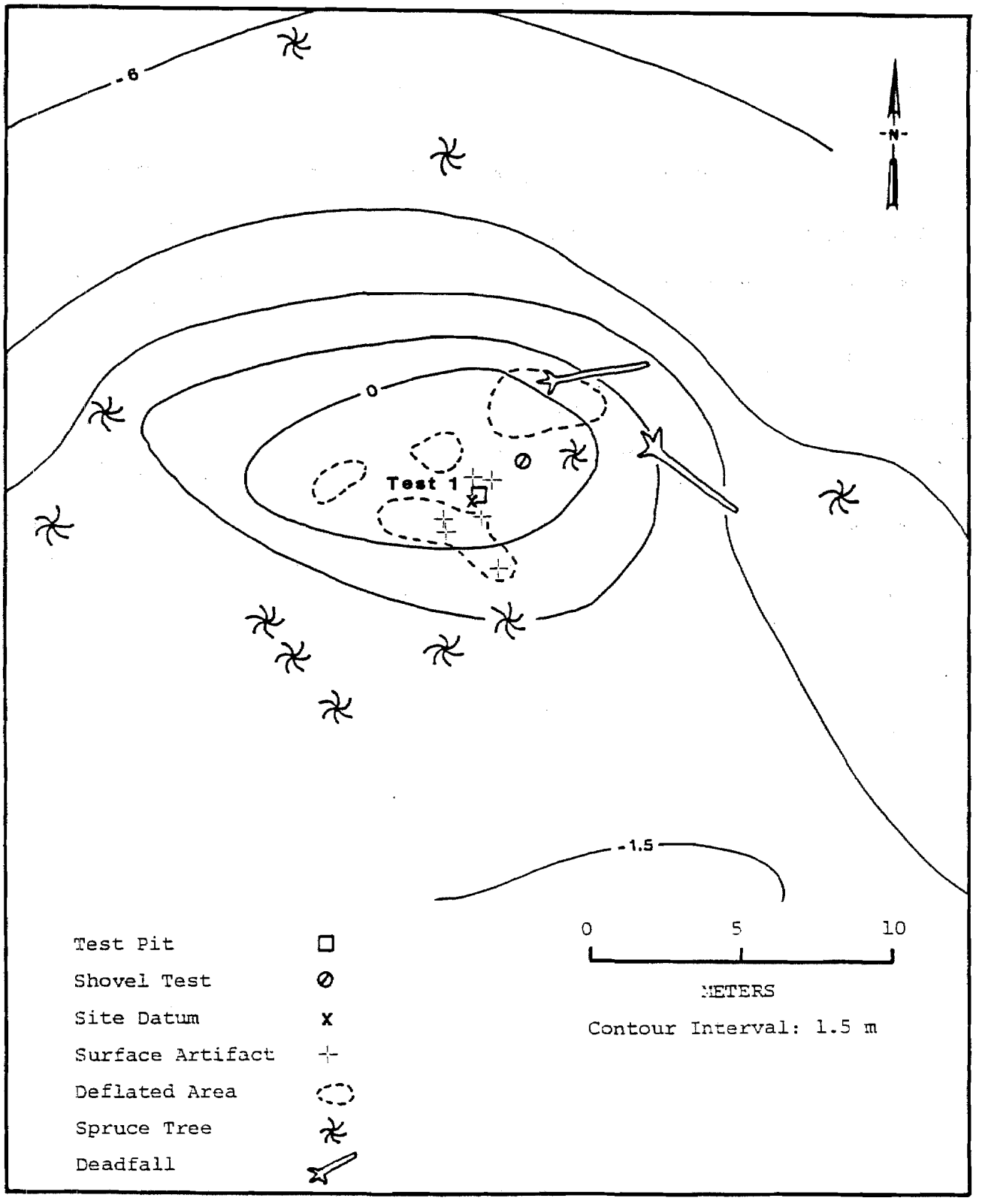


Figure D.238. Site Map, TLM 190

AHRS Number TLM 191; Accession Number UA83-117

Area:	North-northeast of Deadman Creek Mouth
Site Map:	Figure D.239
Survey Locale 150:	Figure E.243
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 191 is located at an elevation of ca. 747 m asl (2450 feet) west of Deadman Creek and north of its confluence with the Susitna River. The site is located on a ridge which runs parallel to Deadman Creek and borders a long, narrow lake (ca. 600 (northwest-southeast) x 40 m) of about 5 ha in area. The ridge is ca. 5-10 m higher in elevation than the lake to the west. TLM 191 is located on a ridge north of the southern end of the lake. The region west of the site consists of elongated kames interspersed with kettle lakes and bogs. The site commands an excellent view in all directions, including Deadman Creek to the north and east, the lake immediately west of the site, and the rolling kettle and kame topography further west. TLM 191 is situated on a relatively broad, flat portion of the ridge, being approximately 40 (north-south) x 30 m (east-west), with slopes of approximately 20 degrees to the west and east. The site is approximately 2 m higher than the rest of the ridge. Vegetation at TLM 191 consists of a thick lichen mat, dwarf birch, blueberry, bearberry, Labrador tea, and grasses. The density of vegetation increases to the east, especially along Deadman Creek where birch, spruce, and dense willow thickets are found.

Testing:

A single tan argillite flake was found in a shovel test (Table D.306). The exact stratigraphic provenience is unknown, but the flake probably originated in or below the Watana tephra. Excavation of eight more shovel tests and the 40 x 40 cm test pit failed to reveal any other artifacts. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.306.

Artifact Summary, TLM 191

Provenience		Description
Lithic Material		
Subsurface:		
Test Pit 1	1	Argillite flake

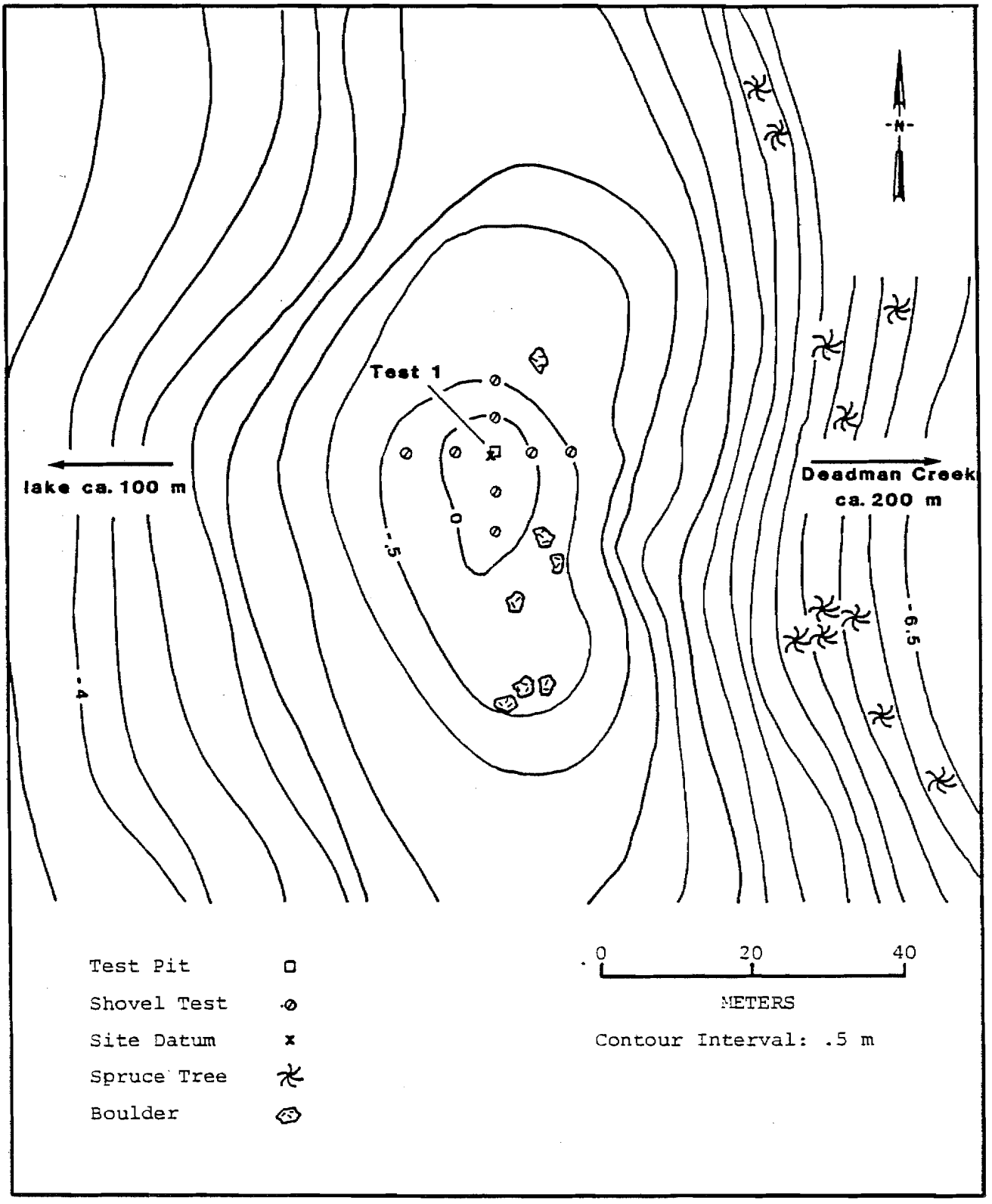


Figure D.239. Site Map, TLM 191

AHRS Number TLM 192; Accession Number UA83-118

Area:	Northeast of Tsusena Creek Mouth
Site Map:	Figure D.240
Survey Locale 152:	Figure E.247
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 192 is located at the edge of a plain at an elevation of ca. 670 m asl (2200 feet), east-southeast of Tsusena Creek and north of the Susitna River. The plain on which the site is located slopes downward from the west before being truncated by a 30 m wide trough possibly glacial in origin. The trough is located immediately west of the site and is about 3 m below the level of the site. The trough slopes downward from its northern end approximately 100 m north of the site. Approximately 50 m south of the site it changes its orientation from north-south to a southwesterly direction, sloping more rapidly down toward Tsusena Creek. The terrain on the opposite side of the trough is about 2 m higher than the site and is characterized by sinuous kames on a rolling plain. A ridge system originates in the east from the higher portion of the sloping plain. The northwest-southeast trending ridges terminate at their western end above Tsusena Creek. South of the site ca. 1.2 km is a high ridge forming the north rim of the Susitna River canyon. Site TLM 018 is visible on the crest of this ridge. A series of kettle lakes occur to the northeast, with the closest of them being ca. 500 m distant. The view from the site is restricted to the sloping plain to the east and the trough to the west. Ridges to the north, east, and west limit visibility to the adjacent few hundred meters. Vegetation on the site consists of dwarf birch, Labrador tea, and scattered black spruce. Equisetum is prevalent in the trough. Open stands of spruce characterize the terrain to the east, while more dense stands of spruce occur to the south and at higher elevations to the north. The east-west trending ridge to the south overlooking the Susitna River is vegetated with mosses and berries.

Testing:

A cobble of tan argillite with flakes removed (possibly natural) was found in a shovel test, probably from within or below the Oshetna tephra (Table D.307). A 40 x 40 cm test (test pit 1) and six shovel tests did not reveal any additional cultural material. The argillite cobble is not indigenous to the tephra level and/or the glacial drift and therefore may be indicative of human activity. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.307.

Artifact Summary, TLM 192

Provenience		Description
Lithic Material		
Subsurface:		
Shovel test 1	1	Argillite cobble

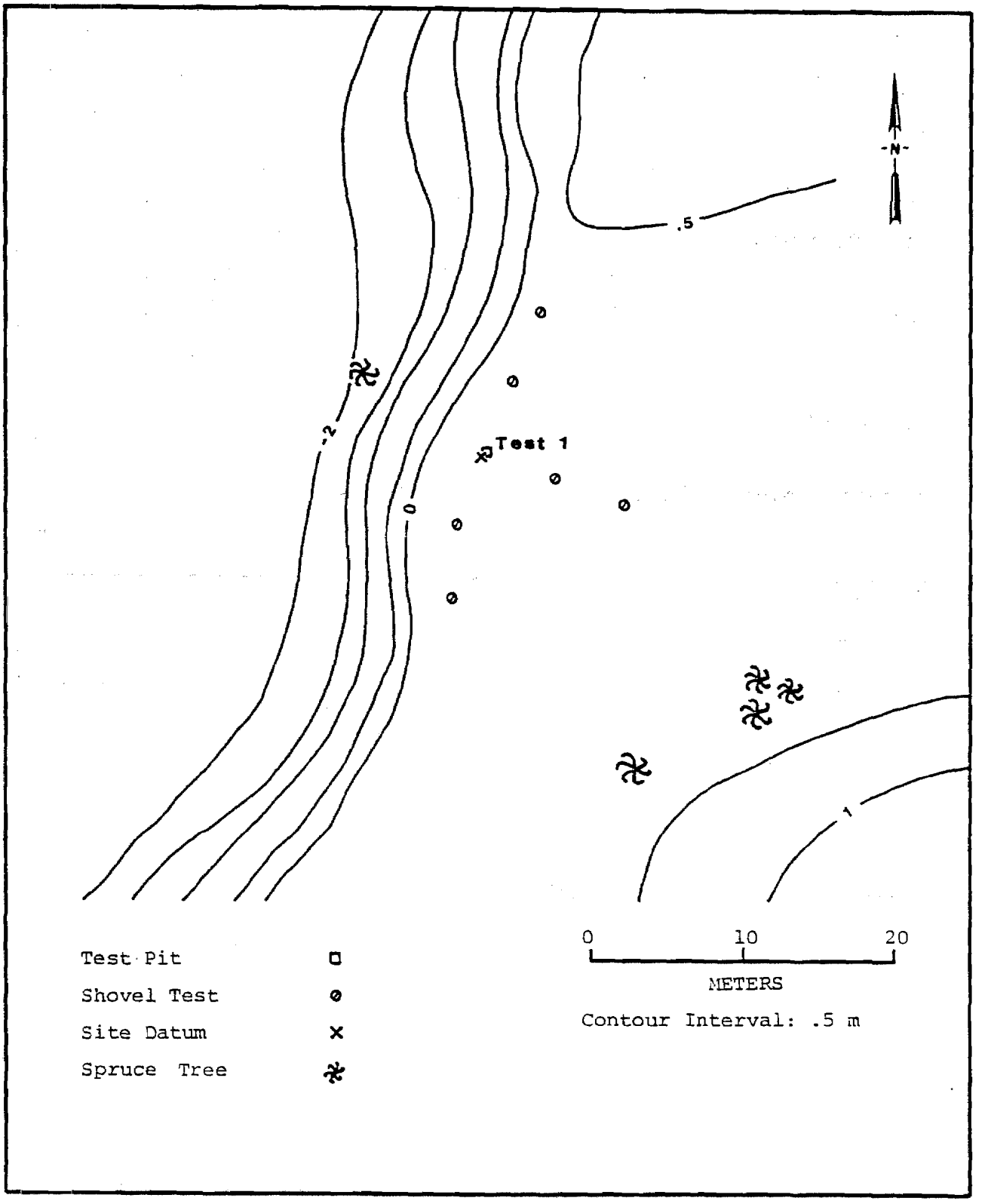


Figure D.240. Site Map, TLM 192

AHRS Number TLM 193; Accession Number UA83-119

Area:	North-northeast of Deadman Creek Mouth
Site Map:	Figure D.241
Survey Locale 150:	Figure E.243
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 193 is located on the southwest slope of a northwest-southeast trending ridge west of Deadman Creek and north-northeast of the confluence of Deadman Creek with the Susitna River. The ridge runs parallel to Deadman Creek and divides two long, narrow lakes. The lake to the west measures about 250 (north-south) x 30 m (east-west), while the lake to the east is about 600 (north-south) x 40 m (east-west). The ridge begins about 150 m south of the northern end of the western lake and continues for approximately another 150 m south of the end of this lake. TLM 193 is southeast of the western lake and northeast of a small pond of less than 1 ha in size. The site is located at an elevation of ca. 732 m asl (2400 feet) on a greater than 30-degree eroded and deflated slope facing the pond. The site is ca. 10 m higher than the level of the pond but is about 2 m lower than the ridge crest. The view from the site is restricted to the northwest. Vegetation on the site consists of dwarf birch, white spruce, lichens, blueberry, crowberry, and grasses. The surrounding vegetation is more variable with the addition of water lilies and sedges in the pond, black spruce in the bogs, and willow thickets along stream channels.

Testing:

TLM 193 consists of two chert pieces (Table D.308) located on the surface of a slope exposure of approximately 2 (north-south) x 2 m (east-west). No additional artifacts were found in the nine shovel tests or the 40 x 40 cm test pit (test pit 1) excavated at this site. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.308.

Artifact Summary, TLM 193

Provenience		Description
Lithic Material		
Surface:	2	Chert pieces

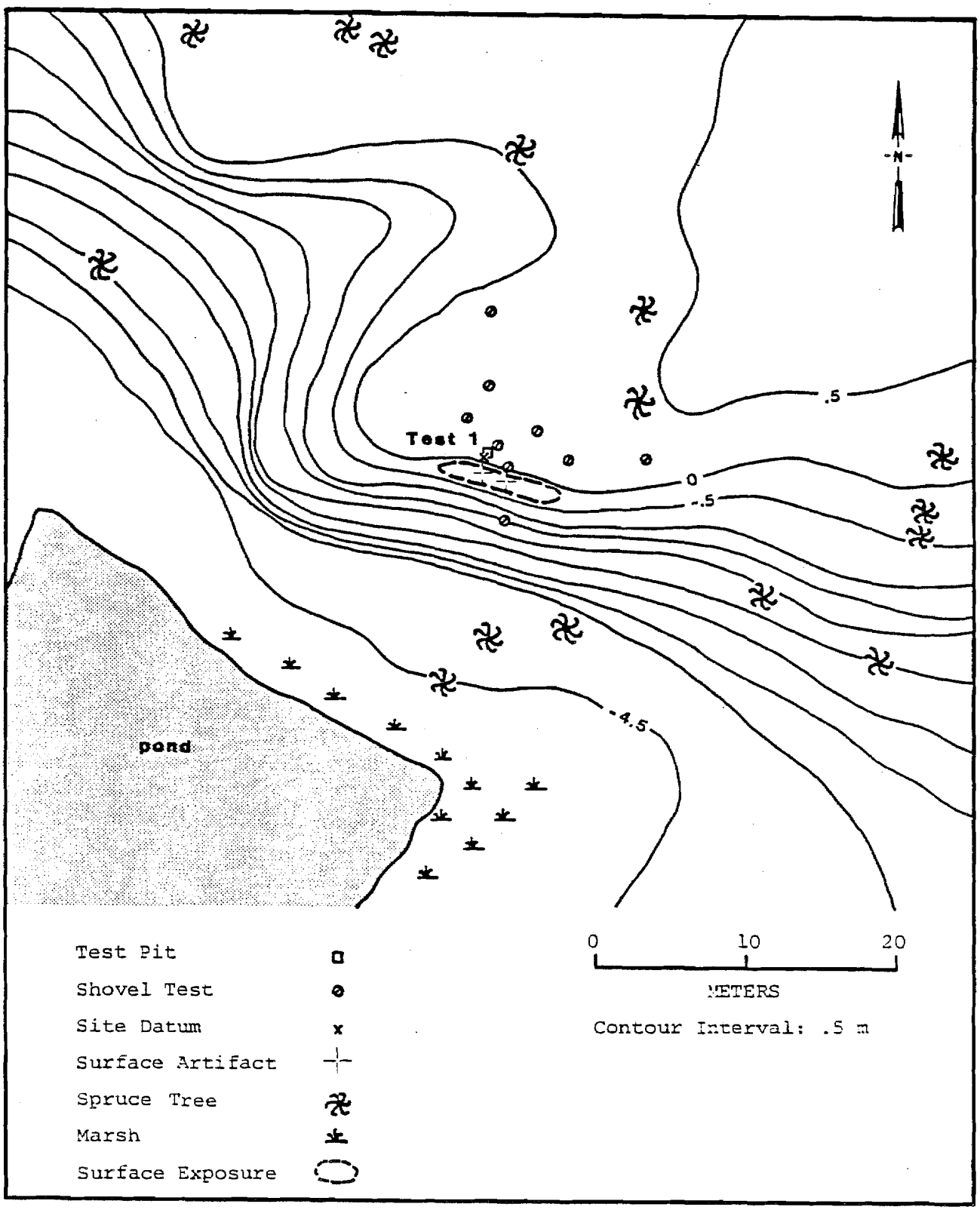


Figure D.241. Site Map, TLM 193

AHRS Number TLM 194; Accession Numbers UA83-120, UA84-134

Area:	West-southwest of Kosina Creek Mouth
Site Map:	Figure D.242
Survey Locale 80:	Figure E.154
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 194 is located west of the confluence of Kosina Creek with the Susitna River. The site is situated on a relatively flat, dry kame on a terrace at the edge of a dense, boggy black spruce forest south of the Susitna River. The terrain in the vicinity of the site, lying at 567 m asl (altimeter: 1860 feet), is characterized by a mosaic of small rounded knolls and linear kames separated by depressions and low saddles. To the south of the site is a muskeg bog, where the terrain is relatively level for approximately 50 m before it steeply slopes to a higher, east-west trending ridge. To the north the kame slopes down at approximately 15 degrees for 4 m, into a kettle depression. To the west, the terrain descends along a game trail into a saddle and then up onto a rounded kame that overlooks a bend in the Susitna River. A drainage flowing north from Watana Lake empties into the Susitna River at a bend ca. 800 m west of the site. There is a heavily vegetated island in the center of the river where it bends directly north of this drainage mouth. To the east, the terrain is level along the game trail and connects the site to another dry kame 15 m distant. The site is surrounded by a dense black spruce forest. Higher terraces on the north slopes of the Susitna River are visible to the northwest and north. Higher terraces to the south are also in view through the trees. Marshy and boggy areas are in view to the southeast and south. The canyon of the Susitna River is in view to the west and northwest. Dense forest obstructs the views to the southwest and the northeast.

The ecosystem of the site area is characterized by a mixed lowland spruce-hardwood forest. Site vegetation consists of black spruce, dwarf

birch, willow, Labrador tea, blueberry, lowbush cranberry, crowberry, heath, lichen, and moss. Willow, black spruce, equisetum, and tussocks are abundant in the boggy areas to the southeast, south, and southwest. Birch trees form a north-south alignment along a drainage on the steep ascending slope ca. 50 m south of the site.

Testing:

TLM 194 was located when an initial shovel test yielded an argillite flake, broken into two pieces. This shovel test was expanded into a 40 x 40 cm test pit (test pit 1) and excavated to a depth of 30 cm. Two additional argillite flakes (one in two pieces) were found in the drift (23 cm below the surface). It appears that oxidized drift gravels are mixed with gray fine-grained particles of the Oshetna tephra, suggesting that these flakes are displaced from the Oshetna tephra. Four shovel tests dug 5 m to the east, south, west and north of test pit 1, plus 19 other shovel tests dug previous to discovery of the site, yielded no additional artifacts. No surface artifacts were found.

A grid shovel testing program was implemented to assist in determining the site size and the placement and number of systematic test squares. Sixteen grid shovel tests were excavated. No cultural material was recovered. The one 1 x 1 m test square (N100/E100) was placed directly south of test pit 1, on the basis of the negative survey and grid shovel testing results.

Discussion:

Testing at TLM 194 involved the excavation of 23 shovel tests, 1 test pit, 16 grid shovel tests, and 1 test square. The cultural remains recovered from this site consist of seven argillite flakes and 11 basalt flakes (Table D.310).

Five soil/sediment stratigraphic units are identified at TLM 194 (Figure D/243; Table D.309). The vertical placement of the soil/sediment units is fairly consistent within the single test square. Frost heaving and cryoturbation are evident in the displacement of some sediments. The basal layer of a general stratigraphic section consists of oxidized glacial drift (unit 5). The overlying Oshetna tephra (unit 4) is thin and sometimes mixed with the oxidized drift. Above the Oshetna tephra is the unoxidized and oxidized Watana tephra (unit 3b and 3a, respectively). The paleosol between the Oshetna and Watana tephras found elsewhere in the project area is not clearly defined in the stratigraphic sequence, but is represented only as a faint carbon stain above the Oshetna tephra. Above the Watana tephra lies the Devil tephra (unit 2). Above the volcanic sediments is a thick contemporary root mat (unit 1) which caps the sequence.

The single cultural component at TLM 194 can be correlated to the contact between the unoxidized Watana and Oshetna tephras (unit 3b/4). One argillite flake and nine basalt flakes were recovered from this stratigraphic context during systematic testing. One basalt flake was recovered from the contact between the Devil tephra and the unoxidized Watana tephra (unit 2/3a). This flake, along with one argillite flake and one basalt flake found in the unoxidized Watana (unit 3b), may have been displaced from the lower contact of the Watana tephra. During

survey testing, there were three argillite flakes (broken into five pieces) found in the drift matrix mixed with the overlying thin Oshetna tephra layer. These flakes presumably have been displaced from the upper Oshetna tephra contact (unit 3b/4) due to cryoturbation. Very small amounts of scattered charcoal flecks mixed with a fine silt comprise the matrix of the cultural contact (Table D.311).

Evaluation:

TLM 194 is situated on the western edge of a relatively flat, dry east-west trending terrace on the south side of the Susitna River west of the mouth of Kosina Creek. The site overlooks a bend in the Susitna River to the west and higher terraces on the north and south slopes of the river. The location of the site, in conjunction with the artifact assemblage, suggests that the site functioned as a lithic chipping station and/or hunting overlook.

A single component is suggested at the site, based on the homogeneity of lithic raw material located stratigraphically at the contact between the unoxidized Watana tephra and Oshetna tephra. An undulating process of cryoturbation in operation at the site apparently has caused a slight upward and downward movement of artifactual material. Testing at this site suggests that the small artifactual assemblage represents a post-Oshetna tephra occupation. Observed site size based on the distribution of artifacts is 9 square meters (Table D.2).

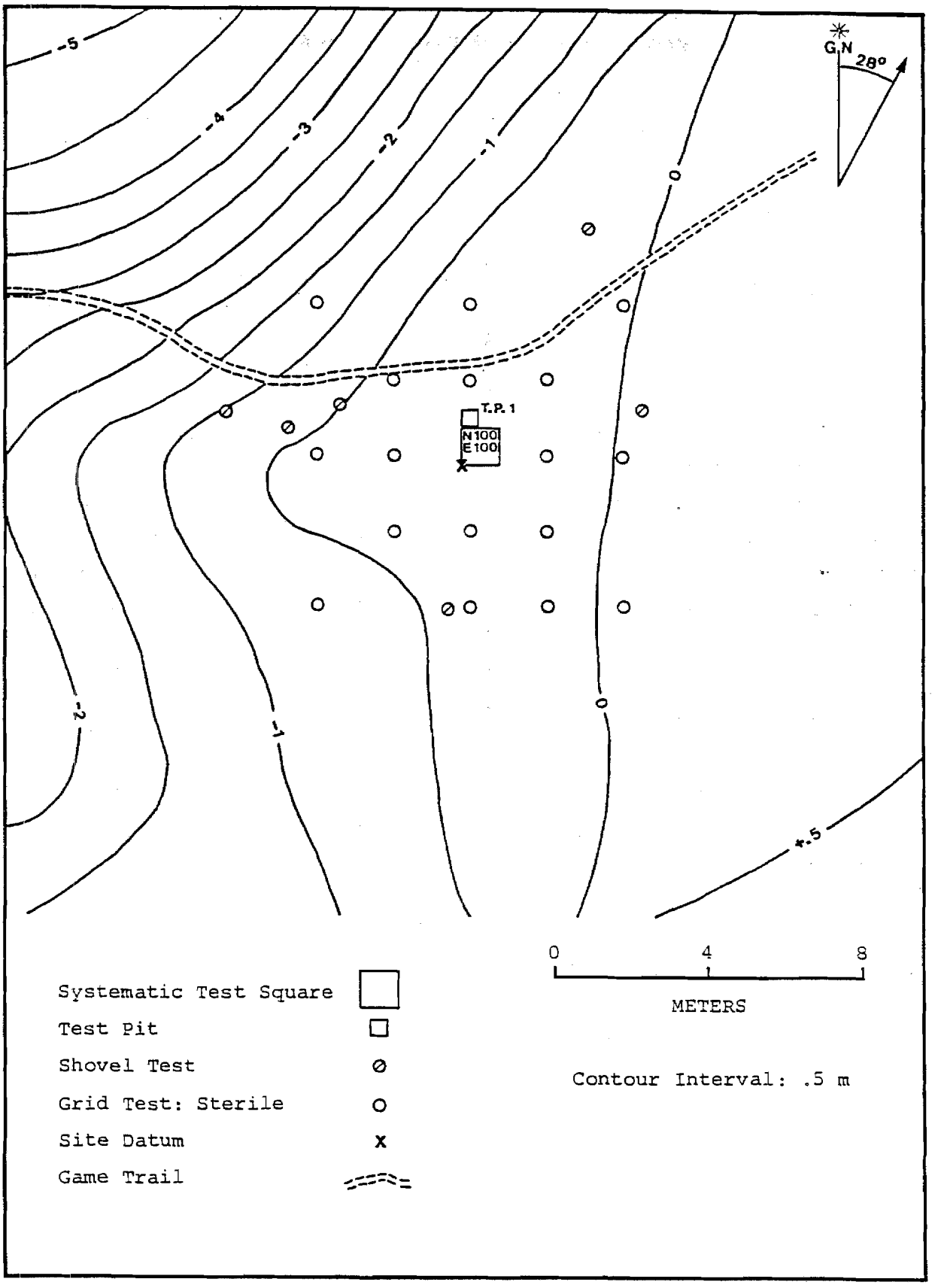


Figure D.242. Site Map, TLM 194

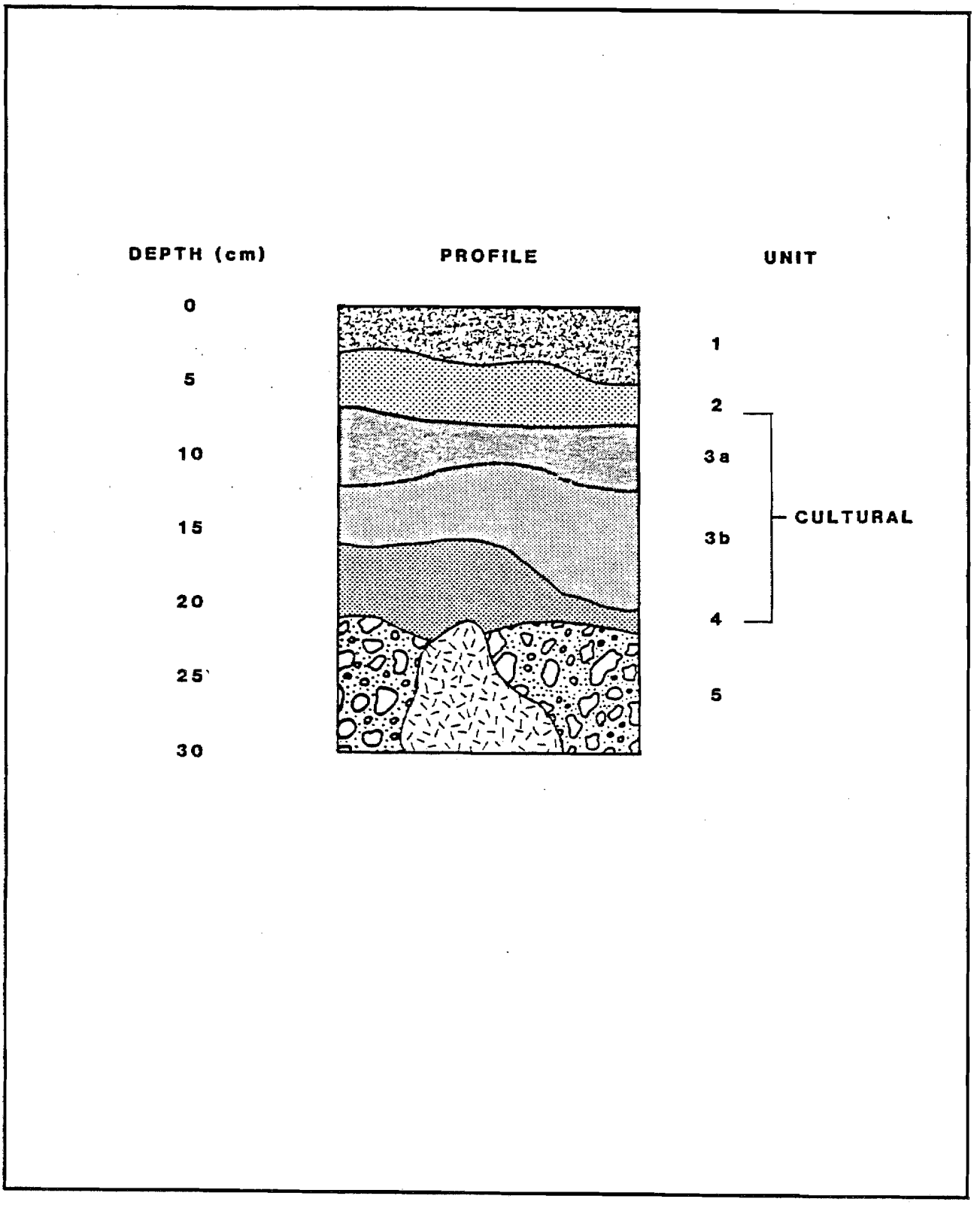


Figure D.243. Composite Profile, TLM 194

Table D.309.

Soil/Sediment Description for Composite Profile, TLM 194

Unit	Description
1	Surface organic layer and very fine silt: decomposed plant fragments, roots, and rootlets from Labrador tea, blueberry, lowbush cranberry, crowberry, heath, lichen, and moss. Varies in thickness from 1-7 cm, but usually 3-5 cm. Lower boundary clear. Continuous. 01 horizon.
2	Fine-grained silt size particles; pinkish gray (7.5YR 6/2) to brown (7.5YR 5/2). Ranges in thickness from 1-6 cm, but usually 3-4 cm. Clear contact with 3a. Devil tephra; eluvial A horizon. Continuous. Cultural material at lower contact.
3a	Fine to medium silt size particles, granular structure; very dusky red (10R 2.5/2). Ranges in thickness from 1-7 cm, but usually 3-5 cm. Lower boundary gradual to diffuse. Discontinuous. Watana tephra; illuvial B2 horizon. Oxidized. Cultural material near upper contact.

Table D.309. (Continued)

Unit	Description
3b	Fine to medium silt size particles; dark yellowish brown (10YR 4/6) to (10YR 3/6). Ranges in thickness from 1-10 cm, but usually 4-6 cm. Lower boundary clear to gradual. Watana tephra; illuvial B2 horizon. Discontinuous. Disturbed by cryoturbation. Cultural material within unit and at its lower extent.
4	Fine silt size particles mixed with sand; olive brown (2.5Y 4/4). Ranges in thickness from 1-8 cm, but usually 3-5 cm. Lower boundary gradual to diffuse. Oshetna tephra; buried, eluvial A horizon. Disturbed by cryoturbation. Discontinuous. Cultural material at the upper contact with unit 3b.
5	Sand and silt size particles mixed with pebbles and cobbles; strong brown (7.5YR 5/6) to (7.5YR 4/6). Frost features present. Glacial drift. Unit determined the extent of excavation.

Table D.310.

Artifact Summary, TLM 194

Lithic Material	
7	Argillite flakes
11	Basalt flakes
18	

Table D.311.

Artifact Summary by Stratigraphic Unit, TLM 194

Unit		Description
2/3a Contact between Devil and Oxidized Watana tephras	1	Basalt flake
3b	1	Argillite flake
Unoxidized	1	Basalt flake
Watana tephra		

Table D.311. (Continued)

Unit		Description
3b/4	1	Argillite flake
Contact between unoxidized Watana and Oshetna tephras	9	Basalt flakes
5	5	Argillite flakes
Drift		

AHRS Number TLM 195; Accession Number UA83-121

Area:	East of Watana Creek
Site Map:	Figure D.244
Survey Locale 142:	Figure E.228
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site is situated on the gradual slope of a northeast-southwest oriented ridge east of Watana Creek and north of a narrow drainage at an elevation of ca. 750 m asl (2500 feet). The clear water drainage to the south serves as an outlet for several small lakes (2 ha or less) located to the north and east of the site. The surrounding undulating kettle and kame topography is visible in all directions except to the northeast where the ridge gradually slopes up and broadens out into a flat, boggy muskeg area. The view to the south overlooks the sweeping north-facing slope of the unnamed drainage and a terrace beyond. A view of the drainage itself is blocked by the sloping, undulating terrain. High knolls and the west rim of Watana Creek's deep valley are visible to the west. Also visible is the west valley wall, approximately 60 m in height and characterized by slumping and mass wasting. The site vegetation is comprised of an upland spruce-hardwood forest consisting of white spruce, alder, willow, dwarf birch, lowbush cranberry, Labrador tea, blueberry, bearberry, crowberry, dwarf dogwood, white lichen, and moss. The spruce and alder become more common downslope and less common upslope from the site.

Testing:

The site contains both surface and subsurface cultural material. A basalt flake was located on the edge of a southwest-oriented, elongated ridge with a ca. 4-5 degree slope. A 40 x 40 cm test (test pit 1) was placed 1.3 m southwest of the surface find. A thermally altered red chert flake was recovered from the contact of the organic mat and a

yellowish brown sandy silt 5 cm below the surface. A basalt flake was also recovered from this test pit in a gray sandy gravel beneath the yellowish brown sandy silt (Table D.312). Eight shovel tests were placed 10 m and 5 m, respectively, in each cardinal direction from test pit 1, all with negative results. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.312.

Artifact Summary, TLM 195

Provenience		Description
Lithic Material		
Surface:	1	Basalt flake
Subsurface:		
Test Pit 1	1	Basalt flake
	1	Chert flake

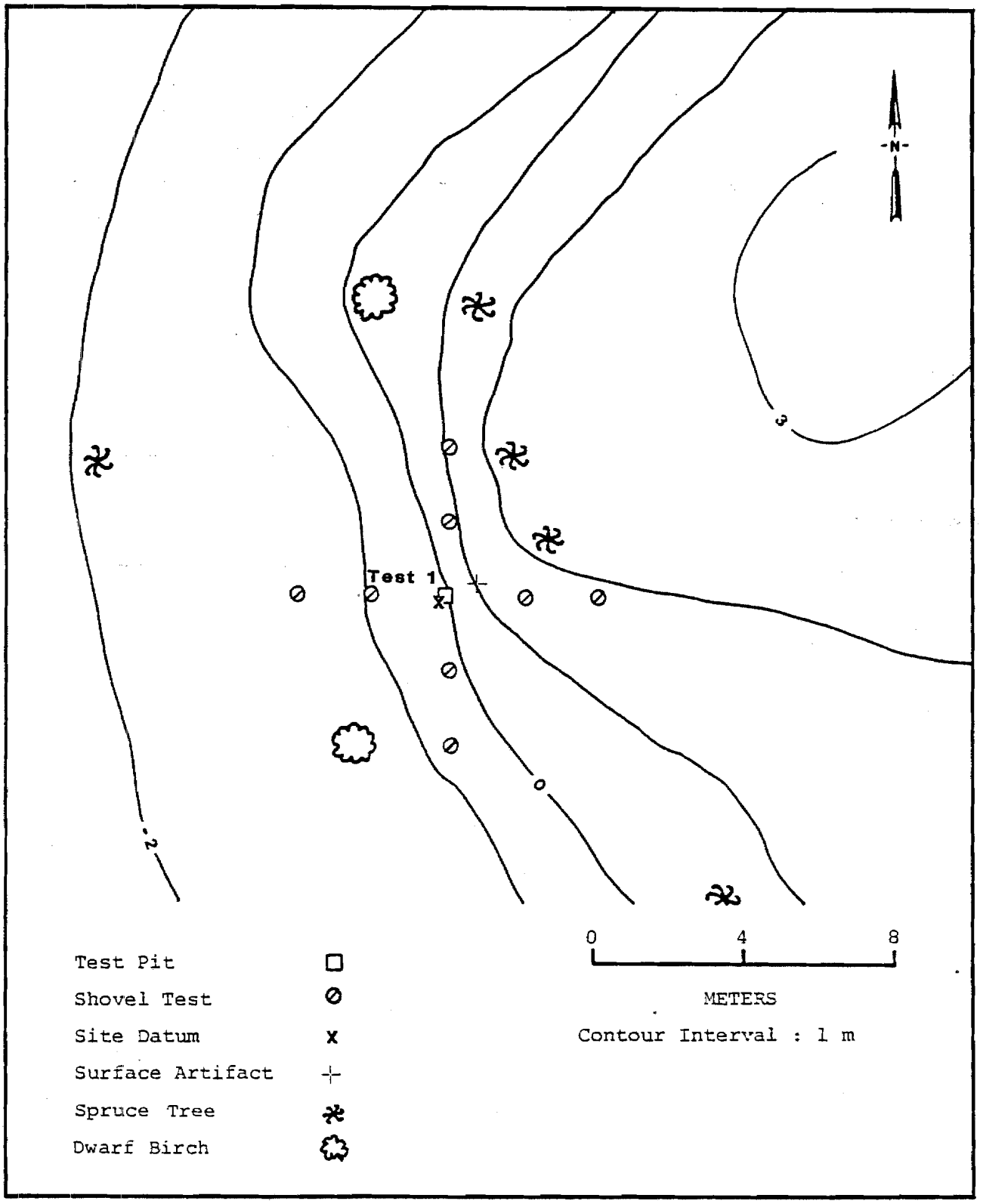


Figure D.244. Site Map, TLM 195

AHRS Number TLM 196; Accession Number UA83-122

Area:	Southwest of Goose Creek Mouth
Site Map:	Figure D.245
Survey Locale 123:	Figure E.194
USGS Map:	Talkeetna Mts. C-1, Figure E.8
Site Location:	Appendix F

Setting:

TLM 196 is located on the east bank of Goose Creek upstream from its confluence with the Susitna River. The site is located in a soil exposure resulting from soil slumping or solifluction. The site is 7 m east of Goose Creek and about 3 m above stream level. TLM 196 is at an elevation of 662 m asl (altimeter: 2172 feet) and is near the bottom of the small valley containing Goose Creek on a low stream terrace with infrequent erosional slumps. The view from the site is restricted to the immediate vicinity of Goose Creek for approximately 400 m upstream to the south and for 200 m downstream to the north-northeast. Heavy vegetation and slopes of greater than 20 degrees prevent views to the west and east. Vegetation on the site is of the lowland spruce hardwood type. It consists of equisetum, shrub willow, grasses, Labrador tea, fireweed, birch, and dwarf birch. Immediately adjacent to Goose Creek are moister lowlands with sphagnum moss and other wet tundra vegetation. The steep slopes confining Goose Creek maintain dense willow thickets and heavy stands of black spruce.

Testing:

TLM 196 was found when a large mandibular fragment with molar was found on an eroded surface below an erosional slump. The slumped area was cut back and another bone fragment was found in situ in massive, silty clay deposits. A 2 m wide excavation, 50 cm into the bank, uncovered three additional fragments of the mandible. Two radiocarbon samples from above the bone unit produced dates of 2040 ± 70 years: 90 B.C. (Beta-7292) and 2120 ± 60 years: 170 B.C. (Beta-7293). The dates

likely refer to the redeposition of the faunal remains and not to the age of the specimen, which appears to be late Pleistocene in origin, based on molar size (Table D.313). The complete molar associated with this specimen is approximately 1/3 larger than similar molars found in modern moose, but compares favorably in size to Pleistocene age specimens (Dr. R. Dale Guthrie, personal communication). All bone fragments seem to be derived from organic lenses in massive, clayey solifluction or mud flow deposits. The five bone fragments articulate together representing the molar row and ramus of a large moose (Figure D.389e). Because no unequivocal artifacts were recovered in association with the mandible it is possible that this is not an archeological site. Observed site size based on the distribution of faunal remains is 4 square meters (Table D.2).

Table D.313.

Artifact Summary, TLM 196

Provenience		Description
Lithic Material		
Subsurface:		
Test Pit 1	4	Rock fragments

Table D.313. (Continued)

Provenience		Description
Faunal Material		
Surface:	1	Mandibular fragment, with molar, unburned, moose (*Alces* sp.)
Subsurface:		
Test Pit 1	4	Mandibular fragments, unburned, moose (*Alces* sp.)

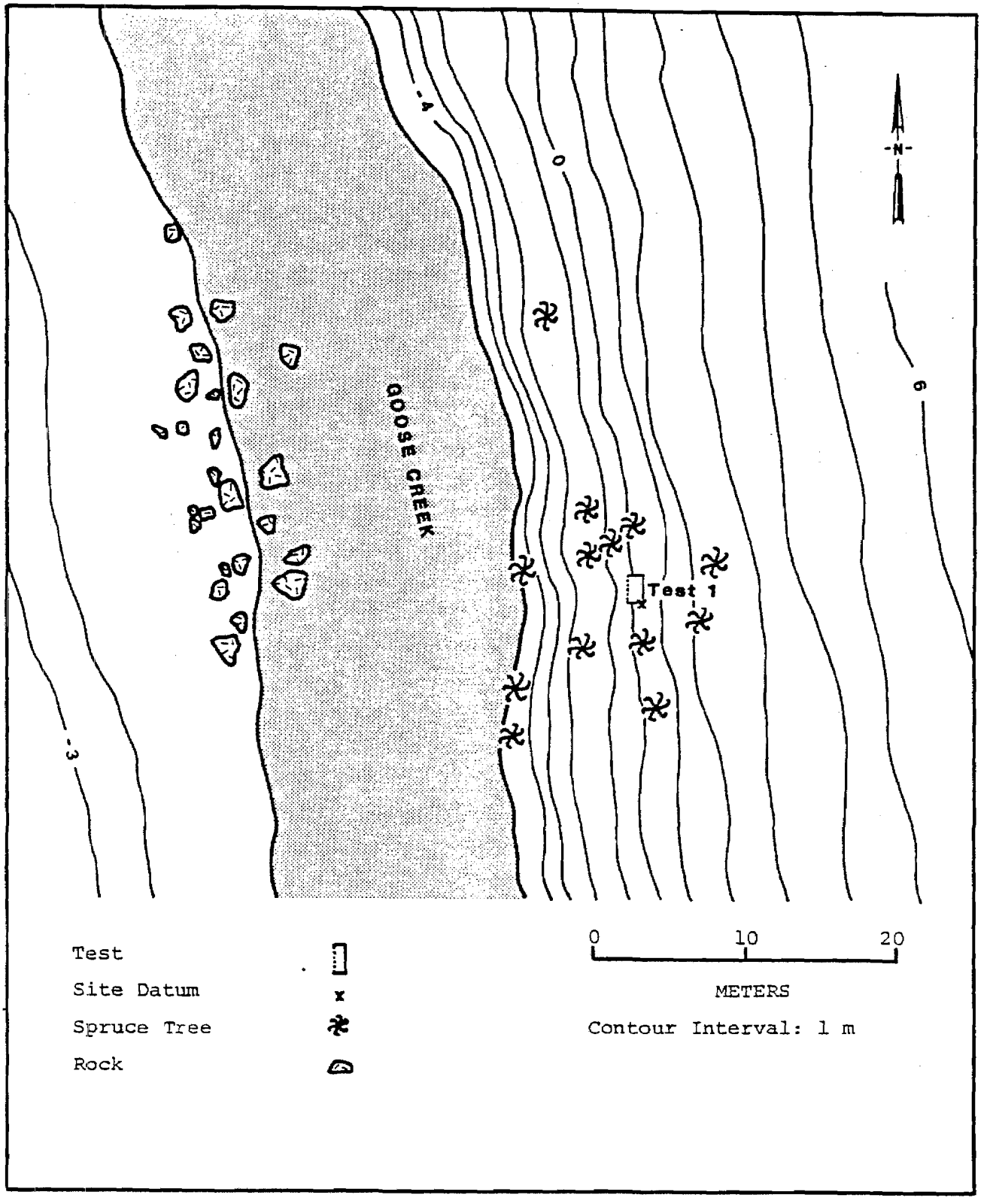


Figure D.245. Site Map, TLM 196

AHRS Number TLM 197; Accession Number UA83-123

Area:	North of Deadman Creek Mouth
Site Map:	Figure D.246
Survey Locale 150:	Figure E.243
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 197 is located at an elevation of just over 730 m asl (2400 feet) west of Deadman Creek and north of its confluence with the Susitna River. The site is on a 15-20 degree southwest-facing slope on a low ridge. The ridge occurs on a gently rolling plain that slopes gradually southward toward the Susitna River. The plain is generally boggy, characterized by fairly level, moist muskeg areas and shallow ponds among occasional low, flat ridges. Two small ponds, each less than 1 ha in area, lie south of the site. Another, larger pond is located southeast of the site. The ridge on which TLM 197 is located curves around the northwest, north, and northeast margins of the nearest pond to the south. The ridge is approximately 6 m above the pond and adjacent swampy area. The south slope of the ridge has intermittent gravel exposures, with TLM 197 located on one of them, ca. 3 m above and overlooking the swamp. The view to the northeast is obstructed by the ridge and the thick dwarf birch stands, up to 2 m in height, that cover it. Toward the northwest, Tsusena Butte is visible across higher, more pronounced ridges. Other ridges covered with dwarf birch and scattered black spruce obstruct the view to the east and south. To the southwest, the large bare knoll on which TLM 016 lies is prominent. The view over the plain extends in this direction to the ridges just north of the Susitna River. The vegetation of the slope on which TLM 197 lies consists of sparse Labrador tea, blueberry, bearberry, and crowberry with lichens and grasses. Dense dwarf birch and occasional black spruce cover the low ridges in the vicinity, the boggy plain is largely moss with grasses and infrequent black spruce, and the swamp and pond-edge flora include moss, sedges, and water lilies.

Testing:

A single gray chert core (UA83-123-1; Figure D.389c), from which two flakes had been removed (Table D.314) was found on a slope exposure about 20 (northwest-southeast) x 5 m (southwest-northeast). No additional artifacts were found in any of the 10 shovel tests or in the 40 x 40 cm test pit 1 (Figure D.246). Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.314.

Artifact Summary, TLM 197

Provenience		Description
Lithic Material		
Surface:	1	Chert flake core (UA83-123-1)

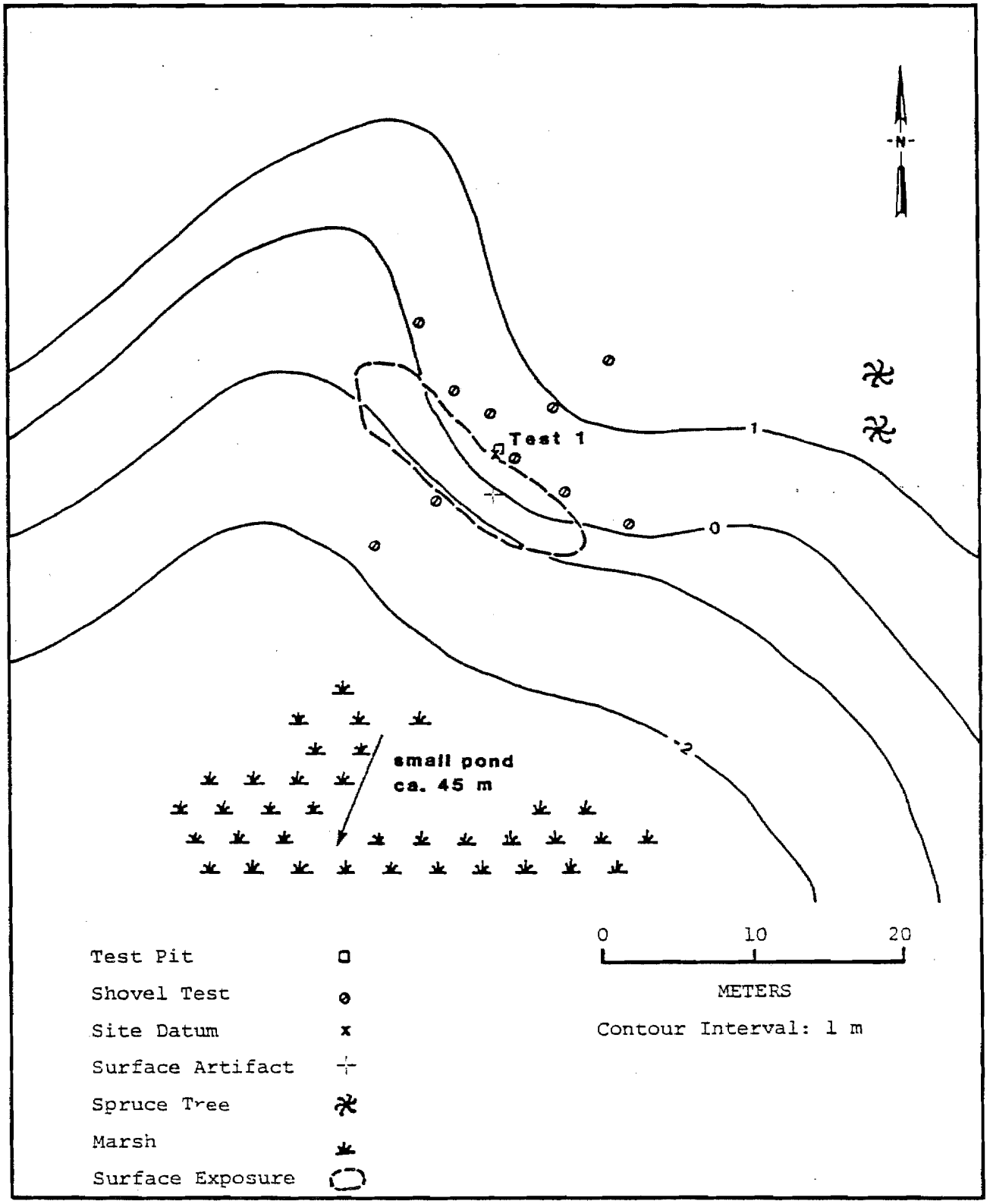


Figure D.246. Site Map, TLM 197

AHRS Number TLM 198; Accession Number UA83-124

Area:	Northeast of Watana Creek Mouth
Site Map:	Figure D.247
Survey Locale 141:	Figure E.227
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 198 is on a high plateau ca. 732 m asl (2400 feet), northeast of the confluence of Watana Creek with the Susitna River. The site is at the extreme southern end of the plateau where it begins a steep descent to Watana Creek to the south. The plateau is dissected by numerous stream channels which drain the plateau and give its margins a scalloped appearance. The plateau is bordered on the east by Watana Creek and on the west by a major tributary of Watana Creek. The two streams converge southwest of the site. North from TLM 198 the plateau extends for several kilometers and is relatively level. The region is poorly drained with numerous, shallow, water-filled depressions. Due to its location at the edge of the plateau, the site has unobstructed views of Watana Creek to the south and east. A small stream is present west of the site. The stream's course is steep and heavily vegetated. Vegetation on the site consists of open stands of dwarf birch, mosses, lichens, blueberry, and several small white spruce. Vegetation on the remainder of the plateau is similar to the above.

Testing:

The site contained a single, patinated argillite modified flake (UA83-124-1) found in a shovel test (Table D.315). The exact stratigraphic provenience of the flake is unknown, but it may have originated from a root zone between the Devil and Watana tephras. A 40 x 40 m test pit (test pit 1) and six additional shovel tests in the vicinity of the find were sterile. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.315.

Artifact Summary, TLM 198

Provenience		Description
Lithic Material		
Subsurface:		
Test Pit 1	1	Argillite modified flake (UA83-124-1)

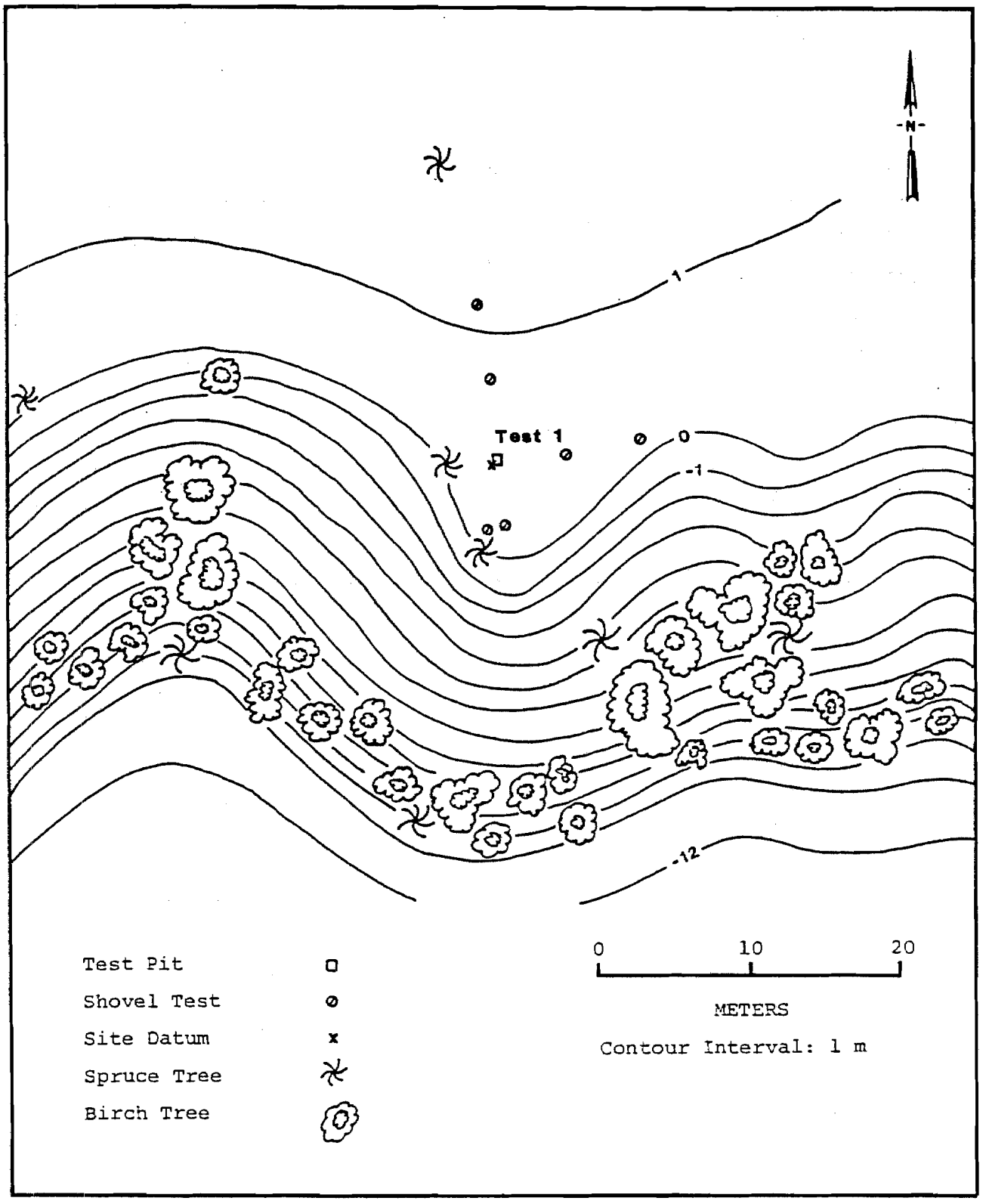


Figure D.247. Site Map, TLM 198

AHRS Number TLM 199; Accession Numbers UA83-125, UA84-137

Area:	Northwest of Watana Creek Mouth
Site Map:	Figure D.248
Survey Locale 22:	Figure E.99
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 199 is on the western end of a relatively minor forested kame northwest of the confluence of Watana Creek with the Susitna River. This kame forms the first ridge north of the Susitna River terrace and is the lowest in a series of east-west trending ridges. TLM 199 is on the lowest end of the ridge at an elevation of 521 m asl (altimeter: 1679 feet), with higher ridges and knolls to the north and east. A circular kettle depression is located ca. 30 m north of the site. There is a prominent terrace to the south, and beyond that the Susitna River. Watana Creek is to the southeast. To the north and west are a series of kames and ridges that rise about 60 m above TLM 199. Approximately 100 m to the northwest is a small stream, apparently following a remnant stream channel that drains a ca. 2 ha lake approximately 300 m to the northeast and disappears into a small depression ca. 75 m southwest of the site. Visibility from TLM 199 is restricted to approximately 50 m in all directions. To the south and west, dense stands of birch and spruce obstruct the view, while to the north and east higher ridges and knolls are found. Vegetation on the site consists of white spruce, birch, dwarf birch, Labrador tea, blueberry, timberberry, lowbush cranberry, dwarf dogwood, grasses, low heath, moss, and lichen. The off-site vegetation is very similar with birch dominating the south-facing slopes and black spruce on the north-facing slopes and in the kettle features.

Testing:

TLM 199 was initially found during survey level testing with the recovery of subsurface cultural material. The initial shovel test that revealed lithic material was expanded into a 40 x 40 cm test pit (test pit 1). Seven additional shovel tests revealed no other artifacts.

A grid shovel testing program was implemented to assist in determining the site size and the extent of the occupation identified during survey testing. Twenty-five grid shovel tests were excavated at the site, however, all proved sterile. The grid shovel test which would have fallen in the center of a depression (feature 1) was not excavated, as the cultural nature of the depression was evident. Systematic testing at TLM 199 consisted of the excavation of one 1 x 1 m test square, N100/E98. This test square was placed on the eastern edge of the berm surrounding the depression, directly west of test pit 1.

Discussion:

Testing at TLM 199 resulted in a total artifact assemblage of 579 flakes. The results of the survey and systematic testing identified two cultural components at TLM 199. The total artifact summary from all phases of testing is listed in Table D.317. The distribution of lithic material by stratigraphic unit is presented in Table D.318.

Two classes of lithic raw material are identified in the lithic assemblage, argillite and basalt. Basalt is the most abundant type, represented by 576 flakes. Argillite is represented by only three flakes.

Six soil/sediment stratigraphic units are identified at TLM 199. Figure D.249 illustrates the vertical superposition of these units. Table D.316 describes the various unit characteristics. The vertical placement of the soil/sediment units is fairly consistent throughout the test square. A general stratigraphic section consists of an eolian sand (unit 6) at the sterile extent of the excavation. This eolian sand

extends for ca. 20 cm where it contacts a coarse sandy drift mixed with small pebbles. The eolian sand is overlain by a sequence of three tephras. The Oshetna tephra (unit 5b) is continuous throughout the test square and is overlain by a well-defined paleosol (unit 5a). Overlying this paleosol is a continuous layer of unoxidized Watana tephra (unit 4) that varies in color from a buff to strong brown. There is no evidence of an oxidized Watana tephra as found elsewhere in the project area. Overlying the Watana tephra is the Devil tephra (unit 3). Above the Devil tephra in the west half of the test square is a sand matrix (unit 2) which represents backfill material from the cultural depression (feature 1). The contemporary root mat (unit 1) caps the stratigraphic sequence.

Five of the six soil/sediment units and the contacts with these units have associated and displaced cultural material; however, only two cultural components are identified at TLM 199. All of the lithic material found at TLM 199 can be correlated to the initial occupation of the site. The majority of this lithic material was found in the paleosol above and within the Oshetna tephra (unit 5). Less than two percent of the flakes occurred above and below this cultural unit. One basalt flake was found in the backfill material from the cultural depression and was probably displaced during the second occupation of the site. Disturbance of the stratigraphic units is evident due to natural processes such as cryoturbation and bioturbation.

Upper Component: The upper component at TLM 199 is correlated to a post-Devil tephra occupation of a cultural depression which is exposed on the surface approximately 2 m west of the test square. This depression is roughly rectangular in shape and measures 1.5 x 1.7 x 0.5 m. Several carbonized and unburned wooden structural members are exposed in the north, west, and south walls of the depression. These exposed wooden beams are oriented both north-south and east-west and are presumed to be the remains of roofing material of a semisubterranean structure. The actual type of construction of this structure is unknown, since the depression was not excavated during systematic testing. However, the configuration of the structural remains (that is,

semisubterranean) is similar to other depressions in the Watana drainage area, specifically, TLM 104, which is located ca. 300 m to the northeast of the site. A well-defined berm extends 1 m beyond the depression, although the sandy backfill matrix from the depression was found in shovel tests extending 2 m from the depression and in the western half of the test square. The remains of a partially charred wooden beam were exposed in the northwest quadrant of the test square. This decomposed beam was found in the sandy backfill material (unit 2) above the Devil tephra and may represent the eastern extent of the roof remains. No evidence of artifactual material was found in association with this feature.

A white spruce tree (15 cm in diameter) was located on the western edge of the depression. Four dendrochronology samples were taken from this tree in order to provide an upper limiting date for the occupation of the depression. The tree contained an average of 60 rings, indicating that it is approximately 60 years old. These dendrochronological samples would suggest a minimum age for the depression of 60 years.

Lower Component: The lower component at TLM 199 can be correlated to the paleosol (unit 5a) and the Oshetna tephra (unit 5b). Three argillite flakes and 556 basalt flakes were found in this unit and its upper contact. The one basalt flake found in the Devil tephra (unit 3) may also have been displaced when the cultural depression was excavated. The two basalt flakes found in the Watana tephra (unit 4) were noted at the lower extent of this unit and may have been moved up by cryoturbation. Cryoturbation may also have caused downward movement of 16 basalt flakes found at the contact between the Oshetna tephra and eolian sand (unit 5/6) and within the eolian sand (unit 6). With the exception of 14 basalt flakes, all other lithic material was concentrated in the northeast quadrant of the test square. Several flakes were observed in the north half of the east wall.

Evaluation:

TLM 199 is situated on the western end of an east-west trending kame below higher ridges and knolls to the north and east separated by a low circular kettle depression. Visibility is restricted to about 50 m by these higher landforms in the northeasterly directions. Dense stands of birch and spruce obstruct the views to the south and west.

Testing at TLM 199 identified two cultural components. The upper component at TLM 199 is correlated to a post-Devil tephra occupation and may be culturally affiliated with the late Athapaskan tradition of Interior Alaska. This component is represented by a seasonally occupied semisubterranean shelter. Although the shelter was not excavated, there is evidence of structural remains that suggest a sod, birch bark, and pole construction. This component of TLM 199 is similar to other depression sites in the Watana drainage which appear to be culturally related.

The lower component consists of a dense lithic concentration associated with the paleosol and within the Oshetna tephra. This lithic concentration is represented solely by flake debitage that indicates a final stage of lithic reduction. The absence of flakes with cortex and diagnostic tools on the site may indicate that cultural activity was restricted to resharpening tools. Observed site size based on the distribution of artifacts is 46 square meters (Table D.2).

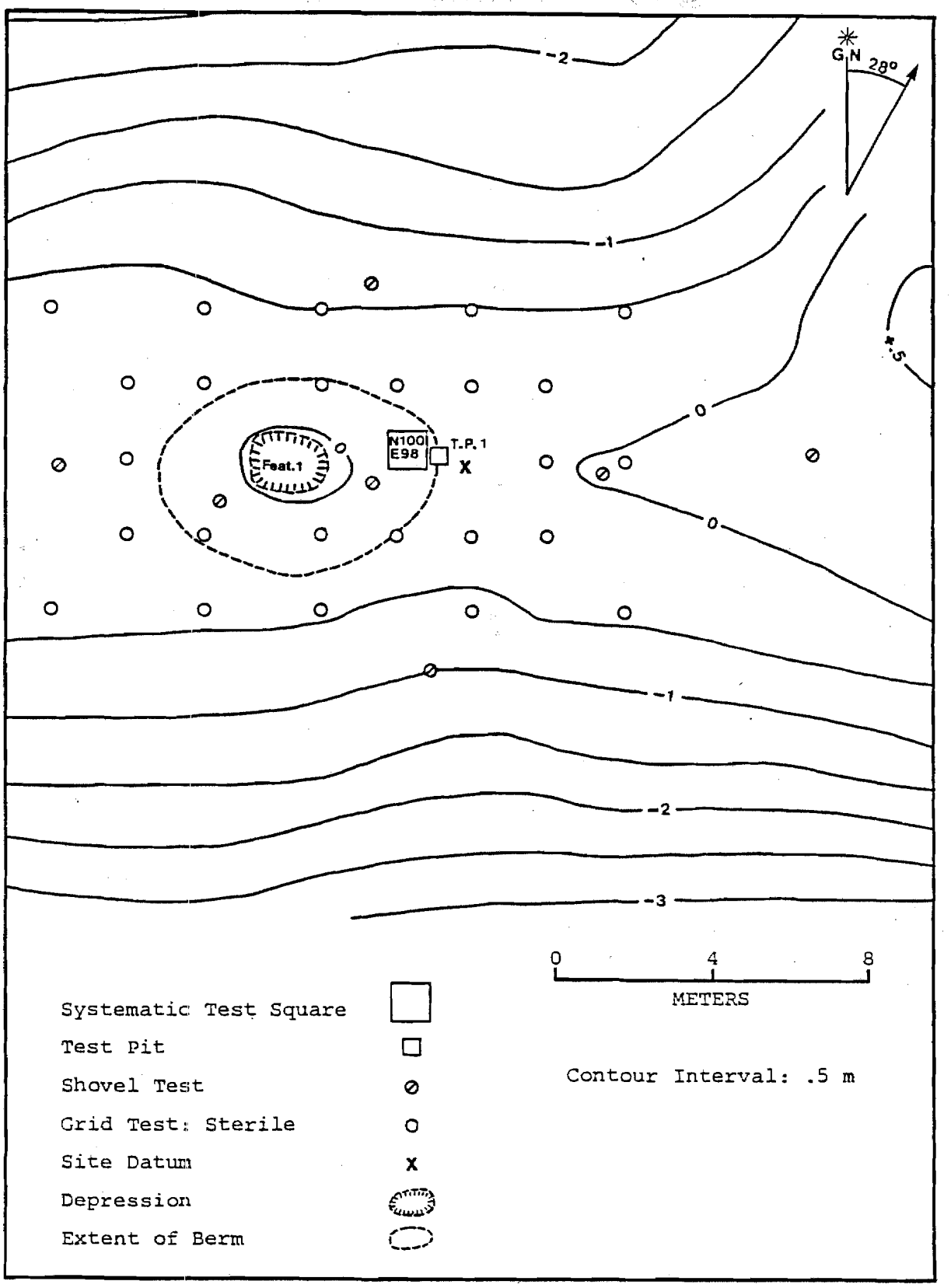


Figure D.248. Site Map, TLM 199

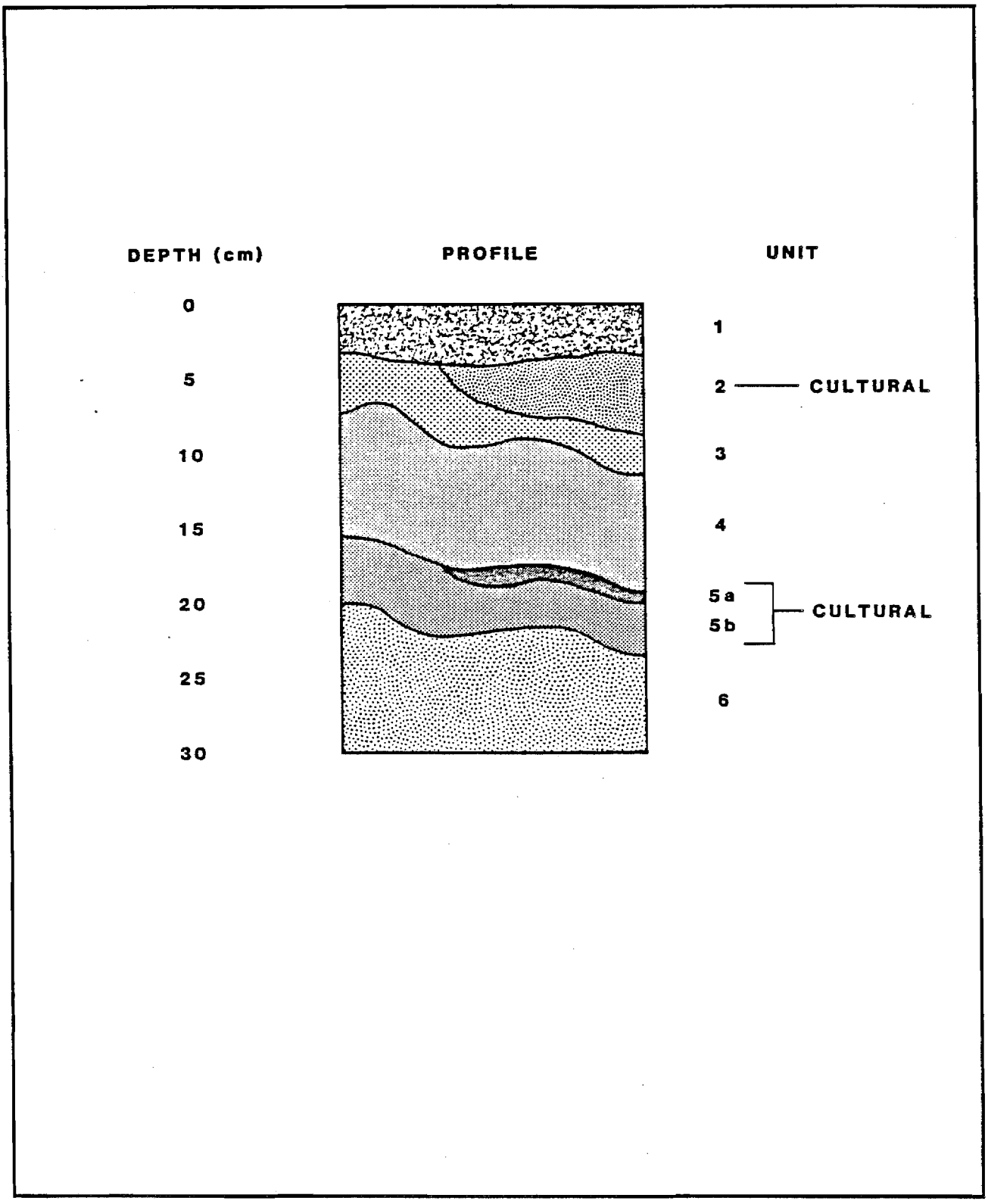


Figure D.249. Composite Profile, TLM 199

Table D.316.

Soil/Sediment Description for Composite Profile, TLM 199

Unit	Description
1	Surface organic layer; decomposed plant debris, roots, and rootlets from Labrador tea, lowbush cranberry, timberberry, dwarf dogwood, reindeer lichen, low heath, grasses, and moss. Varies in thickness from 1-6 cm, generally 3 cm. Lower boundary clear and smooth. Nonmineral O1 horizon. Continuous.
2	Fine to medium silt and sand size particles; dark yellowish brown (10YR 4/4). Varies in thickness from 3-8 cm, generally 5 cm. Lower boundary clear and smooth. Occurs only in the west half of the test square. Backfill material from the cultural depression.
3	Fine-grained silt size particles; light grayish brown (10YR 6/2) to grayish brown (10YR 5/2). Varies in thickness from 2-8 cm, generally 4 cm. Lower boundary clear to wavy. Tephra (Devil); eluvial A horizon. Continuous. Dries to a fine powder. Root penetration.
4	Fine silt size particles; strong brown (7.5YR 4/6) to pale brown (10YR 6/3). Varies in thickness from 2-15 cm, generally 7 cm. Lower boundary clear and wavy. Tephra (Watana); illuvial B2 horizon. Continuous. Unoxidized.

Table D.316. (Continued)

Unit	Description
5a	Small to medium size pieces of charcoal and carbonized plant material; black (N2/). Occurs as a lens less than 1 cm in thickness. Paleosol. Discontinuous but found throughout the test square. Bifurcates in some places. Appears as isolated charcoal concentrations at the upper contact of unit 5. Cultural.
5b	Very fine silt size particles; dark grayish brown (10YR 4/2). Varies in thickness from 2-10 cm, generally 4 cm. Lower boundary is smooth and wavy. Tephra (Oshetna); buried eluvial horizon. Continuous. Cultural unit.
6	Finely sorted silt and sand size particles; strong brown (7.5YR 4/6) to dark yellowish brown (10YR 4/4). Eolian sand.

Table D.317.

Artifact Summary, TLM 199

Lithic Material

3	Argillite flakes
576	Basalt flakes
579	

Table D.318.

Artifact Summary by Stratigraphic Unit, TLM 199

Unit		Description
2	1	Basalt flake
Backfill from cultural depression		
3	1	Basalt flake
Devil tephra		
4	2	Basalt flakes
Watana tephra		
4/5	161	Basalt flakes
Contact between Watana tephra and Oshetna tephra		
5	3	Argillite flakes
Oshetna tephra	395	Basalt flakes
5/6	12	Basalt flakes
Contact between Oshetna tephra and eolian sand		
6	4	Basalt flakes
Eolian sand		

AHRS Number TLM 200; Accession Number UA83-126

Area:	Northwest of Watana Creek Mouth
Site Map:	Figure D.250
Survey Locale 22:	Figure E.99
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 200 is located at 550 m asl (altimeter: 1804 feet) west of Watana Creek and north of the Susitna River. The site is located about 30 m northeast of and ca. 5 m below the summit of a northeast trending kame on a 10-15 degree slope. The site is on the highest terrain feature immediately northwest of the confluence of Watana Creek with the Susitna River. TLM 200 is situated northeast of the summit of the knoll, with views to the north, west, and east. Open ground is found immediately west of the site on the west slope. The south-facing slopes, north of the site, are obscured by mixed spruce-hardwood forests. The closest water source is ca. 150 m to the northeast. To the southeast of TLM 200 is an old river terrace ca. 70-100 m below the level of the site but obstructed from view by dense birch-spruce forest. A remnant stream channel is present to the northwest. Vegetation on the site consists of birch and scattered white spruce. Ground cover is composed of Labrador tea, berries, lichens, and moss. The surrounding vegetation is thick birch forest on the tops of ridges and slopes, with spruce and dense stands of dwarf birch in lowland areas.

Testing:

A single basalt flake was recovered during survey from a shovel test, later expanded to a 40 x 40 cm test pit (test pit 1). Eight other shovel tests failed to produce cultural material. The stratigraphic context of the flake was uncertain.

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Grid shovel testing was implemented to assist in determining the site size and the distribution of cultural material. Sixteeen grid shovel tests were excavated. A 1 x 1 m test square (N101/E99) was placed adjacent to test pit 1. In addition, seven survey shovel tests were placed on the hill top and on the ridge northeast of the site (beyond the site map perimeter); all seven tests were sterile. Figure D.250 depicts the location of testing conducted during survey, grid shovel, and systematic testing.

Discussion:

No artifacts were recovered from either the grid shovel tests or the excavation of test square N101/E99. The basalt flake encountered during survey testing was the only artifact recovered from the site. The observed stratigraphy of the site is depicted in Figure D.251 and described in Table D.319. Tables D.320 and D.321 list the artifacts recovered from TLM 200.

Evaluation:

Although the stratigraphic context of the site remains unclear after grid shovel testing and test square excavation, the negative results from systematic testing do indicate that the site is very limited in both spatial extent and artifact content. Observed site size based on the distribution of artifacts is 4 meters (Table D.2).

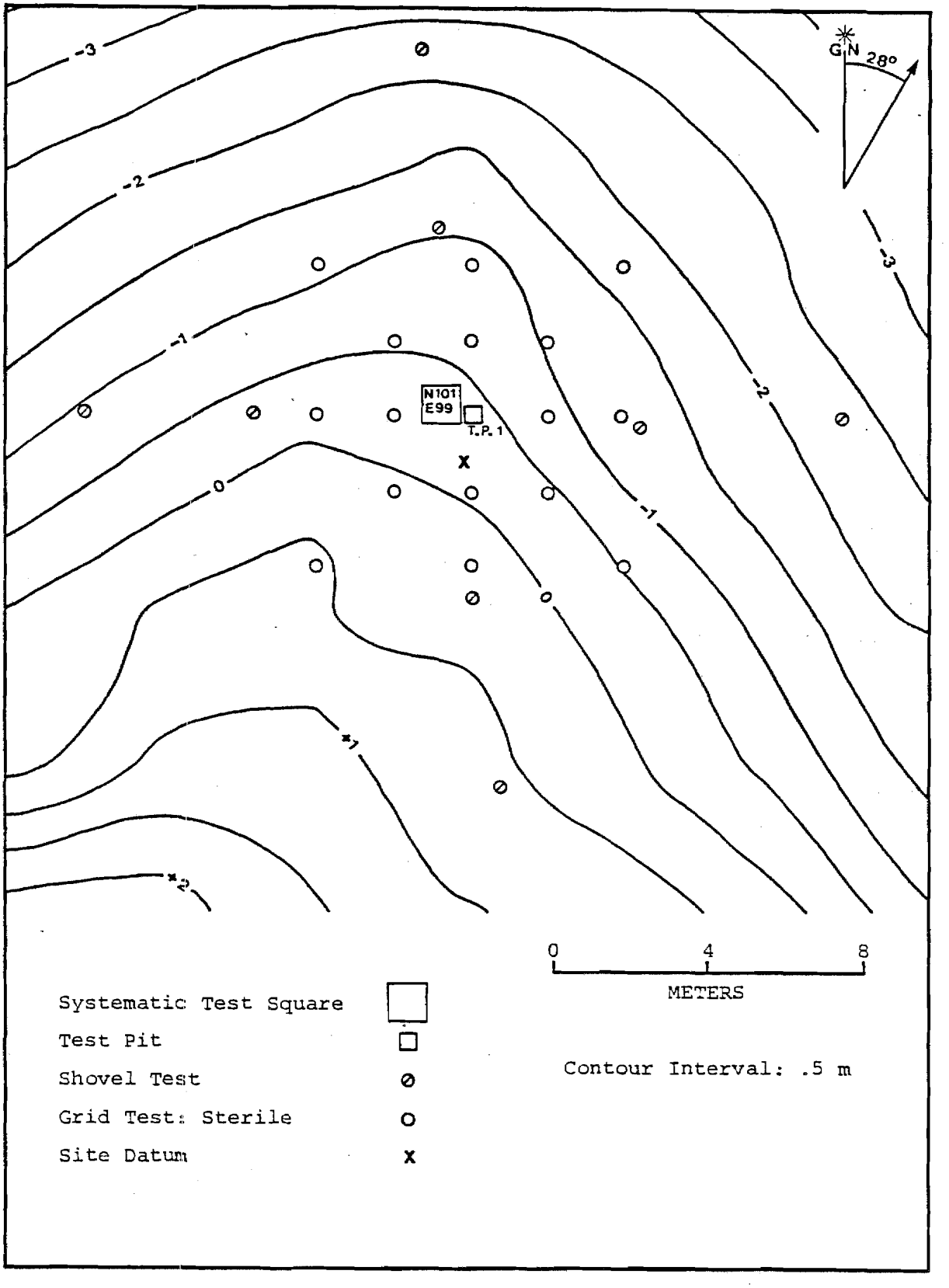


Figure D.250. Site Map, TLM 200

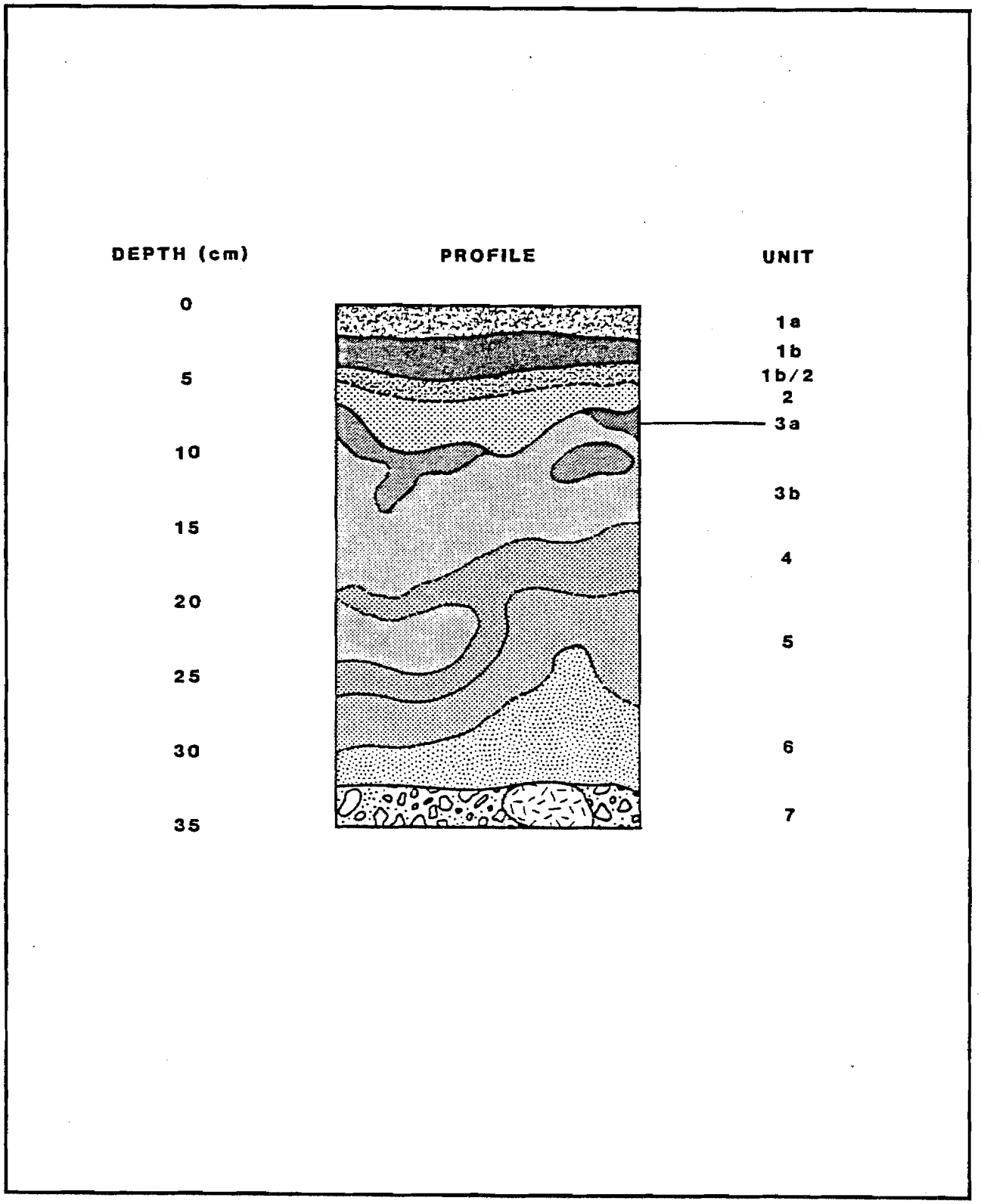


Figure D.251. Composite Profile, TLM 200

Table D.319.

Soil/Sediment Description for Composite Profile, TLM 200

Unit	Description
1a	Surface mat of abundant roots, decomposing organic debris, and small amount of silt; dark reddish brown (5YR 3/2). Continuous. Varies from 1-10 cm, with a modal value of about 7 cm. Grades abruptly to a highly decomposed organic silt unit (unit 1b)
1b	Organic rich silt with abundant rootlets; black (5YR 2.5/1). Occurs as O2 horizon below surface organic mat (unit 1a). Discontinuous. Thickest where unit 1a is thickest, about 2-3 cm thick when present. Very often missing or more commonly mixed with Devil tephra (unit 2) to form a organic rich tephra silt (unit 1b & 2). Mixed unit 1b & 2 is very common, replacing units 1b and 2 through most of square. Abrupt, wavy contact with units 2 and 3.
2	Very fine well-sorted silt with platy texture; light brownish gray (10YR 6/2). Devil tephra. Fairly continuous (except where mixed with unit 1b). Varying from 1-7 cm, usually 2-4 cm thick. Often underlies unit 1b & 2 mix. Upper contact abrupt and wavy, with some carbon-staining; lower contact also abrupt and wavy with some staining by iron oxides.

Table D.319. (Continued)

Unit	Description
3a	Patches of extremely fine well-sorted silt, with iron oxide coatings on the silt grains to the point of concretion and sandy texture; dark reddish brown (5YR 3/3). Usually above unit 3b, but may occur as a patch within it. Oxidized Watana tephra, with color and texture the result of soil development (B horizon). Varies from less than 1-6 cm, usually 2-4 cm thick. Mottled and gradational with unit 3b, with diffuse irregular contact.
3b	Extremely fine well-sorted silt, light yellowish brown (2.5Y 6/4) to dark yellowish brown (10YR 4/6). Buff Watana tephra. Continuous. Varies from 2-20 cm, usually 4-8 cm thick. Abrupt and highly irregular to wavy lower contacts with units 4 or 5. Sometimes heavily cryoturbated and mottled with patches and waves of unit 4 or 5 included in it, or patches included in units 4 or 5.
4	Sandy silt with abundant finely divided charcoal fragments; olive (5YR 4/3). Paleosol unit above Oshetna tephra (unit 5). Usually thin, often discontinuous or missing. About 1 cm thick, but up to 3 cm in cryoturbated pockets. Sometimes mixed with units 3b or 5. Unit may form distinct irregular stringers into Watana tephra (unit 3b). Abrupt contact with unit 5 where unmixed with it.

Table D.319. (Continued)

Unit	Description
5	Fine sandy silt, with a few pebbles; olive gray (5Y 5/2). Oshetna tephra. Varies from 0-9 cm, usually 1-2 cm thick or missing altogether. Abrupt lower contact.
6	Fine sand, well-sorted and probably eolian, without pebbles; dark yellowish brown (10YR 3/6). Discontinuous. Varies from 0-10 cm thick (the latter in cryoturbated pockets). Abrupt irregular contacts with units 3b, 4, or 5, in which it will sometimes form pockets and stringers. Abrupt level contact with unit 7 below.
7	Coarse pebbly sand with rounded to angular cobbles; dark yellowish brown (10YR 4/4). Poorly sorted unweathered glacial drift. Marks bottom of excavation.

Table D.320.

Artifact Summary, TLM 200

Lithic Material	
1	Basalt flake

Table D.321.

Artifact Summary by Stratigraphic Unit, TLM 200

Unit		Description
Subsurface unknown	1	Basalt flake

AHRS Number TLM 201; Accession Numbers UA83-127, UA84-233

Area:	North of the Confluence of Clark Creek with Tsusena Creek
Site Map:	Figure D.252
Survey Locale:	Proposed Borrow C, Figure E.277
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 201 is located west of Tsusena Creek and north of the confluence of Clark Creek with Tsusena Creek. The site is on an elongated northeast-southwest trending kame (ca. 20 x 5 m), which is part of the first terrace above Tsusena Creek. The kame is ca. 10 m above Tsusena Creek, at 732 m asl (altimeter: 2402 feet) and is the first kame north of a swampy area, consisting of patches of grasses with standing water and patches of black spruce bog, which extends along the western margins of Tsusena Creek almost to its confluence with Clark Creek. The terrace system slopes gently westward to the flanks of the hills that separate the Clark Creek and Tsusena Creek drainages. A small stream, less than 2 m wide, separates the site kame from the remainder of the terrace system to the north and northwest. The kame and associated terraces to the north and west are covered by mosses (some in hummocky patches), lichens, blueberry, crowberry, Labrador tea, dwarf birch, dwarf willow, and dogwood. Scattered spruce trees are present around the perimeter of the kame and on the terraces. The site has an excellent view of the northwestern spur of Tsusena Butte and the butte itself as well as the Tsusena Creek valley to the south and southeast.

Testing:

TLM 201 was represented by subsurface and surface flakes (Table D.322). Test pit 1 produced one flake at the contact between the organic mat and Devil tephra and one flake in the Devil tephra. Test pit 2, 10 m southwest of test pit 1, yielded 201 basalt flakes from the organic mat. One flake was recovered from an exposure 2 m south of test pit 2. Four survey shovel tests were excavated but were sterile.

Grid shovel testing was undertaken to assist in determining site size and the distribution of cultural materials. Twenty-seven shovel tests were excavated, three of which contained cultural materials. One basalt flake, 1 chert flake, and 1 quartzite flake were recovered in these three tests, in similar stratigraphic contexts as the previously collected artifacts. Observed site size based on the distribution of artifacts is 43 square meters (Table D.2).

Table D.322.

Artifact Summary, TLM 201

Provenience		Description
Lithic Material		
Surface:	1	Basalt flake
Subsurface:		
Test pit 1	2	Basalt flakes
Test pit 2	201	Basalt flakes
Shovel test 1	1	Chert flake
Shovel test 2	1	Quartzite flake
Shovel test 3	1	Basalt flake

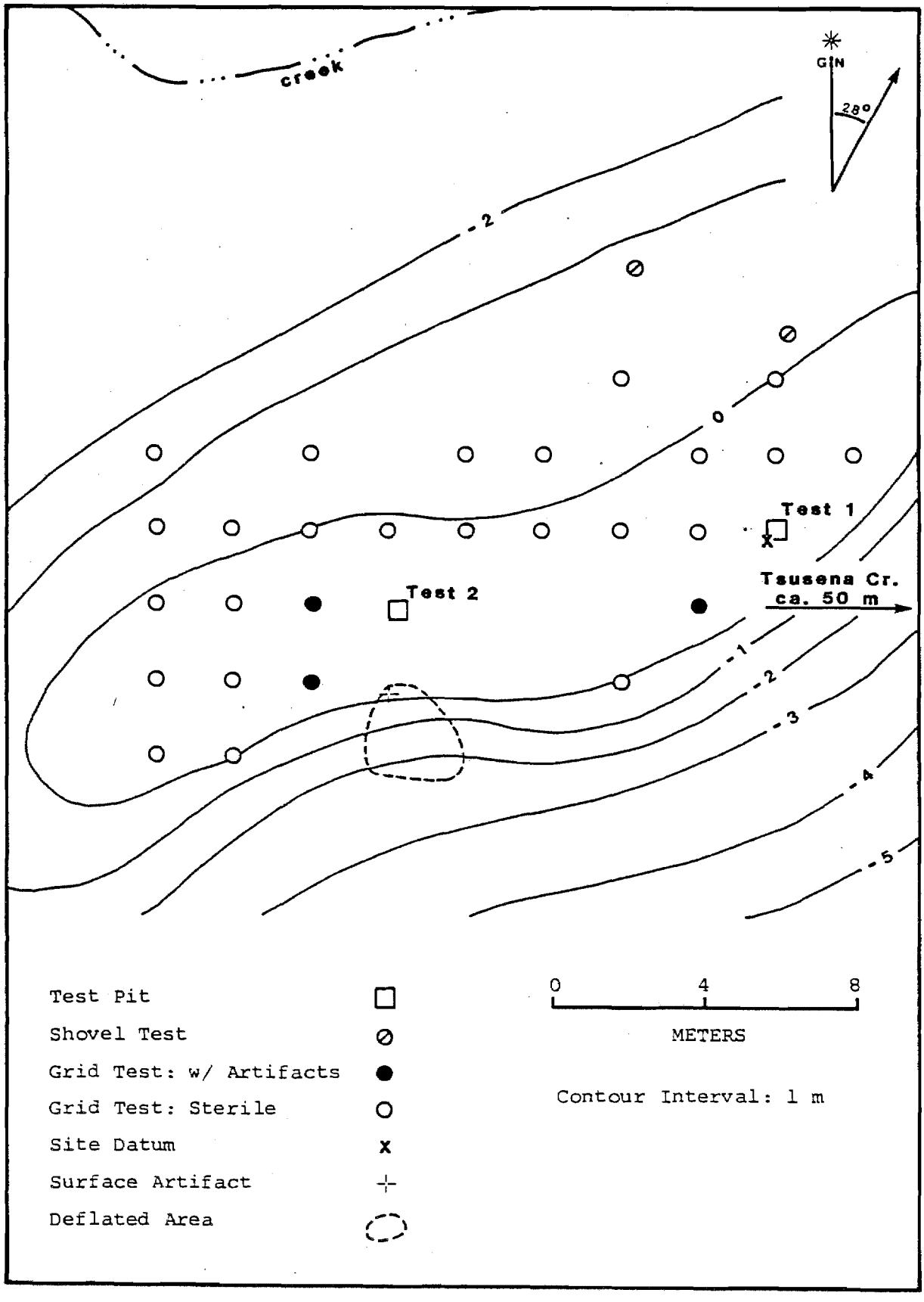


Figure D.252. Site Map, TLM 201

AHRS Number TLM 202; Accession Number UA83-128

Area:	Northwest of the Confluence of Clark Creek with Tsusena Creek
Site Map:	Figure D.253
Survey Locale:	Proposed Borrow F, Figure E.278
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 202 is located on one of a series of terraces west of Tsusena Creek and north of Clark Creek, at an elevation of ca. 718 m asl (altimeter: 2357 feet). The site is on the eastern portion of a ca. 100 m square flat terrace, which parallels Clark Creek. A 2 m break-in-slope along the terrace edge is ca. 40 m to the east. The terrace and surrounding terrain are relatively flat and heavily vegetated. Approximately 5 m south of a game trail, located on the terrace, is a small, dried-up pond filled with tussocks. There are no other similar features in the vicinity. The majority of the ground cover consists of thick, hummocky moss patches covered with dwarf birch. Labrador tea, blueberry, and lichens are also present. Scattered spruce trees form the upper canopy. The view from the site is limited by the spruce trees to the higher elevations on the surrounding hills.

Testing:

Cultural remains from TLM 202 consist of one basalt flake which was recovered from the lower portions of the Watana tephra (Table D.323). The subsequent 40 x 40 cm test pit (test pit 1) and the nine survey shovel tests were all sterile. A grid shovel testing program was implemented to assist in determining site size and distribution of cultural material. Sixteen grid shovel tests were excavated but all proved to be sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.323.

Artifact Summary, TLM 202

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	1	Basalt flake

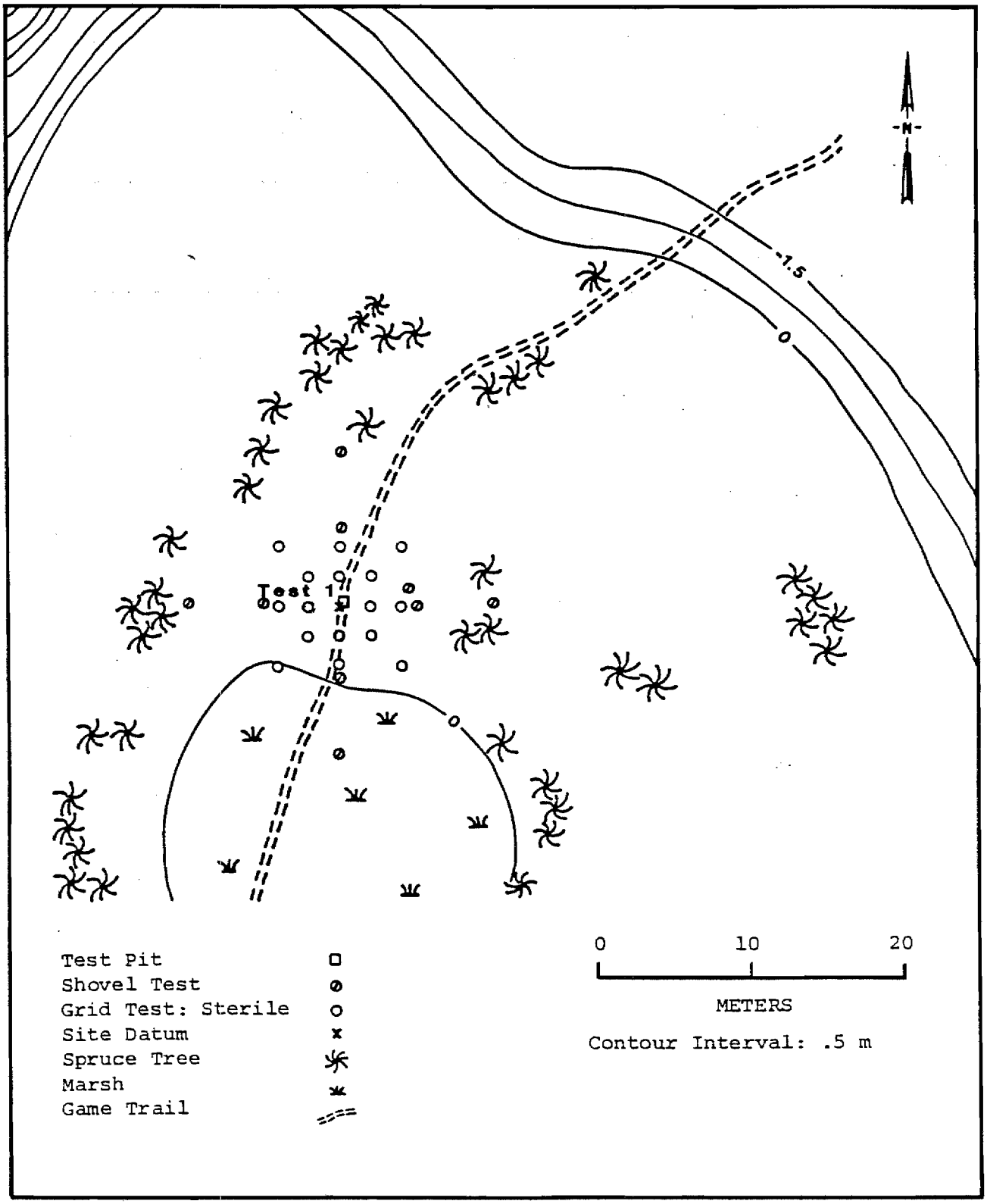


Figure D.253. Site Map, TLM 202

AHRS Number TLM 203; Accession Numbers UA83-129, UA84-117

Area:	West of the Confluence of Clark Creek with Tsusena Creek
Site Map:	Figure D.254
Survey Locale:	Proposed Borrow F, Figure E.278
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 203 is located west of the confluence of Clark Creek with Tsusena Creek and south of Clark Creek at an elevation of 724 m asl (altimeter: 2374 feet). The site is on a knoll which is part of an east-west trending terrace that parallels Clark Creek for approximately 1 km. The knoll on which the site is found is one of the highest in the vicinity. The knoll top is vegetated by mosses, lichens, blueberry, Labrador tea, and dwarf birch. Scattered spruce trees are present off the knoll crest and in the surrounding areas. Lower elevations have thicker moss cover but otherwise the vegetation is similar. To the north the terrace slopes steeply at more than 30 degrees down to Clark Creek, ca. 30 m below the site. Clark Creek is ca. 20 m wide at this point, bordered by low, flat flood plains. Downcutting by Clark Creek has created steep valley walls. The terrace slopes gently eastward to the confluence of Clark Creek with Tsusena Creek, which is not visible from the site. To the south the terrace system continues, cut by a small gully. The view from the site is limited by spruce trees. At present the view includes a 1 km portion of Clark Creek to the north and west and the hills beyond, as well as Tsusena Butte and portions of the Tsusena Creek valley.

Testing:

TLM 203 was identified by the presence of a single basalt flake found on the surface. Two 40 x 40 cm test pits were excavated, one to the north and one to the south of the surface find. Test pit 1 contained four basalt flakes within the organic mat, and at the contact between the organic mat and Devil tephra. Test pit 2 produced a single gray chert flake in the initial shovel test. Five additional survey shovel tests were sterile.

Grid shovel testing involved the placement of 47 additional shovel tests. Twelve basalt flakes and 32 gray chert flakes were recovered from the organic mat of four tests (Table D.324). One argillite and two basalt flakes recovered from the surface in the vicinity of test pit 1 may have come from the test excavation. One of the shovel tests, N104/E96, revealed a 10 cm thick fill of mixed tephras and drift above the Devil tephra. A 35 cm deep, nearly square depression measuring 2.5 x 2 m lies between test pit 1 and test pit 2. This depression most likely represents a cache pit. The possible cache pit and artifact placement in the organic mat suggest a late Athapaskan occupation for the site. Observed site size based on the distribution of artifacts is 40 square meters (Table D.2).

Table D.324.

Artifact Summary, TLM 203

Provenience		Description
Lithic Material		
Surface:	1	Argillite flake
	3	Basalt flakes
Subsurface:		
Test pit 1	4	Basalt flakes
Test pit 2	1	Argillite flake
Shovel test N102/E98	1	Basalt flake
Shovel test N104/E96	3	Basalt flakes
Shovel test N104/E106	1	Basalt flake
Shovel test N106/E106	7	Basalt flakes
	32	Chert flakes

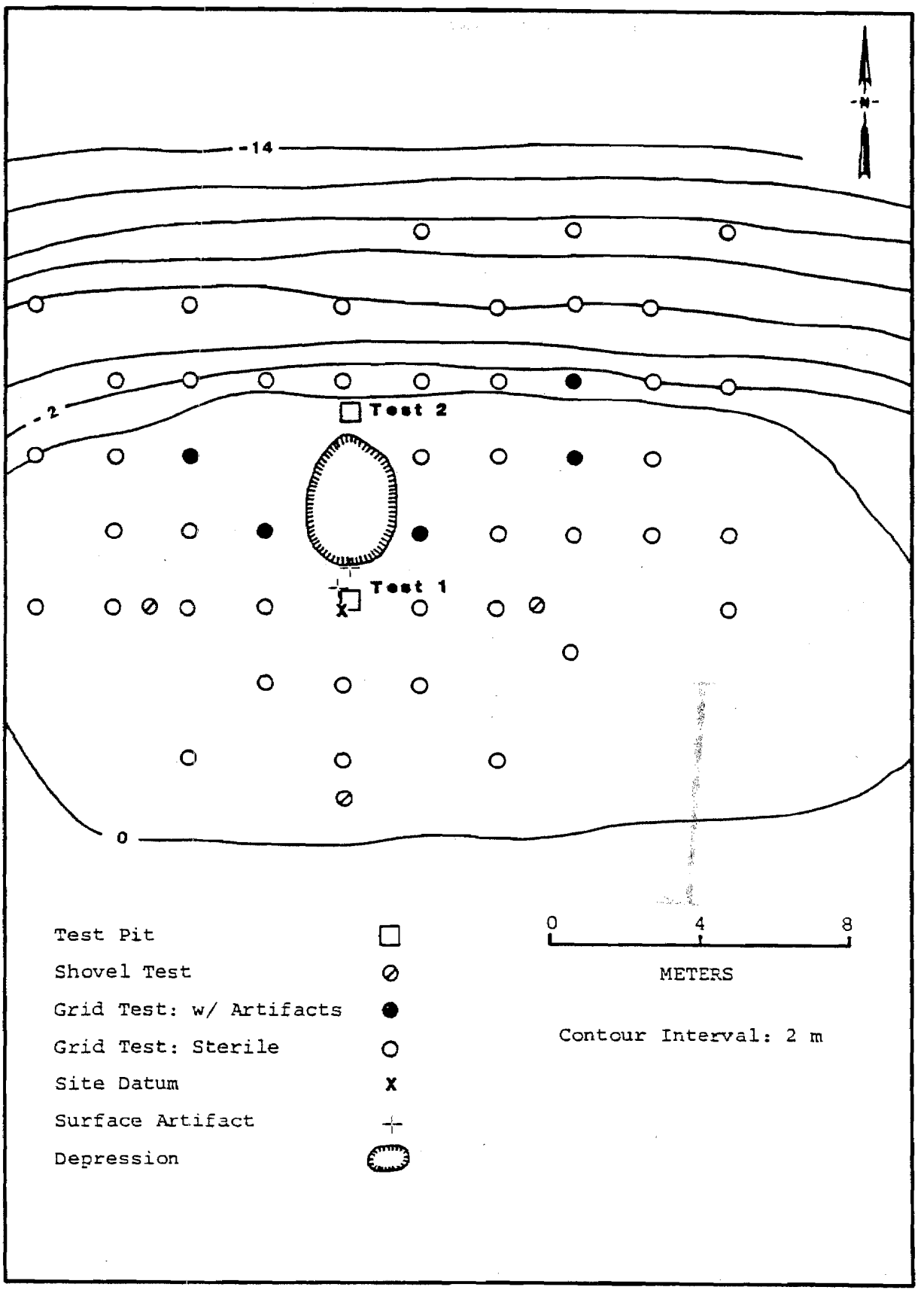


Figure D.254. Site Map, TLM 203

AHRS Number TLM 204

Area:	Northeast of Goose Creek Mouth
Site Map:	North ½, Figure D.255
	South ½, Figure D.256
Survey Locale 157:	Figure E.253
USGS Map:	Talkeetna Mts. C-2, Figure E.7
Site Location:	Appendix F

Setting:

This is an historic site which was probably last occupied in the late 1950's, and was most likely associated with Corps of Engineer studies for the Susitna Hydroelectric Project. It is located on an unnamed creek on the south side of the Susitna River. It lies northwest of the mouth of Goose Creek on a terrace at 613 m asl (altimeter: 2012 feet) and about 30 m above the present level of the Susitna River. Situated on the east bank of the creek, the terrace on which the site is located extends approximately 60 m in an east-west direction and approximately 150 m in a north-south direction. The ecosystem for the site area is generally characterized as lowland spruce-hardwood forest. Vegetation on the site includes black spruce, white spruce, dwarf birch, blueberry, Labrador tea, lowbush cranberry, bearberry, lichens, and moss. Dwarf birch tends to predominate on the site area. The vegetation in the surrounding area contains the same species types with the addition of birch and grasses.

Testing:

A wide variety of historical and contemporary artifacts were observed on the ground surface over a 70 x 70 m area. Two test pits were excavated at the site. Test pit 1 was excavated into a large depression approximately 3.5 x 4.5 m. Test pit 2 was excavated adjacent to an artifact concentration. Neither of the two test pits produced cultural material. No artifacts were collected from the surface of the site but many were observed. Some of the observed artifacts included a coffee

pot, metal cowling for a heater, evaporated milk cans, Hills Brothers Coffee cans, Rainier Beer cans, glass Clorox bottles, a quart oil can, boards, cut logs, and 55-gallon drums (Table D.325). Estimated site size based on the distribution of artifacts is 4,900 square meters (Table D.2).

Table D.325.

Artifact Summary, TLM 204

Provenience	Description
Historic Remains	
(Uncollected)	Coffee pot
	Metal cowling
	Evaporated milk cans
	Hills Brothers coffee cans
	Rainier beer cans
	Glass Clorox bottles
	Quart oil can
	Cut logs
	55-gallon drums

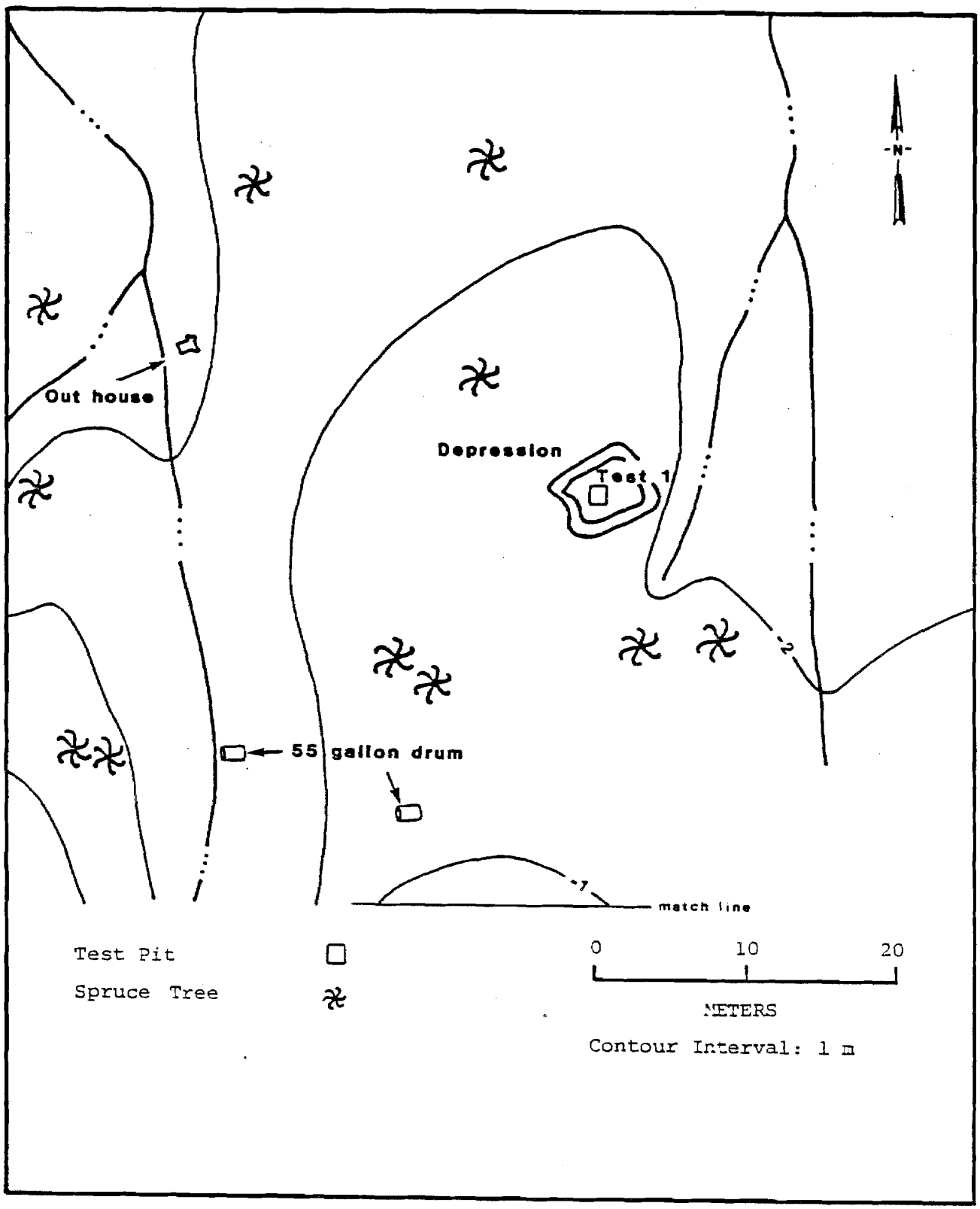


Figure D.255. Site Map, TLM 204 North ½

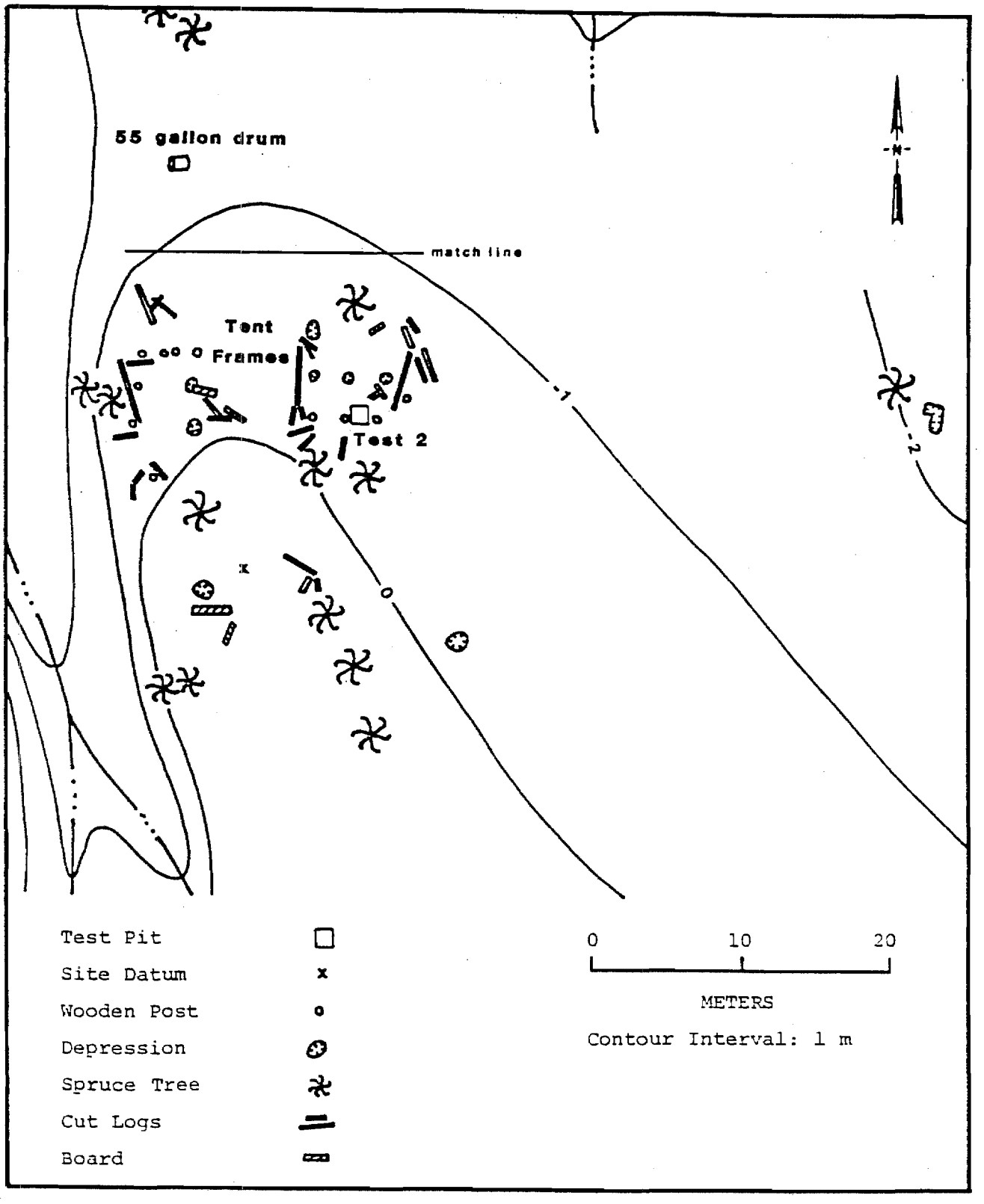


Figure D.256. Site Map, TLM 204 South ½

AHRS Number TLM 205; Accession Number UA83-217

Area:	North-northeast of Watana Creek Mouth
Site Map:	Figure D.257
Site Location Map:	Figure E.65
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

The site is located ca. 961 m asl (3300 feet) on the summit of a prominent rounded knoll on the south Watana Creek valley wall in the upper portion of the Watana Creek drainage ca. 25 km northeast of the Watana Creek mouth. The knoll summit is ca. 30 (north-south) x 40 m (east-west) and relatively flat. The slopes of the knoll, which vary between 20 degrees and 30 degrees in steepness, descend for ca. 30 m to the west to a small stream, and to the north where the knoll slope merges with the general slope of the valley wall. To the south, the knoll slope descends for ca. 20 m before intersecting the southward rising valley wall. To the east, the knoll slope is more gradual and merges with the valley wall ca. 15 m below and ca. 50 m east. The view from the site encompasses the upper Watana Creek valley and the facing slopes of high elevation terrain on the other side of the creek ca. 4 km to the north. To the southwest, south, and east, the slopes of the south valley wall are visible within 1-4 km, rising to ca. 600 m above the site. A small ca. 1.5 ha lake is located southeast of the site in an amphitheater-shaped recess along the valley wall, but it is not visible from the site.

A mineral lick, located southwest of and at approximately the same elevation as the site but on the other side of the small stream to the west, is visible on a steep (30-degree) northeast-facing slope. Very well marked game trails leading to the lick, and a number of Dall sheep were observed on the mineral lick. Vegetation on the site is sparse alpine tundra, with patches of lichen and bearberry interspersed with barren frost-shattered rock areas. Vegetation on the surrounding slopes

is similar, but includes dwarf birch and grass in nearby drainages with willow and spruce thickets present on the Watana Creek valley floor.

Testing:

Survey testing was initiated when a game biologist observing the mineral lick found a basalt scraper fragment (UA83-217-1; Figure D.389d) (Table D.326). Surface and subsurface testing, including eight shovel tests and one test pit, did not produce any further cultural material. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.326.

Artifact Summary, TLM 205

Provenience		Description
Lithic Material		
Surface:	1	Basalt scraper fragment (UA83-217-1)

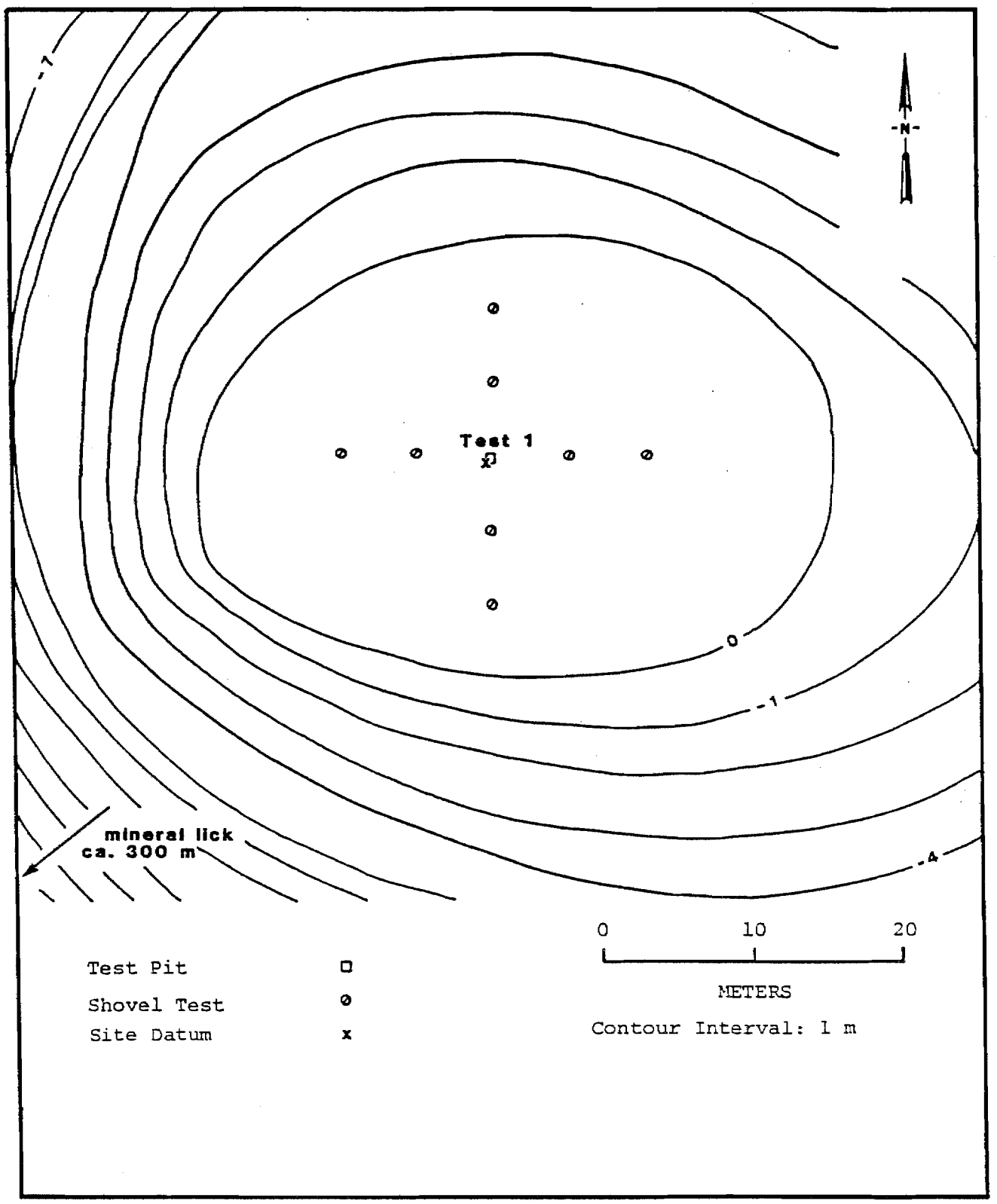


Figure D.257. Site Map, TLM 205

AHRS Number TLM 206; Accession Numbers UA83-218, UA84-140

Area:	South-southeast of the Oshetna River Mouth
Site Map:	Figure D.258
Survey Locale 124:	Figure E.195
USGS Map:	Talkeetna Mts. C-1, Figure E.8
Site Location:	Appendix F

Setting:

TLM 206 is located at an elevation of 658 m asl (altimeter: 2160 feet) atop the south-facing edge of a boulder-paved terrace south-southeast of the confluence of the Oshetna River with the Susitna River, near a point where the orientation of the stream terrace changes from southeast-northwest to south-southeast by north-northwest. The terrace is ca. 6 m higher than the adjacent modern flood plain to the southwest, with the site to the southeast of the point. To the southeast, the terrace gradually merges into the surrounding terrain. To the north-northwest of the point, the terrace slopes gradually to merge with the modern riverbank. The terrace defines the southern and western edges of a larger, gently northward-sloping terrace which merges with the Susitna River flood plain to the north. The site is located east and north of the present Oshetna River channel, which bends around the site. The site appears to be oriented toward the Oshetna River and its flood plain to the south and southeast. The Oshetna River valley with its ca. 120 m high walls is visible to the west. The Susitna River valley and hills beyond are visible across the Oshetna River. To the east, the eastern Oshetna River valley wall can be seen rising to the west margin of a terrace which occurs about halfway up the valley wall and contains two lakes of 2 ha and 6 ha. Vegetation on the site is lowland spruce forest with, dwarf birch, willow, Labrador tea, lowbush cranberry, blueberry, crowberry, bearberry, wild rose, lichen, heath, and moss. The surrounding vegetation along the present Oshetna River flood plain to the south is similar to that of the site area, except for a few scattered black spruce.

Testing:

TLM 206 was initially located with the recovery of both surface and subsurface cultural material during survey testing. Two chert flakes were observed in a small exposure near the top of the terrace. A 40 x 40 cm test pit (test pit 1) was placed in the vegetation mat immediately upslope from the flakes. One brown rhyolite flake was found in test pit 1. The stratigraphic provenience for this flake is unknown. Ten additional shovel tests along the edge and top of the terrace near test pit 1 revealed no other cultural material.

Grid shovel testing was implemented to assist in determining site size, number, and placement of tests squares. Sixteen grid shovel tests were excavated. No evidence of cultural material was found in any of these shovel tests. Since the extent of cultural material was found to be in the immediate vicinity of test pit 1 and the surface exposure, one 1 x 1 m test square was placed directly west of the test pit at N97/E99, where there appeared to be the least disturbance.

Discussion:

Testing at TLM 206 included the excavation of 10 survey shovel tests, 1 test pit, 16 grid shovel tests, and 1 test square. This testing produced an artifact assemblage of 224 flakes (4 chert and 220 rhyolite). One component was identified at this site associated with the Devil tephra. Table D.328 presents a summary of artifacts collected and Table D.329 presents the distribution of lithic material by stratigraphic units.

Five soil/sediment stratigraphic units have been identified at TLM 206. Figure D.259 illustrates the vertical placement of these units and Table D.327 describes their various characteristics.

The surface of the site is capped by an organic mat (unit 1) which is well developed in the northern half of the test square. A humic, carboneous organic silt is sometimes found mixed in the organic mat and

overlying the Devil tephra (unit 2). This tephra is a continuous stratum and contained artifacts throughout and at its upper and lower contact. Beneath this is Watana tephra which has been divided into an upper oxidized zone (unit 3a) and a lower unoxidized zone (unit 3b). The Watana tephra is often mixed with the other tephras. The lowest tephra unit, the Oshetna tephra (unit 4b), is discontinuous and is found in small patches. The Oshetna tephra is sometimes associated with a paleosol (unit 4a) at its upper extent. The tephra sediments have been altered at this site as a result of root penetration, slumpage, and cryoturbation. These units are characterized by upwelling, folding, and mixing. The basal stratum is glacial drift (unit 5).

The single cultural component at TLM 206 can be correlated with the contact between the organic mat and the Devil tephra (unit 1/2). One chert flake and 219 rhyolite flakes were recovered from this stratigraphic context during systematic testing. This lithic material occurred within a small concentration near the center of the test square. Three chert flakes found in an exposure on the surface are probably associated with this component, since there is evidence of the Devil tephra eroding out onto the surface in the southern half of the test square. Although the stratigraphic units show evidence of considerable cryoturbation, the cultural material associated with the upper extent of the Devil tephra appears to be unaffected. The stratigraphic provenience of the rhyolite flake found in test pit 1 during survey testing is unknown. However, the similarity of lithic raw material with 219 other rhyolite flakes suggests this flake is probably associated with the other material at this site.

Evaluation:

TLM 206 is situated on the south-facing edge of a boulder paved river terrace south-southeast of the confluence of the Oshetna River with the Susitna River. Visibility from the site provides an excellent view of the present Oshetna River and its valley walls. The location of the site, in conjunction with the artifact assemblage, suggests that the site functioned as a lithic chipping station and/or hunting overlook.

A single component is evident at the site based on the homogeneity of lithic raw material located at the contact between the organic mat and the Devil tephra. Despite cryoturbation at the site, the lithic concentration found directly beneath the organic mat appears to be unaffected by the frost heaving of sediments. Based on the systematic recovery of lithic material at this site, it is believed that the small concentration of artifactual material represents a post-Devil tephra occupation. Observed site size based on the distribution of artifacts is 15 square meters (Table D.2).

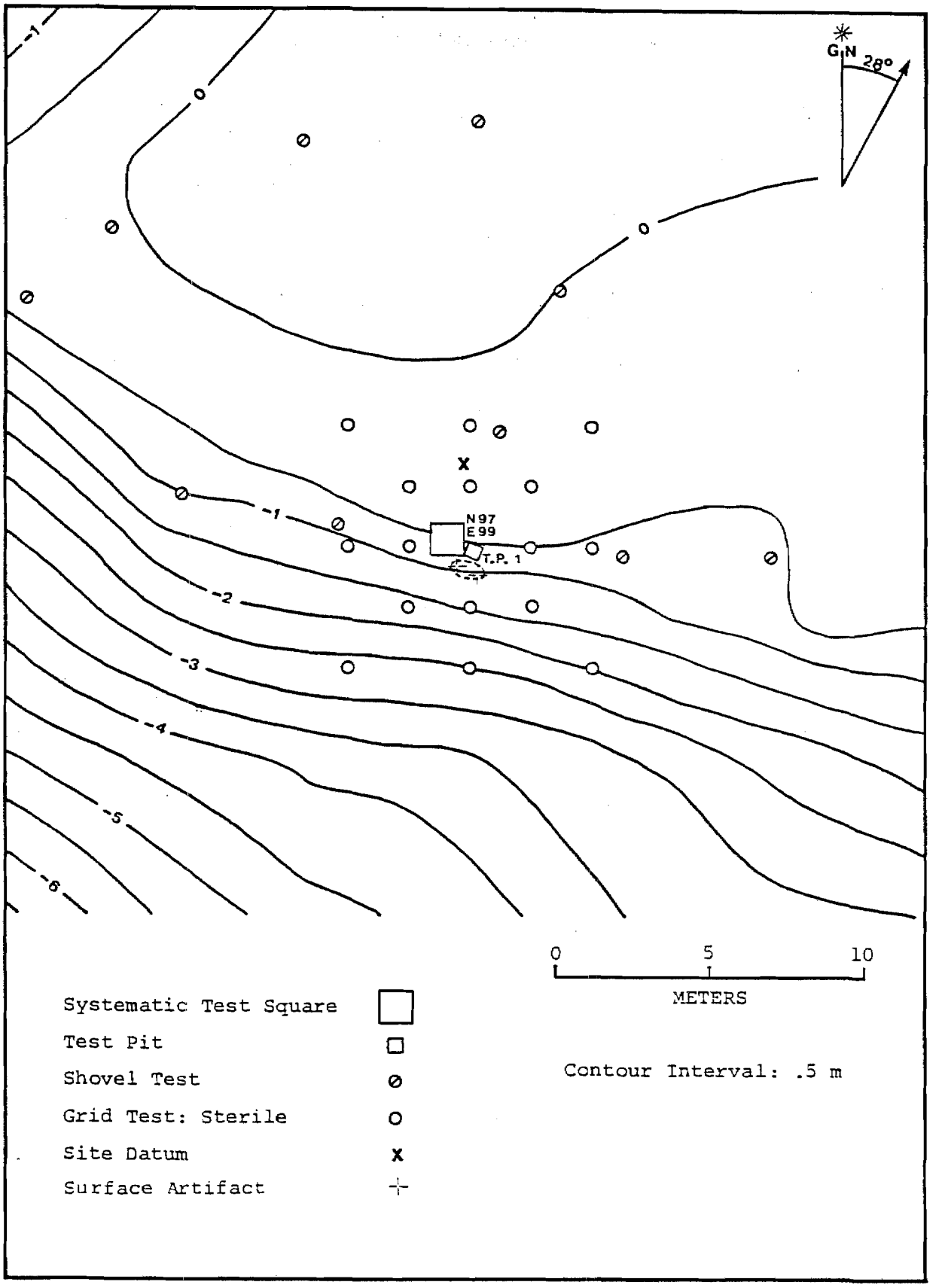


Figure D.258. Site Map, TLM 206

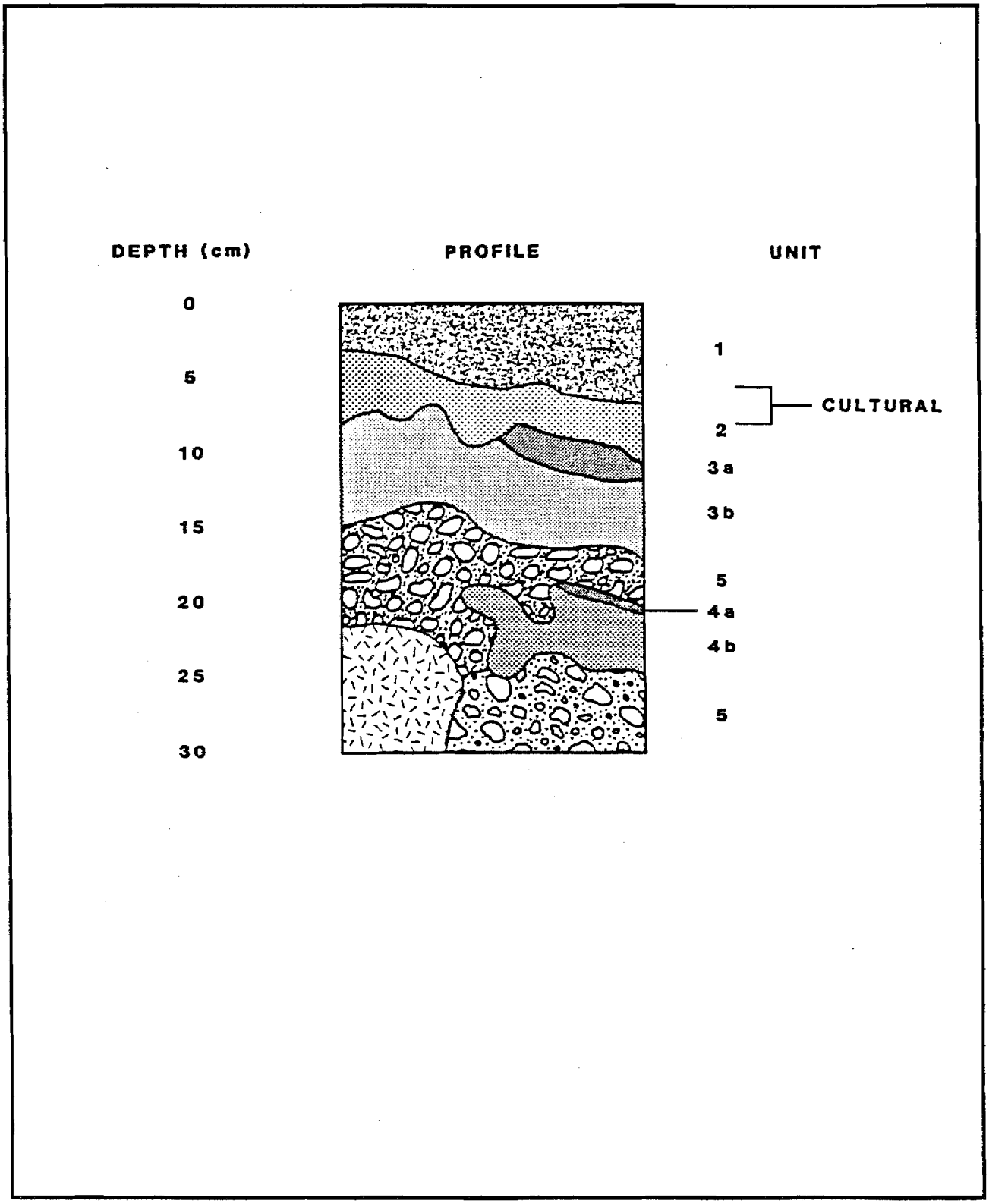


Figure D.259. Composite Profile, TLM 206

Table D.327.

Soil/Sediment Description for Composite Profile, TLM 206

Unit	Description
1	Surface organic layer: thick fibrous root mat with living and partially decomposed plant material from dwarf birch, lowbush cranberry, wild rose, and low heath. Varies in thickness from 2-6 cm, but is usually 3 cm. The lower boundary is clear and smooth. Continuous unit. O1 horizon.
2	Fine grained silt size particles; dark gray (10YR 4/1) to grayish brown (10YR 5/2) to light gray (5YR 7/1). Varies in thickness from 1-12 cm, generally 4 cm. The lower boundary is wavy but distinct. Tephra (Devil); eluvial A horizon. Fairly continuous. Root penetration. Cultural material at upper contact.
3a	Fine to medium silt size particles; dark brown (7.5YR 3/4). Varies in thickness from 1-4 cm, generally 3 cm. Lower boundary is wavy, irregular, and distinct. Tephra (Watana); illuvial B2 horizon. Discontinuous. Root penetration. Mixed due to cryoturbation. Oxidized.

Table D.327. (Continued)

Unit	Description
3b	Very fine silt size particles; dark yellowish brown (10YR 4/6). Ranges in thickness from 1-19, generally 6 cm. The lower boundary is wavy, irregular, and distinct. Tephra (Watana); illuvial B2 horizon. Discontinuous. Unit disturbed by root penetration and cryoturbation.
4a	Small flecks of charcoal and carbonized plant material; black (5YR 2.5/1). Occurs as a lens less than 1 cm. Paleosol. Discontinuous.
4b	Very fine silt size particles; very dark grayish brown (10YR 3/2). Varies in thickness from 3-9 cm, generally 5 cm. The lower contact is wavy and irregular, but is distinct. Tephra (Oshetna); buried eluvial A horizon. Unit has been disturbed by cryoturbation.
5	Sand and silt size particles mixed with pebbles and other tephra sediments; dark yellowish brown (10YR 3/4) to olive brown (2.5Y 4/4). Glacial drift. Rounded pebbles, cobbles, and boulders ranging from 4-50 cm in diameter. Unit determines the extent of excavation.

Table D.328.

Artifact Summary, TLM 206

Lithic Material

4	Chert flakes
220	Rhyolite flakes
224	

Table D.329.

Artifact Summary by Stratigraphic Unit, TLM 206

Unit		Description
Surface	3	Chert flakes
1/2	1	Chert flake
Contact between organic mat and Devil tephra	219	Rhyolite flakes
Unknown	1	Rhyolite flake

AHRS Number TLM 207; Accession Numbers UA83-219, UA84-67

Area:	South-southeast of Oshetna River Mouth
Site Map:	Figure D.260
Survey Locale 124:	Figure E.195
USGS Map:	Talkeetna Mts. C-1, Figure E.8
Site Location:	Appendix F

Setting:

TLM 207 is located south-southeast of the confluence of the Oshetna River with the Susitna River, at an elevation of 686 m asl (altimeter: 2252 feet) on the southwestern edge of a ridge approximately 400 m long. The ridge is oriented north-south and has a broad flat crest. The western slope is paved by boulders and descends steeply to the Oshetna River flood plain. The eastern slope descends more gradually into a relict river channel on the terrace containing two lakes, forming an isolated ridge between the present flood plain and the east wall of the Oshetna River valley. The two lakes in the relict channel include a ca. 2 ha lake to the northeast which drains into the Susitna River and a ca. 6 ha lake located ca. 300 m east of the site, but neither are visible from the site. The east slope of the ridge is obscured by vegetation and barely perceptible from the site. The north end of the ridge, where TLM 073 is located ca. 300 m from TLM 207, is separated by a small saddle from a continuation of the terrace to the mouth of the Oshetna River. The southern end of the ridge, beyond the site location, changes orientation slightly and gradually descends, ending ca. 100 m south-southeast of the site at the outlet drainage of the larger of the two lakes which flows from the relict channel to the Oshetna River. The site appears to be primarily oriented to the Oshetna River which is close and easily accessible. The boulder-paved west slope of the site ridge may be a relict riverbank, suggesting that the river may have been closer to the site in the past. The view from the site includes the Oshetna River valley walls to the south (upstream) for a distance of 1-2 km, to the west ca. 750 m, and the continuation of the valley wall above the terrace to the east ca. 500 m distant. Adjacent sections of the

Oshetna River and flood plain are also visible from the site. The Oshetna River is rapid and bending, with gravel bars near the site.

Vegetation on the site includes black spruce, white spruce, and dwarf birch, with a ground cover of lichens, moss, Labrador tea, lowbush cranberry, wild rose, and fireweed. Some frost boil patterning is present, but otherwise surface exposures are limited. Vegetation in adjacent well-drained areas is similar, with black spruce bog and grassy marsh areas on the Oshetna River flood plain to the west and around the lakes to the east.

Testing:

TLM 207 was found when flakes were observed on the surface and in the lichen mat on the western portion of the terrace. A 40 x 40 cm test pit was placed adjacent to this material (test pit 1) and revealed a subsurface lithic flake scatter in the organic mat and humic layer (units 1 and 2). No other cultural material was recovered from this test except for a single flake from the underlying Devil tephra (unit 3).

A shovel test placed 10 m north of test pit 1 produced two flakes and three microblade fragments (UA83-219-7, 10, 11). This shovel test was expanded into a 40 x 40 cm test pit (test pit 2) and produced a subsurface scatter of lithics consisting of 18 chert flakes, 39 chert microblades and microblade fragments (UA83-219-12 to 47, 49 to 51), and 1 chert core rejuvenation flake (UA83-219-52). All of these were recovered either within or in close association with a granular grayish brown matrix (unit 5b) which was stratigraphically below the Watana tephra (units 4a and 4b). Although the profile of this test pit indicated heavy cryoturbation, the stratigraphic unit containing the majority of artifacts was continuous and distinct.

The recovery of artifacts in two different groups of soil/sediment stratigraphic units at the site suggested the presence of two components. One component, identified in test pit 1, was located in the

uppermost stratigraphic units (units 1 and 2) and primarily consisted of basalt flakes. The second component, identified in test pit 2, was located in the lowermost stratigraphic units (units 5a, 5b, and 6a) and primarily consisted of chert microblades, microblade fragments, and flakes. Five additional shovel tests were excavated at the site but did not produce cultural materials.

Further testing was conducted at TLM 207 to more closely examine the content and context of the microblade component present. A grid shovel testing program was initiated at the site to provide estimates of site boundaries and the distributions of cultural materials. Twenty grid shovel tests were excavated in the shovel testing expansion, however only one contained artifactual materials. This shovel test was located at N103/E100 and produced one basalt flake.

Two 1 x 1 m test squares were also excavated at the site. These two test squares were placed adjacent to test pit 2 on the northern periphery of the site at N101/E98 and N102/E98 in an effort to obtain a larger sample of cultural materials.

Discussion:

Eight soil/sediment stratigraphic units were identified at the site. Figure D.261 shows the vertical superposition of these units and Table D.330 provides a written description of the unit characteristics. Both of the 1 x 1 m test squares contained all eight of the stratigraphic units. The vertical placement of these units was generally consistent; however, cryoturbation caused some upwelling and mixing of the deposits. The distinctiveness of the soil/sediment stratigraphic units was identified during the course of excavation. The greatest concentration of artifacts was recovered in unit 5b, although many artifacts were recovered from the unit 4b/5a contact, unit 5a, the 5a/5b contact and the unit 5b/6a contact. Few artifacts were recovered in the upper soil/sediment stratigraphic units (unit 1, 2, 3, 4a, and 4b) or in the glacial drift (units 6a and 6b).

One thousand seventy-four artifacts were recovered from TLM 207 (Table D.331). These primarily consisted of microblade fragments, microblades, and flakes, although one bone fragment (Table D.332) and a piece of charred birch bark were also present. The predominant lithic raw material was red chert, although some chalcedony and white chert were also recovered. One chalcedony endscraper (UA84-67-5; Figure D.390w), one red chert microblade core (UA84-67-132; Figure D.390y), 1 white chert core rejuvenation flake (UA84-67-146; Figure D.390x), and 354 chert and chalcedony microblades and microblade fragments (Figure D.390) were recovered during the excavation of these test squares. Seven hundred fourteen flakes and flake fragments were also present in the assemblage.

During the course of excavation, it was observed that many of the lithic artifacts were thermally shattered. The fact that the ventral surfaces of many flakes and blades exhibit thermal fractures (e.g., potlid fractures, crazing) indicates the artifacts were fired after their manufacture. This is also supported by the stratigraphic associations of many artifacts with soil/sediment unit 5a. Unit 5a was a discontinuous lens of charred organic matter located between the unoxidized Watana tephra (unit 4b) and the Oshetna tephra (unit 5b). Although this stratigraphic unit was not present in all portions of the test squares, localized concentrations were identified in some areas. In these areas (especially the northwest quad of test square N102/E98), it could be seen that the majority of artifacts lay directly beneath this unit in the upper portion of the Oshetna tephra (unit 5b). Additionally, most of the artifacts recovered in this context exhibited considerably more thermal fractures. This suggests that the manufacture of these lithic artifacts preceded the deposition of unit 5a, and that the fire(s) causing the formation of unit 5a may be responsible for the thermal fracturing of the artifacts present.

A radiocarbon sample recovered from stratigraphic unit 5a at the site was submitted for analysis and produced a date of 4030 ± 220 years: 2080 B.C. (Beta-9897).

Based on survey and systematic testing, two cultural components were identified on the site. In the southern portion of the site a component of unmodified basalt flakes was recovered in stratigraphic units 1 and 2. In the northern portion of the site, a component of chert microblades was recovered in association with stratigraphic units 5a and 5b. The presence of two components, each characterized by its own distinct manufacturing technology and raw material preferences, makes their differentation possible. The majority of lithic artifacts recovered in the upper stratigraphic levels of the test squares are made of chert and chalcedony, and the fact that they also exhibit characteristics of a microblade technology suggests that may be displaced from a lower stratigraphic context as a result of cryoturbation and other noncultural formation processes.

An additional consideration that strengthens this interpretation is the frequency distribution of artifacts by stratigraphic units. In Table D.333 it can be seen that there is a dramatic increase in the frequency of artifacts for the lower stratigraphic units in the test squares (units 5a, 5b). Eight hundred eighty-one lithic artifacts were recovered during systematic testing, approximately 90% of them were associated with units 5a and 5b. The localized and restricted vertical distribution of artifacts within these stratigraphic units suggests the presence of a single component from which a small number of artifacts have been displaced by noncultural processes. Thus, on the basis of the raw material, technological characteristics, and frequency distribution of lithic artifacts, it is most probable that the sample of cultural materials recovered in the test squares represents a single assemblage of tools and debitage.

Evaluation:

Site TLM 207 is located on the western edge of a broad flat ridge east of the Oshetna River. Its location provides a clear view of the Oshetna River flood plain and adjacent uplands to the northwest, west, and southwest, although views to the north and east are presently obscured by vegetation.

Systematic testing focused on a more detailed investigation of the microblade component at TLM 207. Two 1 x 1 m squares were excavated and a single component characterized by a microblade technology was identified. The presence of a microblade core in association with hundreds of microblades and microblade fragments indicates tool manufacturing activities occurred at the site. However, the presence of an endscraper suggests other kinds of maintenance activities (e.g., hideworking, woodworking, etc.) may also have occurred. The emphasis on microblades and a composite tool technology, as well as the older stratigraphic position of the majority of the artifacts present, suggest they may be associated with the American Paleo-Arctic tradition.

A second more recent component is known to be present at the site, and does not appear to overlap the microblade assemblage. Some lithic artifacts were recovered in the upper stratigraphic units of the test squares, but they were probably displaced by cryoturbation and other noncultural formation processes. This position is argued on the basis of the technological characteristics, raw material, and frequency distribution of the lithic artifacts recovered during systematic testing.

In summary, the site area appears to have been occupied during two discrete temporal episodes and on two discrete spatial loci. Artifacts recovered from the upper component bear no resemblance to the assemblage recovered from the lower component. In addition to different horizontal and vertical proveniences, the components also exhibit different technological characteristics and different preferences in raw materials for tool manufacture. Observed site size based on the distribution of artifacts is 35 square meters (Table D.2).

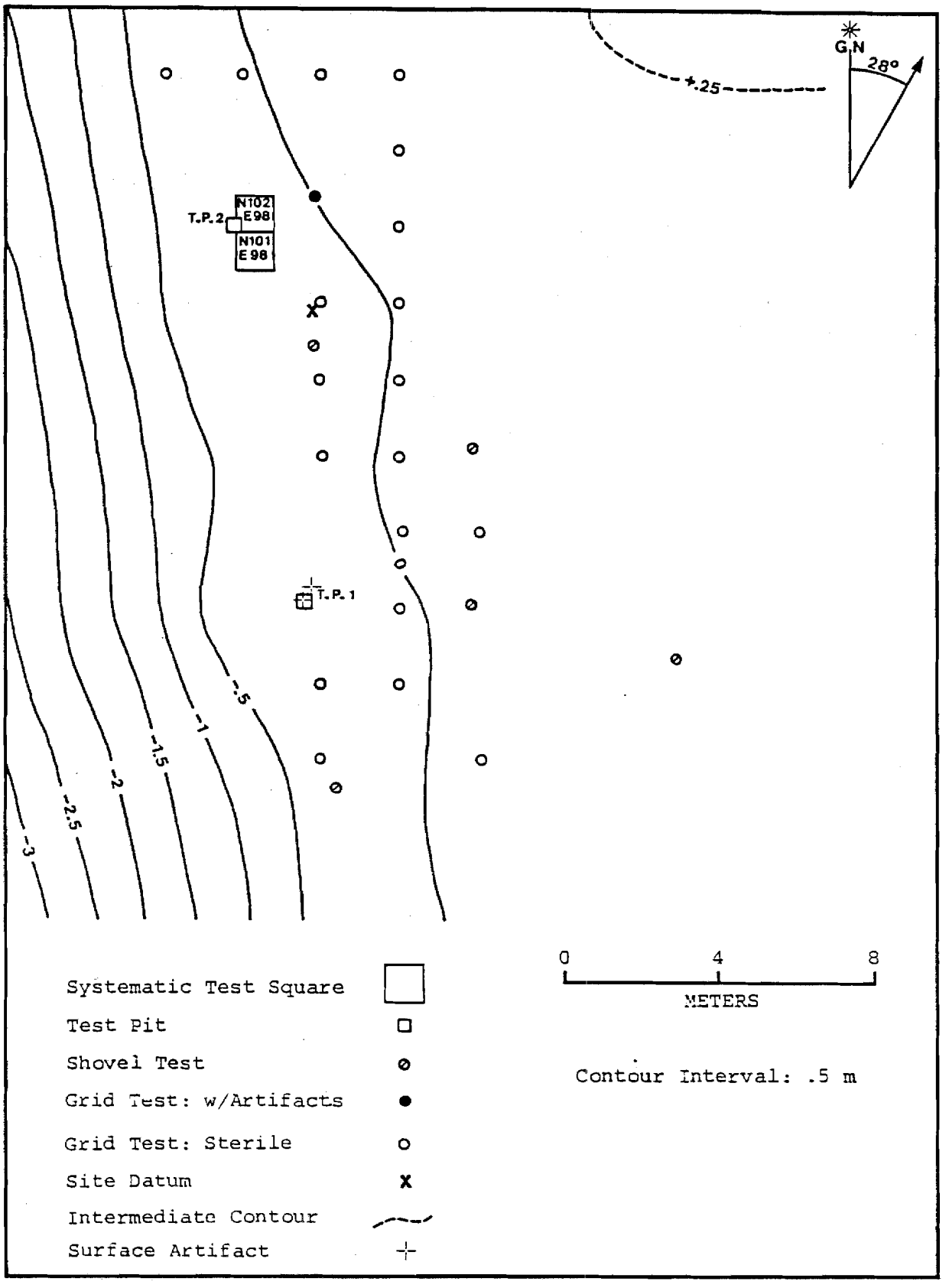


Figure D.260. Site Map, TLM 207

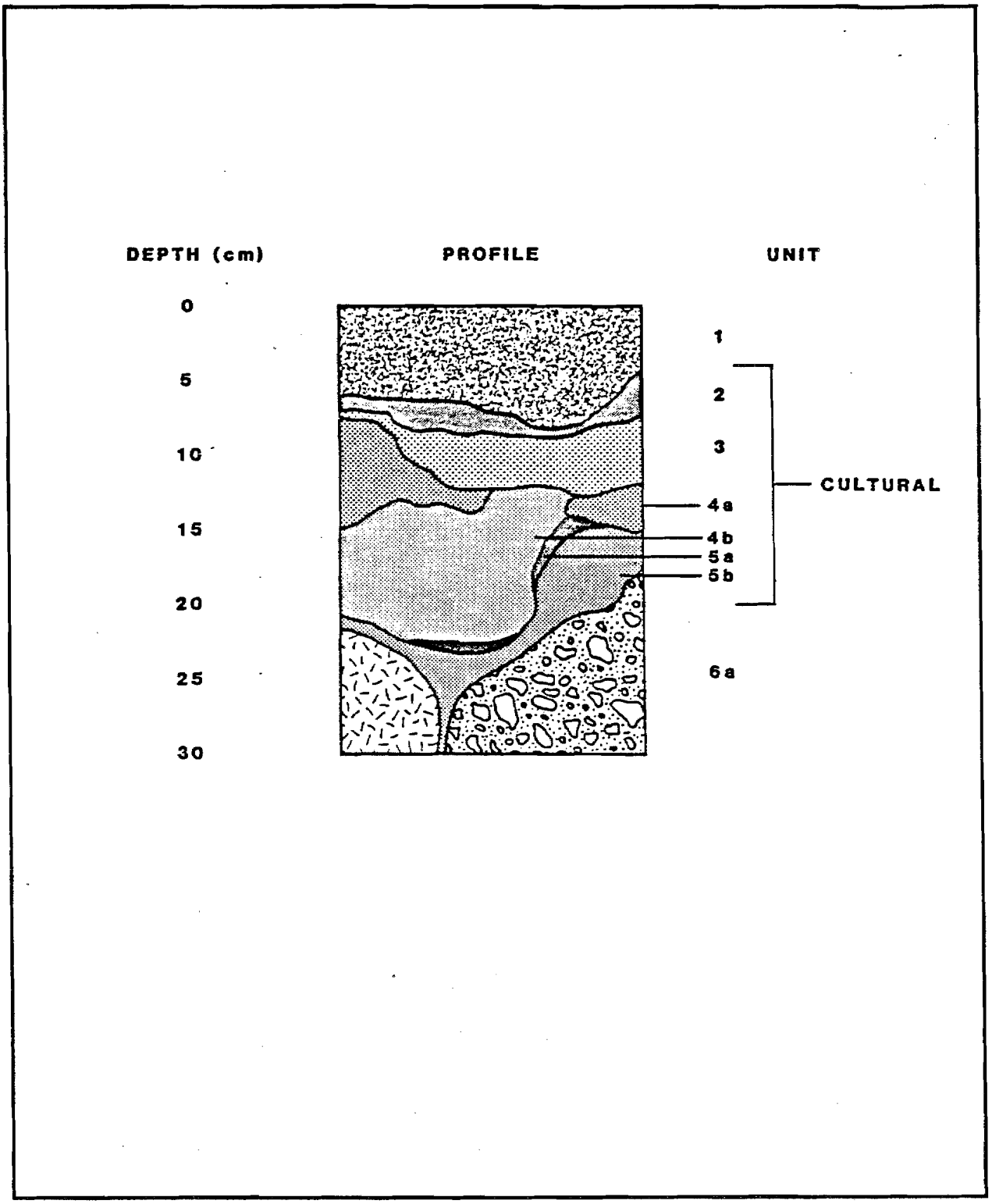


Figure D.261. Composite Profile, TLM 207

Table D.330.

Soil/Sediment Description for Composite Profile, TLM 207

Unit	Description
1	Organic root mat: black spruce, white spruce, dwarf birch, lichens, moss, Labrador tea, lowbush cranberry, wild rose, and fireweed. Very loosely compacted. Brown (7.5YR 4/6). Varies from 1-8 cm in thickness.
2	Fine-grained sediment with finely divided organics, decomposed organics, rootlets, and charcoal. Carbon staining occurs throughout the unit, causing the color to vary from very dark grayish brown (10YR 3/2) to black (N2/). Discontinuous and thickness varies from 1-6 cm.
3	Fine-grained sediment composed of moderately compacted silt and tephra. Color varies from pinkish gray (7.5YR 7/2) to gray (10YR 5/1), although some charcoal flecking is present. Varies in thickness from 1-9 cm and is discontinuous. Tephra (Devil).
4a	Fine-grained sediment comprised of moderately compacted silt and tephra. Heavily to lightly oxidized which gives it a yellowish red (5YR 4/6) or dark reddish brown (5YR 3/4) color. Varies in thickness from 1-12 cm and is discontinuous. Tepha (Watana).

Table D.330. (Continued)

Unit	Description
4b	Fine-grained sediment composed of moderately compacted silt and tephra. Unoxidized, giving it a yellow (10YR 7/6) or yellowish brown (10YR 5/6) color. Discontinuous. Varies in thickness from 1-16 cm. Tephra (Watana).
5a	Loamy silt and tephra containing decomposed organics, carbon staining, and small pieces of charcoal; black (10YR 2/1). Paleosol. Occurs as a very discontinuous lens within the test squares excavated. Moderately compacted. Varies in thickness from 0.2-1.0 cm.
5b	Gray sandy silt and tephra with pebbles and cobbles mixed throughout; gray (10YR 5/1). Moderately compacted. Varies in thickness from 1-17 cm. Discontinuous. Tephra (Oshetna).
6a	Moderately compacted matrix of sandy silts and gravels; dark yellowish brown (10YR 4/6) to strong brown (7.5YR 4/6). Varies in thickness from 2-29 cm. Continuous. Glacial drift.

Table D.331.

Artifact Summary, TLM 207

Tools	
1	Scraper
	1 Chert (UA84-67-5)
354	Microblades
	4 Chalcedony (UA84-67-7, 48, 65, 157)
	350 Chert (see Table D.333 for catalogue numbers)
1	Microblade core
	1 Chert (UA84-67-132)
4	Rejuvenation flakes
	4 Chert (UA83-219-52; UA84-67-121, 146, 147)
360	
Lithic Material	
113	Basalt flakes
21	Chalcedony flakes
555	Chert flakes
24	Chert pieces
714	

Table D.331. (Continued)

Other	
1	Piece of birch bark (UA84-67-109)
Faunal Material	
1	Bone fragment

Table D.332.

Faunal Material by Stratigraphic Unit, TLM 207

Unit		Description
4b/5a Contact between buff-colored Watana tephra and gray sandy silt and tephra with pebbles and cobbles	1	Unidentifiable fragment, heavily burned, medium-large mammal

Table D.333.

Artifact Summary by Stratigraphic Unit, TLM 207

Unit		Description
Surface	2	Basalt flakes
1	38	Basalt flakes
Organic mat		
1/2	1	Chert flake
Contact between	2	Chert microblades (UA84-67-69, 70)
organic mat and		
decayed organic		
horizon		
2	69	Basalt flakes
Within decayed	1	Chalcedony flake
organic horizon	1	Chert flake
2/3	2	Basalt flakes
Contact between	2	Chert flakes
decayed organic	1	Chert scraper (UA84-67-5)
and Devil tephra	10	Chert microblades (UA83-219-12 to 14;
mat		UA84-67-72 to 75)
3	1	Basalt flake
Within Devil	5	Chalcedony flakes
tephra	14	Chert flakes
	1	Chalcedony microblade (UA84-67-7)
	2	Chert microblades (UA84-67-78, 79)

Table D.333. (Continued)

Unit		Description
3/4a Shovel test Contact between Devil tephra and oxidized Watana tephra	1	Basalt flake
3/5a Contact between Devil tephra and black loamy silt and tephra with organics and carbon	1 2	Chert flake Chert microblades (UA84-67-85)
3/6a Contact between Devil tephra and oxidized drift	1 2	Chert flake Chert microblades (UA84-67-88)
4a Within oxidized Watana tephra	1	Chert flake

Table D.333. (Continued)

Unit		Description
4a/4b Contact between oxidized Watana tephra and light brown Watana tephra	3	Chert flakes
4b	3	Chert flakes
Within light brown	1	Chert piece (shatter)
Watana tephra	4	Chert microblades (UA84-67-91, 94)
4b/5a	19	Chert flakes
Contact between	12	Chert microblades (UA84-67-13, 15, 95, 97)
buff Watana tephra and black, loamy silt and tephra with organics and carbon		
4b/5b	2	Chert flakes
Contact between	2	Chert microblades (UA84-67-99, 102)
buff Watana tephra and gray sandy silt and tephra with pebbles and cobbles		

Table D.333. (Continued)

Unit		Description
5a	1	Chalcedony flake
Black loamy silt	14	Chert flakes
and tephra with	2	Chert pieces (shatter)
organics and carbon	16	Chert microblades (UA84-67-19 to 26, 36 to 38, 103)
5a/5b	50	Chert flakes
Contact between	1	Chert piece (shatter)
black loamy silt	7	Chert microblades (UA84-67-105 to 108)
and tephra with	1	Piece of birch bark (UA84-67-109)
organics and carbon and gray sandy silt and tephra with pebbles and cobbles		
5b	13	Chalcedony flakes
Within gray	387	Chert flakes
sandy silt and	16	Chert pieces (shatter)
tephra with	3	Chalcedony microblades (UA84-67-48, 65, 157)
pebbles and	234	Chert microblades (UA83-219-15 to 47, 49 to
cobbles		51, UA84-67-40 to 47, 64, 122 to 124, 133 to 137, 148 to 156, 158 to 165, 182 to 188)
	1	Chert microblade core (UA84-67-132)
	4	Chert rejuvenation flakes (UA83-219-52; UA84-67-121, 146, 147)

Table D.333. (Continued)

Unit		Description
5b/6a	30	Chert flakes
Contact between	4	Chert pieces (shatter)
gray sandy silt	43	Chert microblades (UA84-67-198 to 201, 207,
and tephra with		211 to 222)
pebbles and cobbles		
and oxidized drift		
6a	1	Chalcedony flake
Within oxidized	21	Chert flakes
drift	6	Chert microblades (UA84-67-230, 231)
Subsurface,	5	Chert flakes
provenience unknown	8	Chert microblades (UA83-219-7, 10, 11;
		UA84-67-2)

AHRS Number TLM 208; Accession Number UA83-220

Area:	East of Watana Lake
Site Map:	Locus A, Figure D.262
	Locus B, Figure D.263
	Locus C, Figure D.264
Site Location Map:	Figure E.66
USGS Map:	Talkeetna Mts. C-3, Figure E.6
Site Location:	Appendix F

Setting:

The site consists of three loci (A, B and C) located east of the north end of Watana Lake. Locus A is on the summit and upper slopes of a ca. 105 m high knoll adjacent to the northeast margin of Watana Lake, at an elevation of ca. 1035 m asl (3396 feet). The knoll, which is the point of highest relief on the gradually eastward sloping plateau bordered by Watana Lake, its outlet stream, and the Susitna River and Kosina Creek valleys, has a broad, flat summit of approximately 80 (north-south) x 40 m (east-west). The highest point is at the south end of the summit. To the north, the summit area slopes gently downward (ca. 1-2 degrees) before reaching the relatively steep (ca. 15-30 degrees) sides of the knoll. Locus C is located on a bench on the lakeward face of a ridge at the south end of the knoll, south of locus A. Terrain around the knoll is dominated by Watana Lake (ca. 140 ha) to the west and Watana Mountain on the west shore of the lake, and by relatively low-relief, eastward sloping terrain to the south, east, and north, upon which a number of 5-10 m high knolls and ridges occur as well as several small lakes and ponds within 1.5-3 km of the site. Locus C is primarily oriented toward Watana Lake to the west. Locus B is located on the north end of an east-west oriented low ridge which is visible to the east from locus A at 96-degrees azimuth. The locus B site ridge is typical of the low-lying ridges on the plateau, with a broad rounded crest and several discrete knoll-like irregularities; the west-facing slope is of much less relief than the east slope relative to surrounding terrain owing to the overall eastward slope of the plateau.

While locus A commands a panoramic view of adjacent terrain in all directions for a distance of ca. 2-4 km, the view from locus B is primarily limited to an easterly and southerly view encompassing the plateau to the margins of the Kosina Creek and Susitna River canyon, with views to the west and north obstructed by rising irregular terrain within 150 m, although the summit of the locus A knoll is visible.

Locus A site vegetation consists of thin tundra mat interspersed with often extensive deflated surface exposures. The sides of the knoll and the terrain adjacent to its base and the shores of Watana Lake have birch shrub vegetation. Locus C has deflated areas with sparse tundra patches and some birch shrub. The facing slope of Mount Watana is unvegetated scree over ca. 200 m above the lake. In other directions beyond ca. 1.5 km, spruce trees occur in drainages and around small lakes, increasing in frequency toward the lower margins of the plateau. Locus B site vegetation consists of discontinuous upland tundra interspersed with deflated areas, with grasses and dwarf birch thicket occurring in surrounding less exposed areas.

Testing:

Locus A: Locus A, located by project personnel assisting in the relocation of Alaska Fish and Game equipment, consists of an extensive but diffuse lithic scatter over the summit and upper slopes of the knoll adjacent to Watana Lake. Additional surface survey by a survey crew resulted in observation of additional lithic material during site recording. Diagnostic tools and a sample of flakes were collected (Table D.334). The tools included 2 chert scrapers (UA83-220-13, 14; Figure D.391j,f), 3 obsidian scrapers (UA83-220-1, 3, 4; Figure D.391i,h,g), 1 quartz scraper (UA83-220-7; Figure D.391d), 1 basalt biface (UA83-220-2; Figure D.391c), 1 chert preform (UA83-220-5; Figure D.391b), 1 basalt lanceolate point (UA83-220-6; Figure D.391a), and 1 chert flake core (UA83-220-8; Figure D.391e). Due to the large quantity of diagnostic artifacts found on the surface, no subsurface testing was undertaken, although there is probably subsurface lithic material in

areas with intact vegetation mat. Estimated locus A size based on the distribution of artifacts is 4200 square meters (Table D.2).

Locus B: Locus B consists of a surface lithic scatter, including a chert flake core (UA83-220-25; Figure D.391k), found on a deflated area of a low ridge during a brief survey of the area to the east of locus A (Table D.334). Estimated locus B size based on the distribution of artifacts is 6 square meters (Table D.2). A return visit to TLM 208 resulted in the discovery of the locus C scatter and the discovery of an additional surface diagnostic tool from locus A.

Locus C: Locus C is a lithic scatter of ca. 5 m in minimum extent (Table D.334). A basalt biface fragment (UA83-220-28; Figure D.391l) and a sample of debitage were collected. No subsurface testing was conducted. Estimated locus C size based on the distribution of artifacts is 5 square meters (Table D.2).

Table D.334

Artifact Summary, TLM 208

Provenience		Description
Lithic Material		
Surface:		
Locus A	2	Argillite flakes
	6	Basalt flakes
	1	Chert flake
	1	Obsidian flake
	1	Quartzite flake
	1	Rhyolite flake
	1	Basalt modified flake (UA83-220-9)
	1	Rhyolite modified flake (UA83-220-21)
	2	Chert scrapers (UA83-220-13, 14)
	3	Obsidian scrapers (UA83-220-1, 3, 4)
	1	Quartz scraper (UA83-220-7)
	1	Basalt biface fragment (UA83-220-2)
	1	Chert biface (UA83-220-27)
	1	Chert preform (UA83-220-5)
	1	Basalt lanceolate point (UA83-220-6)
	1	Chert flake core (UA83-220-8)
Locus B	1	Argillite flake
	1	Chert flake core (UA83-220-25)

Table D.334. (Continued)

Provenience		Description
Locus C	2	Basalt flakes
	1	Chert flake
	1	Basalt biface fragment (UA83-220-28)
	2	Rock fragments

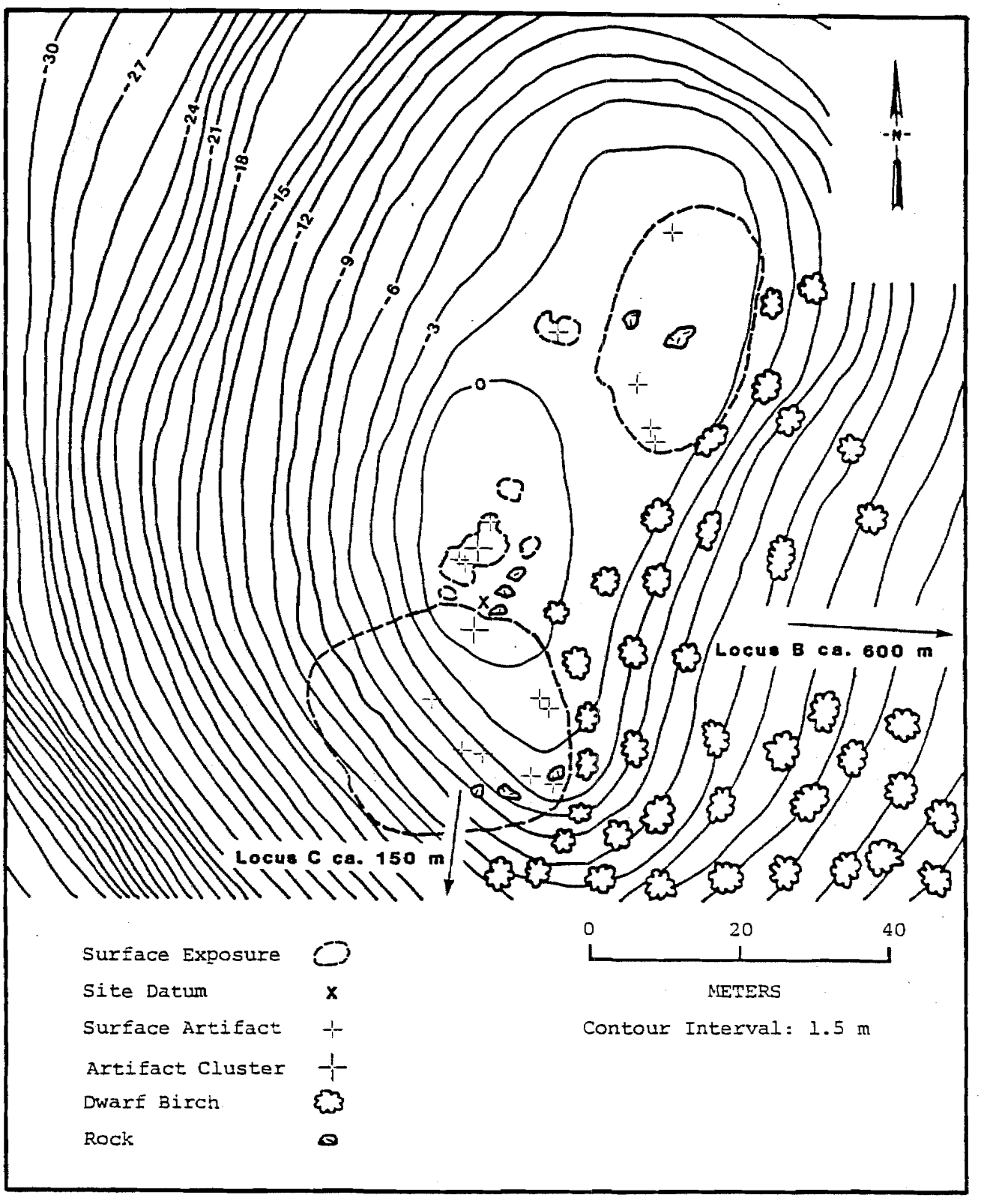


Figure D.262. Site Map, TLM 208 Locus A

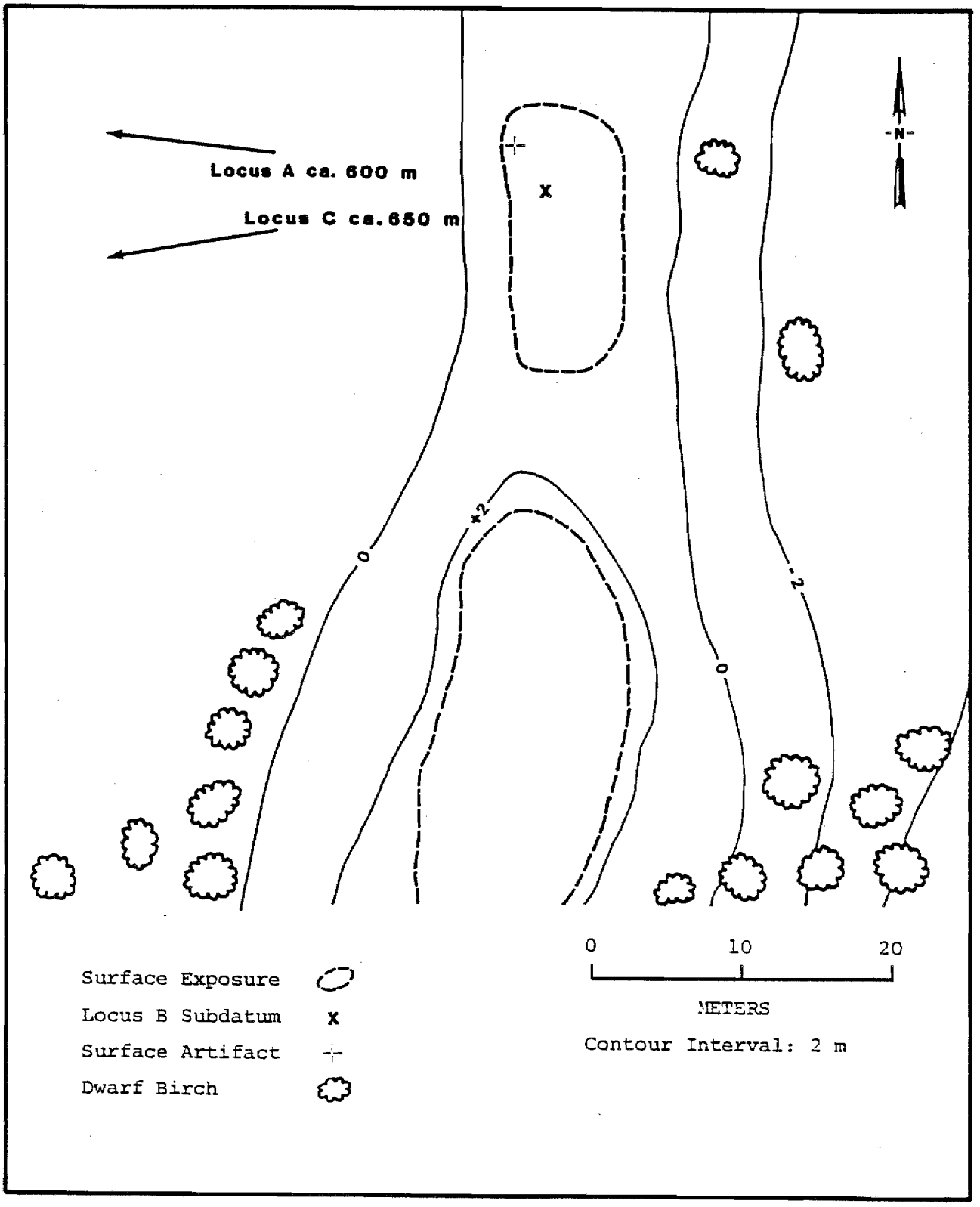


Figure D.263. Site Map, TLM 208 Locus B

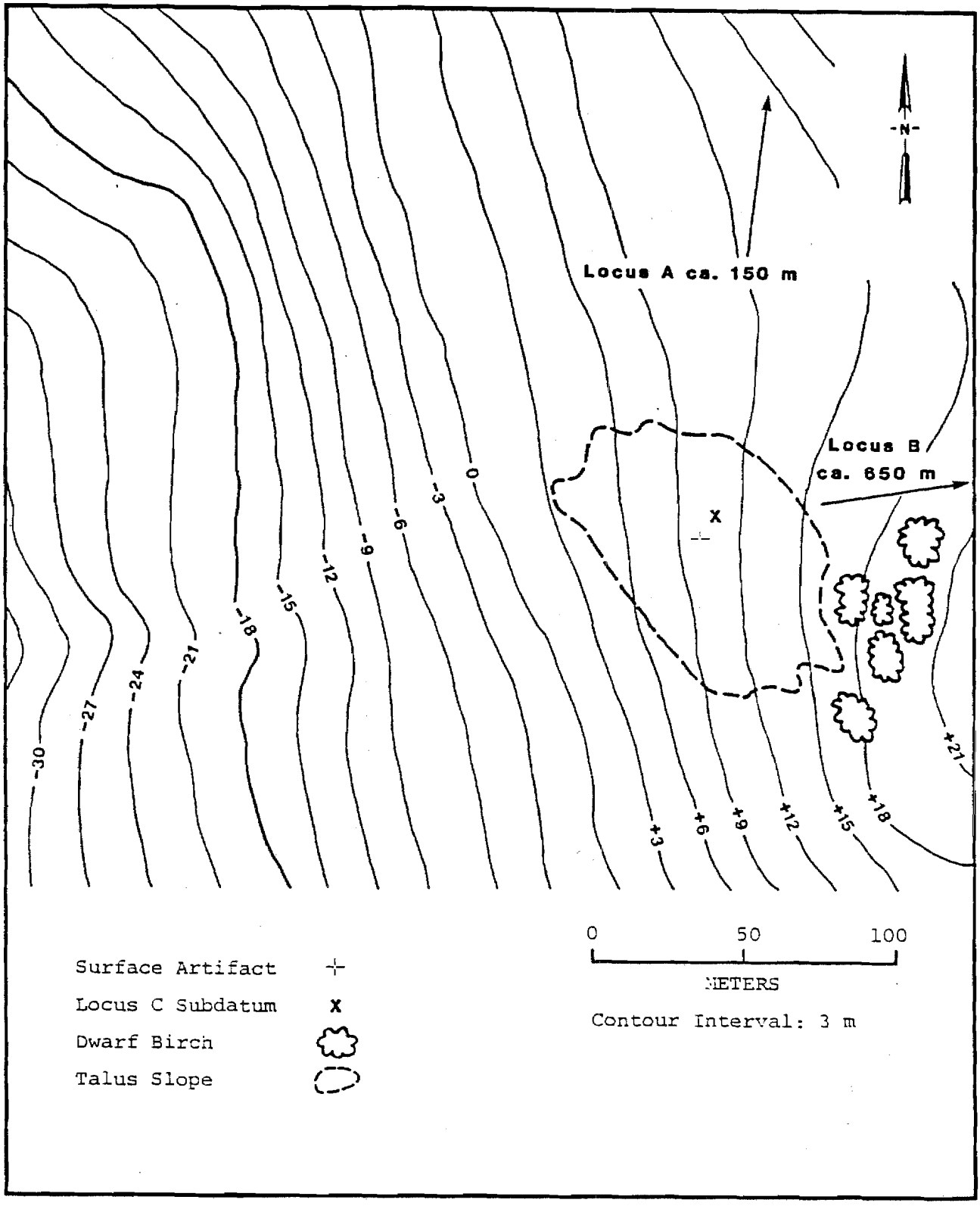


Figure D.264. Site Map, TLM 208 Locus C

AHRS Number TLM 209; Accession Numbers UA83-221, UA84-118

Area:	North-northeast of the Confluence of Clark Creek with Tsusena Creek
Site Map:	Figure D.265
Survey Locale:	Proposed Borrow F, Figure E.277
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 209 is located east of Tsusena Creek on the western flank of Tsusena Butte at 738 m asl (altimeter: 2422 feet). The site is situated on a small north-south oriented knob at the western end of an east-west trending spur. There is a series of these ridges north of TLM 209. TLM 210 and TLM 211 are ca. 600 m and 700 m, respectively, northeast of TLM 209 on a larger east-west trending bedrock spur. To the north, between the bedrock spurs, is a wide valley filled with high brush, mainly dwarf birch. This valley also contains a small, thickly vegetated stream channel and a boulder field. To the west the ridge system slopes steeply, approximately 22 degrees, downward to the Tsusena Creek valley. The site location affords an excellent view of Tsusena Creek valley, especially to the south and west. The confluence of Clark Creek with Tsusena Creek is south-southeast of the site but is obscured by the stands of spruce trees in the valley bottom. To the east the spur slopes upward very gently for ca. 100 m to the walls of Tsusena Butte. The site itself is vegetated by mosses and lichens, with surface exposures north and east of the datum. Exposed rocks are also apparent. Elsewhere on the knob top and on the surrounding terrain, the vegetation consists of mosses, lichens, blueberry, dense clumps of dwarf birch and scattered spruce trees.

Testing:

TLM 209 was located when four flakes were observed in an exposure extending north and east of the site datum (Table D.335). A 40 x 40 cm

test pit (test pit 1), placed at the edge of the deflated area produced an additional four flakes one from the surface and three from the Devil tephra. Five survey shovel tests did not produce cultural material.

Grid shovel testing was initiated to assess site size and determine the distribution of cultural material. Thirty-two shovel tests were excavated. Three grid shovel tests contained cultural material. Shovel test N104/E104 contained 288 basalt flakes at the contact between the organic mat and the Devil tephra. Shovel test N100/E104 contained ash, charcoal, and thermally altered rocks. A single gray chert flake was recovered from the root mat of shovel test N100/E98. Observed site size based on the distribution of artifacts is 24 square meters (Table D.2).

Table D.335.

Artifact Summary, TLM 209

Provenience		Description
Lithic Material		
Surface:	5	Argillite flakes
Subsurface:		
Test pit 1	3	Argillite flakes
Shovel test N100/E98	1	Chert flake
Shovel test N104/E104	288	Basalt flakes

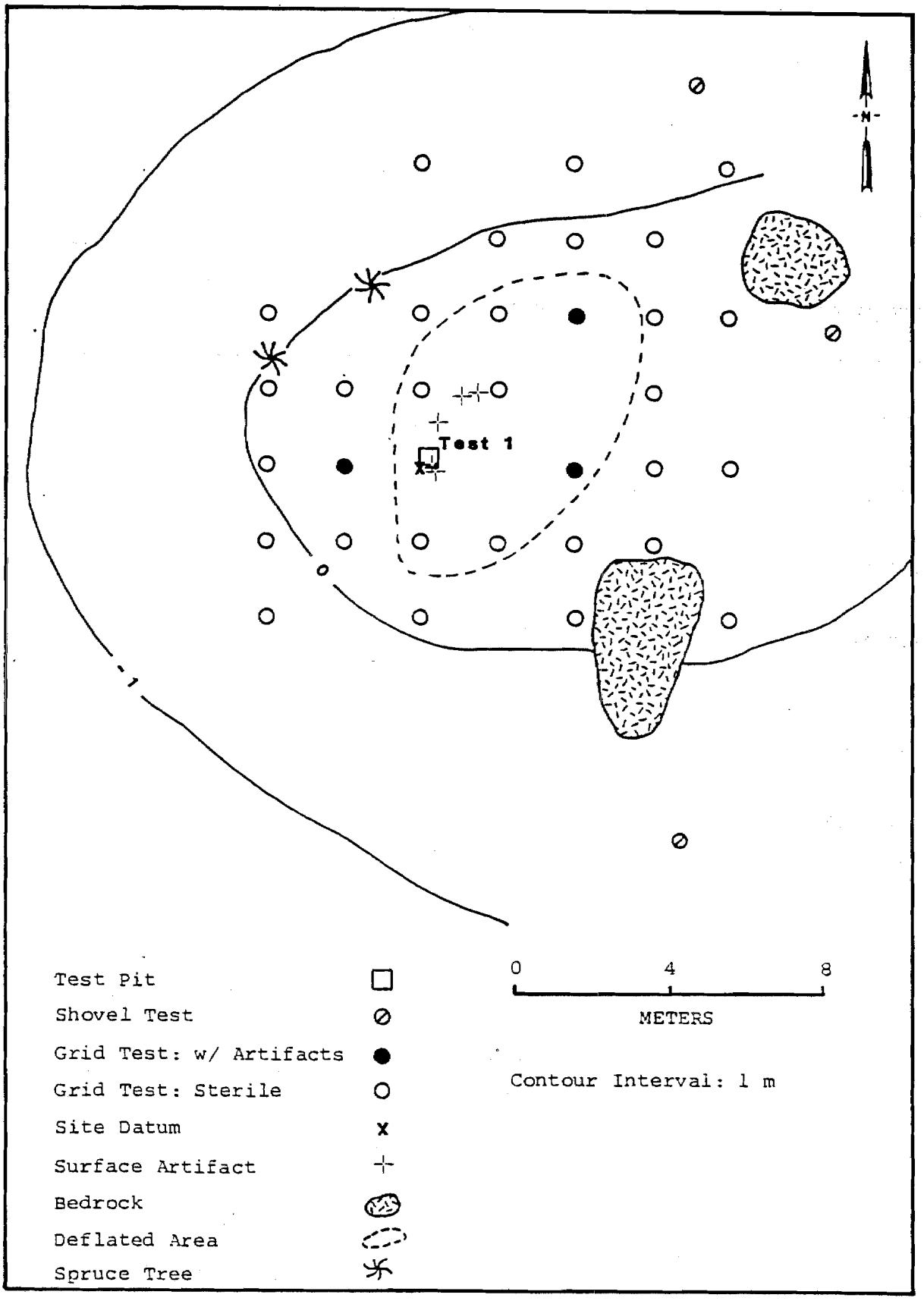


Figure D.265. Site Map, TLM 209

AHRS Number TLM 210; Accession Number UA83-222, UA84-119

Area:	Northeast of the Confluence of Clark Creek with Tsusena Creek
Site Map:	Figure D.266
Survey Locale:	Proposed Borrow F, Figure E.277
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 210 is located on a knob, at ca. 732 m asl (2400 feet), which is on the southern end of an east-west trending spur on the western side of Tsusena Butte. The knob, approximately 15 (north-south) x 8 m (east-west), is situated on a north-south trending bedrock knob which continues for another 20 m, to the north-northwest. To the north lies a gully, ca. 3 m deep, that separates the knob with TLM 210 from the next knob, ca. 100 m to the north, where TLM 211 is located at approximately the same elevation. To the west and southwest the knob drops off very sharply and then continues at approximately 20 degrees to the Tsusena Creek, ca. 100 m west and 30 m below. To the south, the terrain descends into a fairly deep, wide ravine system that separates TLM 210 and TLM 209, which is situated on a knob ca. 600 m south-southeast. To the east, the spur rises gently to meet the steep walls of Tsusena Butte. TLM 210 is vegetated by lichens, mosses, blueberries, crowberries, lowbush cranberries, Labrador tea, dwarf birch, and scattered spruce trees. Off the site, the vegetation is very similar although the moss mats and dwarf birch patches are denser. The view from the site is limited to the east by the flanks of Tsusena Butte and to the north by outcrops of bedrock on the spur. The site affords an excellent view of the Tsusena Creek valley to the west and south. To the south, lies the southern flanks of Tsusena Butte and the Tsusena Creek valley with the Talkeetna Mountains in the background. The confluence of Clark Creek with Tsusena Creek lies ca. 1.3 km southwest of the site, but is obscured by spruce trees in the vicinity of the confluence. To the southeast the knolls with TLM 203, south of Clark

Creek, and TLM 176, north of Clark Creek, are visible. If the vegetation were reduced to shrubs, then the confluence would be visible as well as TLM 202, located northwest of the confluence.

Testing:

TLM 210 was located by the presence of a basalt flake in the lichen mat (Table D.336). A 40 x 40 cm test pit (test pit 1) placed at the point of discovery was sterile. Nine additional survey shovel tests placed on the knob were also sterile. A grid shovel testing program was implemented to locate subsurface material and to assist in determining the areal extent of TLM 021. Fifteen grid shovel tests were placed in the vicinity of test pit 1. A single basalt flake was recovered from N102/E100 at the contact between the organic and Devil tephra units. Observed site size based on the distribution of artifacts is 8 square meters (Table D.2).

Table D.336.

Artifact Summary, TLM 210

Provenience		Description
Lithic Material		
Surface:	1	Basalt flake
Subsurface:		
Shovel test N102/E100	1	Basalt flake

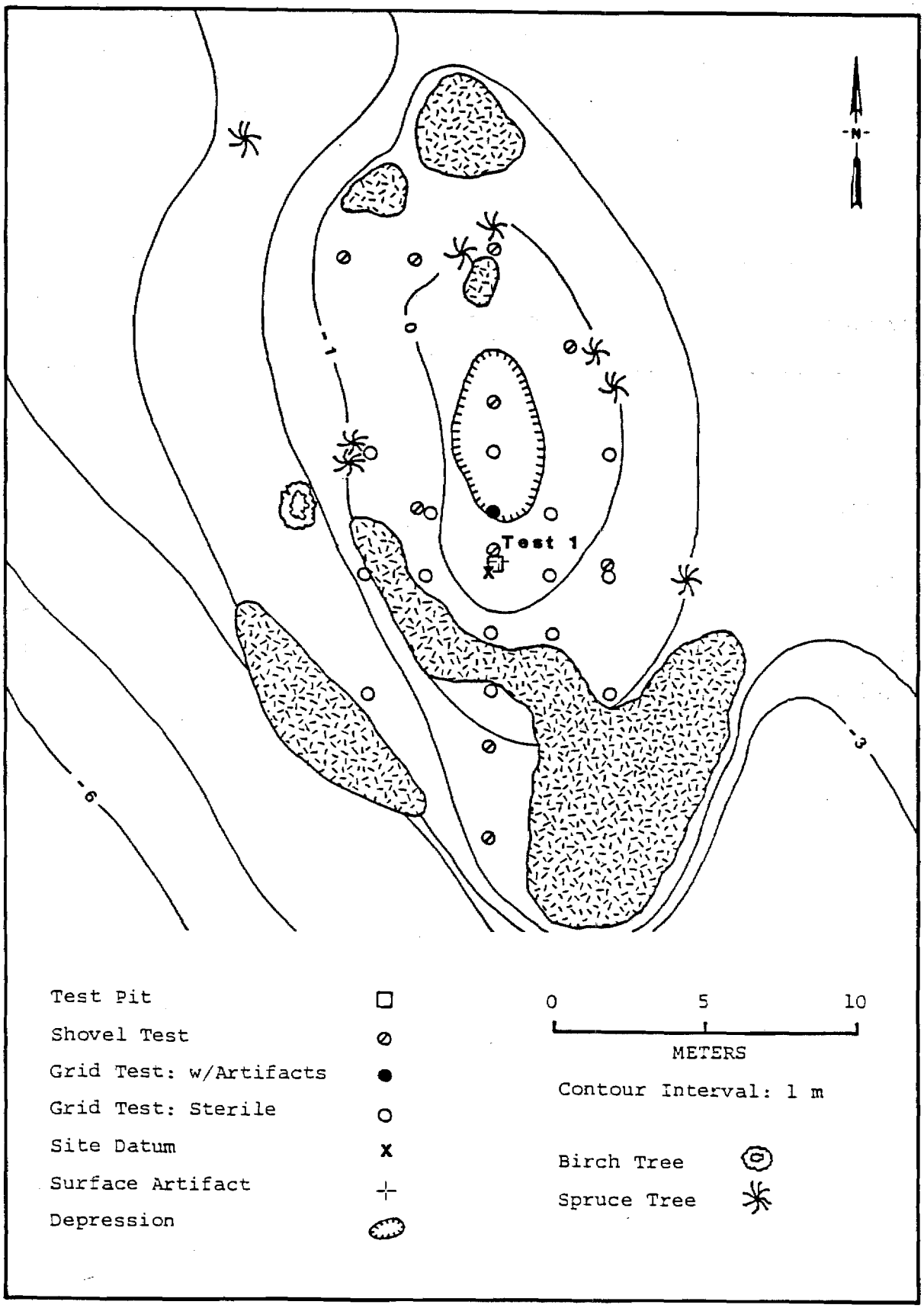


Figure D.266. Site Map, TLM 210

AHRS Number TLM 211; Accession Number UA83-223

Area:	Northeast of the Confluence of Clark Creek with Tsusena Creek
Site Map:	Figure D.267
Survey Locale:	Proposed Borrow C, Figure E.277
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 211 is located on a knob ca. 732 m asl (2400 feet). It is one of a series of knobs located on an east-west trending spur on the west side of Tsusena Butte. These knobs, generally oval in shape, measure approximately 6 (north-south) x 3.5 m (east-west), are basically boulders mantled with eolian sediments. TLM 211 is located on the northern one-third of one knob; the southern portion has very little soil deposition. To the east, the terrain rises gently for approximately 100 m until the spur joins the walls of Tsusena Butte. Talus slopes of boulders are visible upslope from the site. To the north and south are gullies which separate this outcrop from similar outcrops, that restrict the view. TLM 210 lies on a knob of the same elevation, ca. 100 m south. To the west TLM 211 affords a good view of the Tsusena Creek valley and the hills beyond it. To the southwest the upper terraces of Clark Creek are visible where TLM 203, south of Clark Creek, and TLM 176, north of Clark Creek, are located. Tsusena Creek is located west of the site and ca. 30 m below the site. The site vegetation consists of lichens, scattered mosses, lowbush cranberry, blueberry, crowberry, and spruce trees in the crevices of the bedrock. At the edge of the knoll top, approximately 4 m north and east of the datum, the moss thickens and there are dense thickets of dwarf birch. The areas around the site are covered by dense patches of dwarf birch shrubs and scattered spruce trees. There are many moss-covered boulders, at lower elevations, and lichen-covered bedrock outcrops in the vicinity. If the vegetation were reduced to shrubs, then TLM 202,

located northwest of the confluence of Clark Creek with Tsusena Creek, and the confluence itself might be visible.

Testing:

TLM 211 was discovered when lithic material was observed in a shovel test placed near the crest of the knob (Table D.337). This test was expanded into a 40 x 40 cm test pit (test pit 1). Twenty flakes (17 argillite and 3 chalcedony flakes) were recovered from the organic unit and two flakes (1 argillite, 1 chalcedony) were recovered from the Watana tephra. Eight additional survey shovel tests failed to produce material. A grid shovel testing program was implemented to assist in determining site size and the distribution of cultural material. Sixteen grid shovel tests were excavated around test pit 1 but these also proved sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.337.

Artifact Summary, TLM 211

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	18	Argillite flakes
	4	Chalcedony flakes

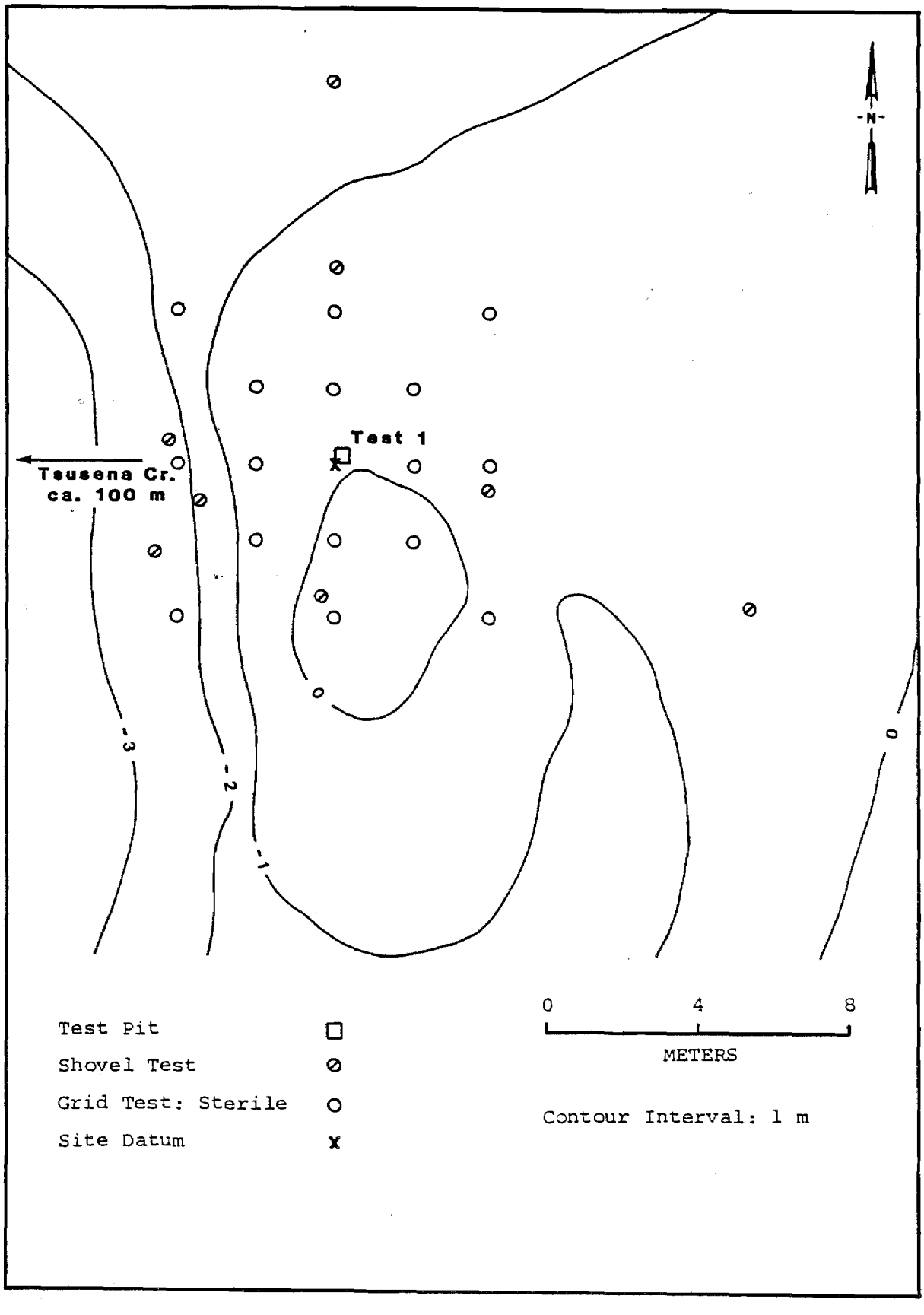


Figure D.267. Site Map, TLM 211

AHRS Number TLM 212

Area:	West of Tsusena Creek
Site Map:	Figure D.268
	Structure Map, Figure D.269
Survey Locale:	Proposed Borrow F, Figure E.279
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 212 is a historic log cabin located on the western bank of Tsusena Creek, south-southeast of the confluence of Clark Creek with Tsusena Creek. The site is situated on the low, flat vegetated flood plain at 638 m asl (altimeter: 2093 feet), at a bend in Tsusena Creek, ca. 7 m southwest of the present creek channel. This location allows excellent access to the creek but provides a poor view of the area, as the site area is thickly vegetated. The ground cover consists of hummocky thick mosses (with a number of moss-covered boulders), lichens, dwarf dogwood, fireweed, lowbush cranberry, blueberry, and grasses. The lower canopy consists of rose bushes and dwarf willows. The upper canopy consists of fairly dense stands of spruce trees. The relatively thick vegetation, especially the spruce trees, obscures the view in all directions, except to the northeast.

Testing:

The site consists of a single cabin with an associated scatter of historic debris. The cabin is a 1-room, ca. 13 x 13 ft. structure built of unhewn, horizontally placed spruce logs with moss chinking. The corner joints are rounded to square-notched and the logs extend past their point of intersection. The logs are saw-cut and the notches hand-hewn with an axe. The roof and upper portions of the walls have collapsed. The remaining logs stand approximately 4 ft., high. The roof planking has collapsed toward the southeast end of the cabin and

consists of (11 x 3/4 in.) milled planks. Patches of the sod roofing are still clinging to these planks.

Openings in the cabin include a small door, 4'1" x 2'6", on the northeastern wall and a small vent, 6" x 1'7", north of the door on the same wall. The door is made of three rough-hewn planks and is still held shut by a single nail, near the upper left corner. The window or vent is located on the northern half of the northeast facing wall, next to the stove. It is approximately 10 in. above the ground surface and is held shut by a rough-hewn board which is nailed to the inside of the cabin wall.

The interior furnishings are obscured for the most part by the collapsed roof planks and the thick vegetation growth on the inside of the cabin. A small (2'1" x 1'4") cast iron, two-lidded wood stove is located in the northeast corner of the cabin. The northeast corner of the cabin also has a number of nails placed in a shaved log. Metal bread pans, frying pans, cups, and forks are visible in this corner. All the metal items are rusted.

There is a small depression along the northern wall of the cabin near the northwestern corner. It is approximately 4'3" x 4'3" x 1'8" and contained one badly rusted square metal cannister. A shovel test placed in the center yielded only sand.

The cabin is in poor condition. No cultural remains were collected at this site; however, Table D.338 contains a listing of all items noted in and about the cabin. Estimated site size based on the distribution of artifacts is 96 square meters (Table D.2).

Table D.338.

Artifact Summary, TLM 212

Provenience		Description
Historic Remains		
(Uncollected)		
	1	Rusted 8 oz. can
	1	Rusted, cast iron wood stove with two burner lids
	1	Sled with metal runners and wooden frames
	1	Rubber boot, poorly preserved
	1	Rusted 5 lbs. Wild Rose brand lard can
	1	Rusted 5 lbs. Swifts and Company lard can
	3	Rusted 20 lbs. square cans - no markings, presumably fuel cans
	1	Wooden crate, marked "Swifts"
	1	Rusted gray-blue granite enamelware basin
	1	White enamelware basin
	1	Rusted gray-blue granite enamelware coffee pot with attached lid
	1	Leather boot, left foot
	2	Rusted 116 Red Label Hills Bros. coffee cans
	2	Rusted metal loaf pans
	1	Rusted square cake pan
	1	Rusted pressed metal frying pan
	1	White enamelware cup
	3	Rusted "bone" handled forks, sitting on stove
	1	Badly rusted square cannister

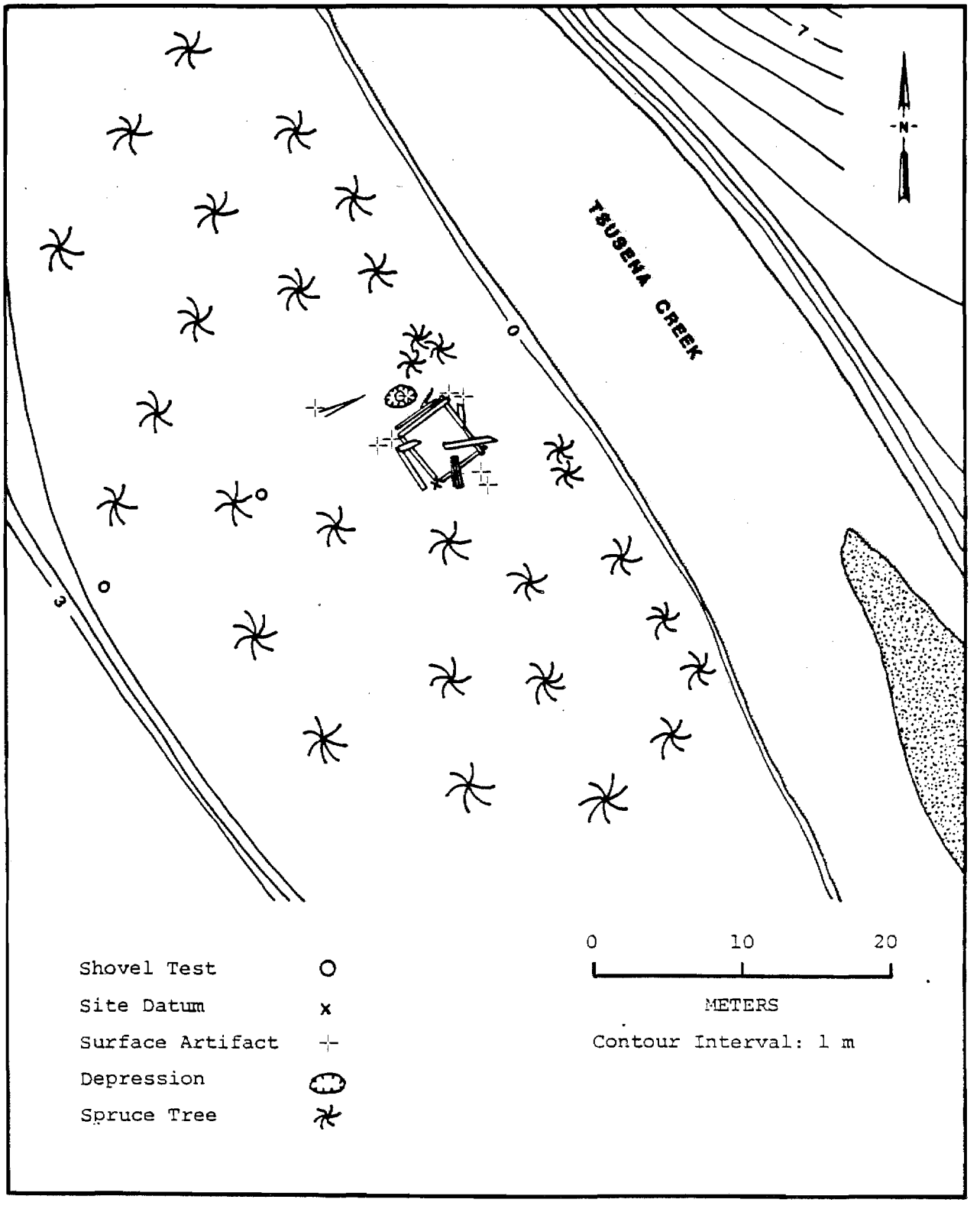


Figure D.268. Site Map, TLM 212

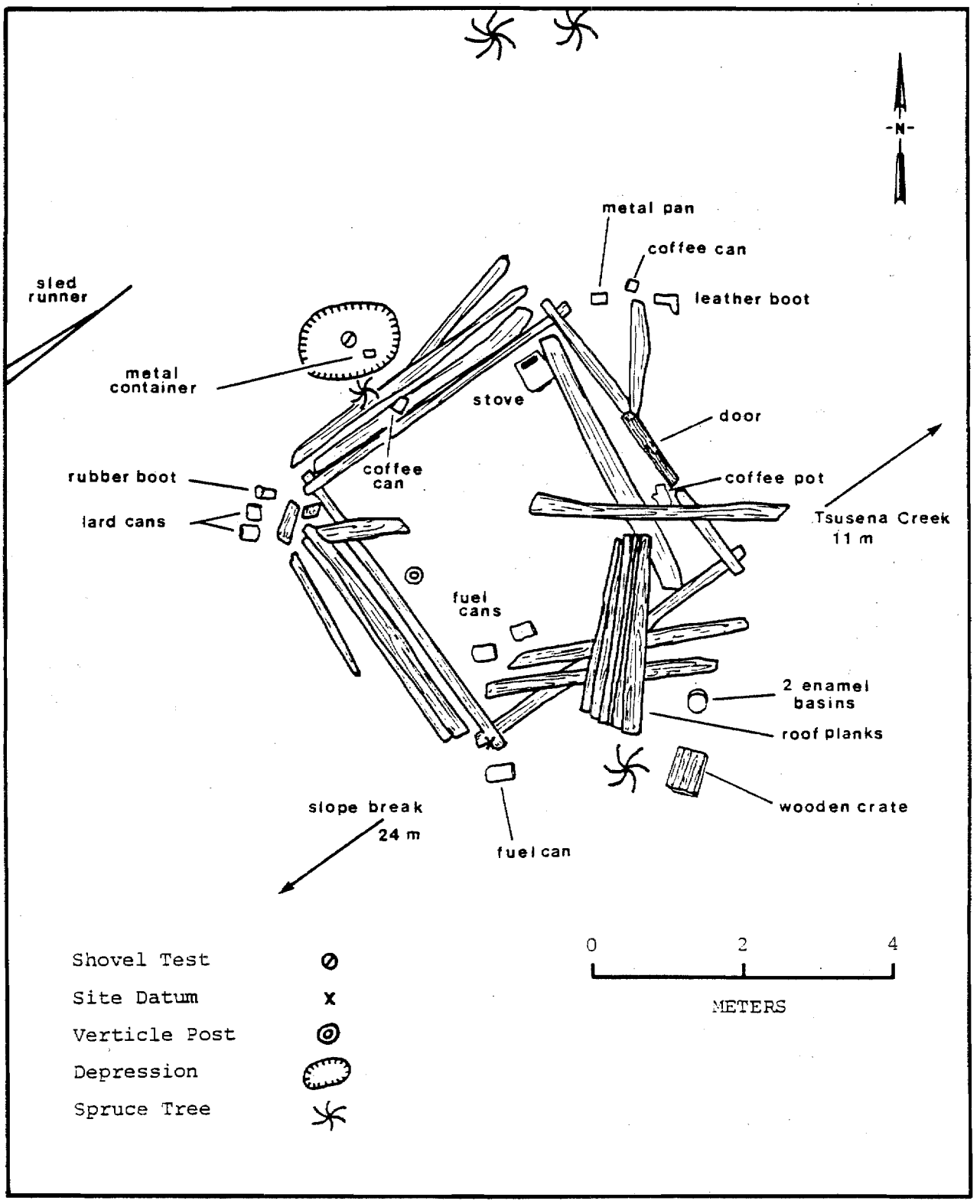


Figure D.269. Structure Map, TLM 212

AHRS Number TLM 213; Accession Number UA83-225

Area:	North of the Confluence of Clark Creek with Tsusena Creek
Site Map:	Figure D.270
Survey Locale:	Proposed Borrow C, Figure, E.277
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 213 is located at 727 m asl (altimeter: 2386 feet), on a level, ice stagnation feature which lies between two major bedrock spurs on the west side of Tsusena Butte. The site is situated on the southern bank of a small stream that drains lake and marsh which lie east of the site. The site overlooks the outlet of the stream onto the vegetated flood plain of Tsusena Creek, which lies ca. 8-9 m below. The stream flows out of a steeply incised gully north and northeast of the site and then turns and flows south along the base of the bank west of the site before it joins Tsusena Creek. Across this deeply incised stream outlet are a series of eskerlike features that meander northward to the base of the northern bedrock spur. To the south, there are also eskerlike features, but these are not as well defined. Further south, ca. 400 m, there are bedrock outcrops that form the spur on which TLM 210 and TLM 211 are located. These bedrock spurs and the steeply rising walls of Tsusena Butte, define the limits of the view to the northeast, east, and southeast. This site has a good view of the northern half of the western flanks of Tsusena Butte. To the west lies Tsusena Creek which is visible across its ca. 50 m wide flood plain, and beyond it are high hills. These hills form the limit of visibility to the northwest, west, and southwest. To the north and south, the Tsusena Creek valley is visible but obscured by the presence of spruce trees. Vegetation on the site consists of lichens, mosses (with hummocky patches up to 50 cm high) starting approximately 3-5 m away from the bank edge, blueberry, bearberry, lowbush cranberry, dwarf Labrador tea, crowberry, dwarf birch, and scattered spruce trees. In the vegetated flood plain and

marshy areas grasses predominate, while willow is common in the stream valley.

Testing:

TLM 213 is represented by a single basalt flake recovered from the lower portions of the Watana tephra during survey testing (Table D.339). The expansion of the shovel test into a 40 x 40 cm test pit (test pit 1) and eight subsequent shovel tests produced no additional material. A grid shovel testing program was implemented in an effort to locate subsurface remains and to assist in site size determination. Sixteen grid shovel tests were excavated but all were devoid of cultural material. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.339.

Artifact Summary, TLM 213

Provenience		Description
Lithic Material		
Surbsurface:		
Test pit 1	1	Basalt flake

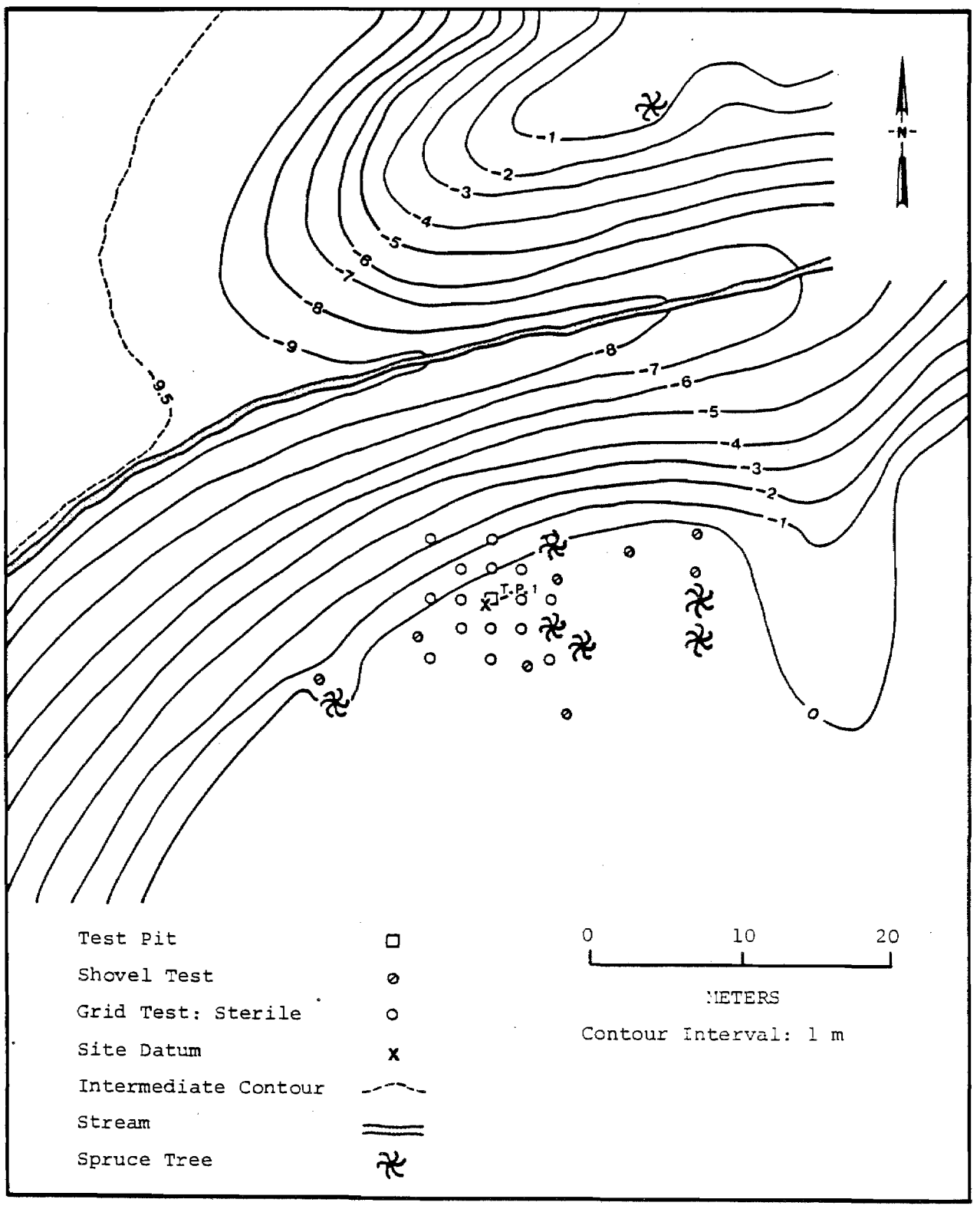


Figure D.270. Site Map, TLM 213

AHRS Number TLM 214; Accession Numbers UA83-226, UA84-123

Area:	North-northeast of Tsusena Creek Mouth
Site Map:	Locus A, Figure D.271
	Locus B, Figure D.272
Survey Locale:	Proposed Borrow F, Figure E.278
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

The site, consisting of two loci (A and B), is situated on a relatively flat plateau top at an elevation of 798 m asl (altimeter: 2618 feet), north-northeast of the mouth of Tsusena Creek and south of Tsusena Butte. The plateau is elbow shaped, with one axis oriented north-south and the other northwest-southeast. At its greatest extent, the plateau measures ca. 150 x 75 m. Steep descending slopes around the circumference, the greatest being ca. 7.5 m in height on the northwestern margin, define the character of this discrete landform. A series of five small lake basins are located on the glaciolacustrine plain to the south of the site. The closest of these basins is less than 1 km away. Of the three basins in view from the site, only two support open lakes while the other is entirely covered with vegetation. Low knolls and a lowland spruce bog surround the group of lakes. A rapid, boulder-filled section of Tsusena Creek is situated west of TLM 214, and is in view to the north and west, with a mountainous vista beyond. Clark Creek, which drains this upland terrain to the northwest, empties into Tsusena Creek northwest of the site. The mouth of Clark Creek and its lower 6-7 km are obstructed from view at locus A by the northwest plateau edge; however, it is visible from locus B. A glacial trough trending northwest-southeast is visible from locus A, but not from locus B. There are boulders on the surface of the plateau top, and there are a number of deflated areas. Tsusena Butte limits the view to the east and northeast. Two plateaus similar to that on which the site is located are in view ca. 1 km southwest. Vegetation on the site

includes lichens, mosses, grasses, Labrador tea, dwarf birch, blueberry, crowberry, alder, and an occasional spruce.

Testing:

An intensive surface survey was conducted on the deflated portions of the terrace which contained exposed bedrock and glacial drift deposits. Two concentrations of lithic artifacts were observed on the surface (loci A and B), approximately 55 m apart (Table D.340).

Locus A: Locus A is located on the southeastern portion of the terrace. A deflated exposure revealed a surface lithic scatter of four light gray argillite flakes and one white chert flake. Two of the argillite flakes articulate, forming a large modified flake (UA83-226-3 articulates with 4). A grid shovel testing program was implemented to locate subsurface material and to assist in determining the areal extent of locus A. Seventeen shovel tests were excavated, but none contained cultural material. A 40 x 40 cm test pit (test pit 1) was situated south of the artifact concentration (Figure D.271). Neither the test pit nor subsequent surface survey of other exposures revealed additional artifacts. Observed locus size based on the distribution of artifacts is 4 square meters (Table D.2).

Locus B: Locus B is located on the northwestern portion of the terrace. One argillite flake, 2 chert flakes, and 54 basalt flakes were collected from the surface at this locus. A grid shovel testing program was implemented to locate subsurface material and to assist in determining the areal extent of this locus. Fifteen grid shovel tests were excavated, but only one contained cultural material. Shovel test 1 yielded 14 basalt flakes. Five of these flakes were recovered from the Devil tephra unit, while the remaining nine flakes were recovered from a mixed unit of Watana tephra and glacial drift. Observed locus size based on the distribution of artifacts is 12 square meters (Table D.2).

Table D.340.

Artifact Summary, TLM 214

Provenience		Description
Lithic Material		
Surface:		
Locus A	2	Argillite flakes
	1	Chert flake
	2	Argillite modified flake fragments (UA83-226-3 articualtes with 4)
Locus B	1	Argillite flake
	54	Basalt flakes
	2	Chert flakes
Subsurface:		
Locus B		
Shovel test 1	14	Basalt flakes

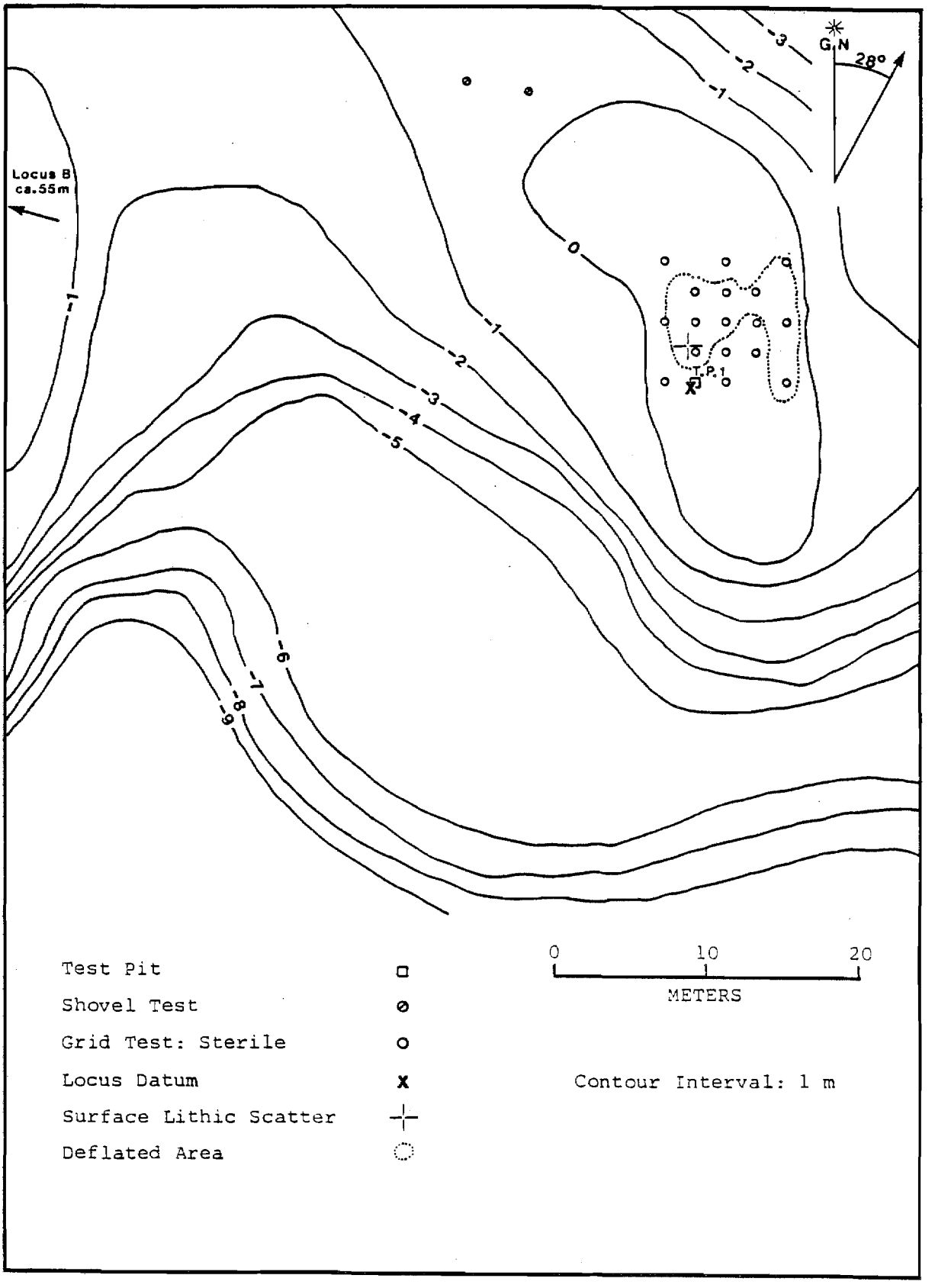


Figure D.271. Site Map, TLM 214 Locus A

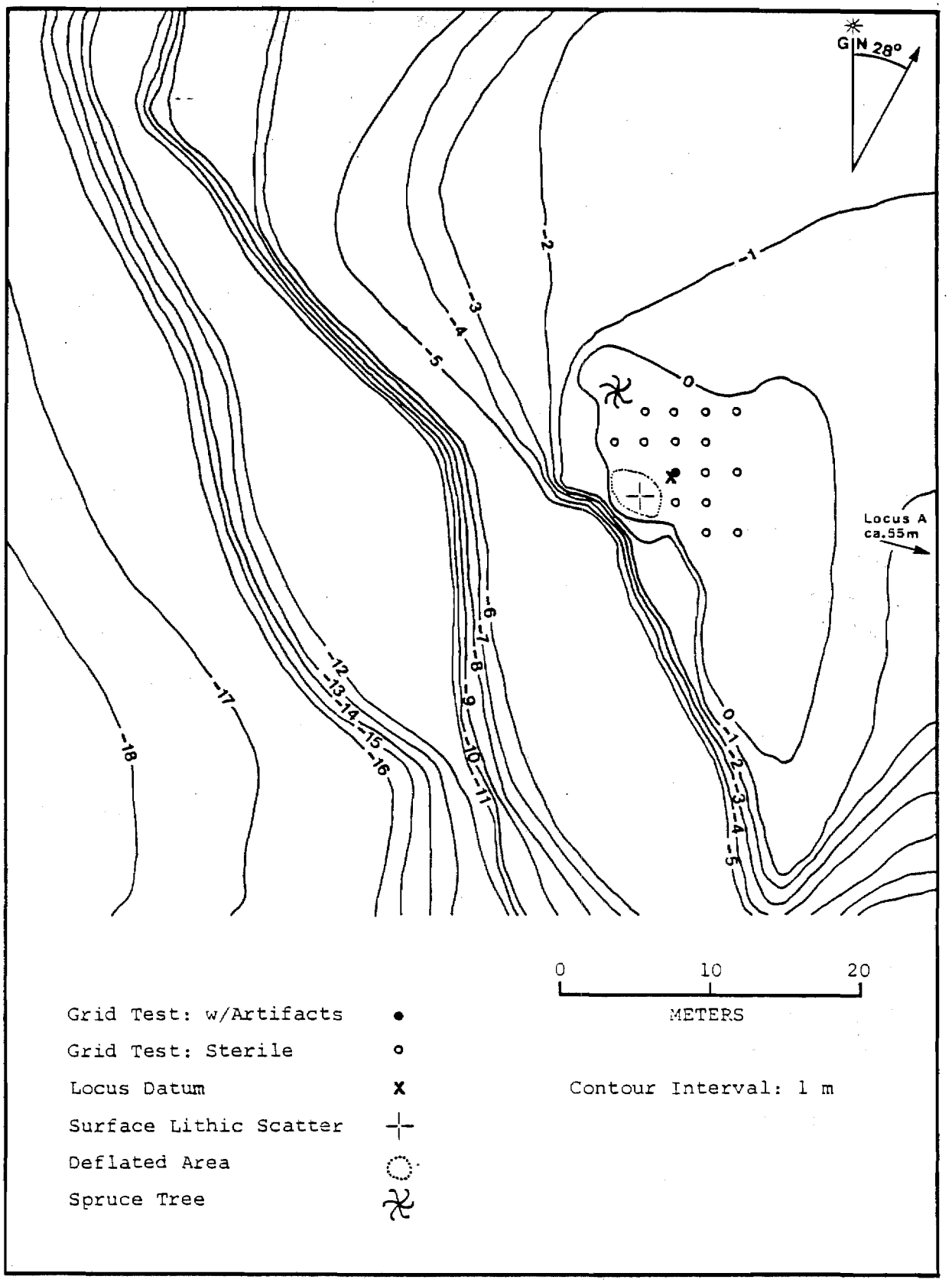


Figure D.272. Site Map, TLM 214 Locus B

AHRS Number TLM 215; Accession Numbers UA83-227, UA84-57

Area:	North-northeast of Watana Creek Mouth
Site Map:	Figure D.273
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 215, lying north-northeast of the confluence of Watana Creek with the Susitna River, is situated on the summit of a knoll rising ca. 5 m above the surrounding black spruce bog. The knoll is slightly rounded with sharp relief on the southern and western aspects and more gentle relief on the north and east. Extending approximately 90 x 45 m and resting at 613 m asl (altimeter: 2010 feet), this knoll is one of the prominent landforms on the lower Watana Creek drainage. It lies at the eastern edge of a gradually sloping plain dissected by marshy drainage channels. On its summit, the knoll is relatively flat and marked by several depressions of not more than 3 m in length which contrast noticeably with the surrounding surface. A small pond of less than 1 ha lies ca. 500 m to the southwest. A commanding view of the Watana Creek drainage to the east, the south Susitna River plateau, and the low wetlands to the north is afforded from the site. To the west-southwest approximately 300 m distant, a similar knoll on which TLM 184 lies is clearly seen from the site. Several other sites are also located in the vicinity of TLM 215. Vegetation on the knoll includes scattered white spruce, birch, clusters of dwarf birch, lowbush cranberry, and blueberry. A lichen mat forms the ground cover in open areas. The low, boggy terrain off the knoll consists of muskeg and black spruce.

Testing

The site was identified when a single bone fragment was recovered from a shovel test placed in an oval-shaped depression (feature 1), measuring 2.6 x 2 m, at the northern end of the knoll. Thirty-nine previous

shovel tests placed in and between other depressions during survey testing proved to be sterile.

The first phase of systematic testing involved the excavation of a 1 x 1 m test square, N100/E50, which was superimposed over three of the survey shovel tests in the cultural depression designated as feature 1. The square was placed at the southeastern edge of the depression so as to intersect both the base and the berm of this feature. Three adjoining 1 x 1 m squares (N100/E49, N101/E49, and N101/E50) were excavated during the second phase of systematic testing in order to clarify the complex stratigraphy and occupational history of the site.

At the completion of systematic testing, four shovel tests, placed at points 2 and 4 m south of the N100/E50 stake and 2 and 4 m east of the N101/E51 stake, were excavated to determine the extent of cultural material around the depression itself. These tests failed to produce cultural material.

Discussion

All the cultural material from TLM 215 was recovered from the 1 x 1 m test squares superimposed over feature 1. Based on stratigraphy and the distribution of artifacts, it appears that this feature is the result of a minimum of four cultural events postdating the Devil tephra fall. All these events appear to be closely spaced chronologically and represent one cultural component. Cultural material includes 57 flakes primarily of basalt (one of which was modified) and 746 bone fragments. Refer to Tables D.342, D.343, and D.344, respectively, for an artifact summary, inventory of faunal remains by stratigraphic unit, and artifact distribution by stratigraphic unit.

The stratigraphic history of feature 1 is best illustrated as a series of both natural and cultural events (Table D.341; Figure D.274). The natural events consist of the deposition of glacial drift (units 9 and 10), and a series of volcanic ash falls consisting of the Oshetna (unit 7), Watana (unit 6), and Devil (unit 5). A paleosol, represented as a

distinct stain with occasional flecks of charcoal, appears between the Oshetna and Watana tephras. Since the stain was incorporated into both tephras and could not be sufficently isolated it was included with unit 7 (Oshetna tephra).

At some time after the Devil tephra was deposited and sufficent time had elapsed to allow for the formation of a well-defined 02 horizon, the first cultural event, excavation of a deep pit into the drift, occurred. A narrower, deeper pit was then dug into the floor of this pit and subsequently refilled with finely mixed tephras and drift (unit 11). This unit contained charcoal flecks and calcined bone throughout that may have been incorporated in the fill at another location, suggesting that this material was used as an intentional fill matrix. A smaller, narrow hole was dug into the approximate center of the hole now occupied by unit 11. This smaller hole was subsequently filled with a clean sand matrix defined as unit 12. It is possible that the hole filled with unit 11 was originally excavated to receive a vertical roof support, and unit 11 was material used to set the support. Unit 12 could be material that filled a cast resulting from the removal of the support member.

After an indeterminate period of use represented by a dark brown organic stain at the contacts of units 8, 11, and 12, the pit was intentionally filled with unit 8, a poorly mixed matrix of tephra and drift sand and gravel. Several large rocks, averaging 27 cm in diameter and 15 kg in weight, lay at the base of the depression. These rocks appear to have been intentionally placed near the perimeter of the depression prior to filling with unit 8 and may represent an aspect of the depression's function. Smaller cobbles were located throughout the fill unit and are generally assumed to be fill material and not a separate cultural feature. Again, the material forming unit 8 contains a homogenous mixture of charcoal and calcined bone suggesting that it was part of an activity area located elsewhere and deposited into the pit as a secondary deposit. Birch bark, lying in discontinuous layers, was found throughout unit 8. It is uncertain whether these layers represent a series of uses such as periodic linings of the pit for use as a cache, a

gradual accumulation of refuse, or a single episode of deposition resulting from the collapse of a bark-lined roof covering.

After unit 8 was deposited and before unit 3, the overburden, was created, the tephra sequence surrounding the depression slightly extruded and overrode the original pit margins. Unit 5 (Devil tephra) was either washed or trampled across the surface of unit 8 forming a false impression of continuity at the contact. This redeposited stringer was less apparent in the northwestern portion of the excavation and provided the necessary information for the sequence reinterpretation. Cultural material (basalt flakes and calcined bone) recovered from the surface of the Devil tephra within the buried 02 horizon (unit 4) originated beyond the perimeter of the depression containing unit 8. It is possible that the occupation of the surface of the Devil tephra and the excavation of the pit are contemporaneous. If the feature represents a small dwelling this surface could correspond to an interior bench area.

Prior to the deposition of unit 3 (overburden), a narrow, steeply walled pit was dug in the approximate center of unit 8. A number of cobbles accumulating in this small pit were identified as feature 2 (which is contained within feature 1). It remains unclear whether these cobbles actually form an intentional feature or are the result of merely filling the depression. Two large cobbles associated with burned bone were imbedded in the Devil tephra at the pit margin in the southeast quadrant of N100/E49 and may form more of a recognizable feature.

The stratigraphic sequence is completed by the deposition of unit 3, a cap of sandy drift material containing gravels and small cobbles. Stratigraphy of the grid shovel tests suggests that this unit does not extend more than 2 m beyond the excavation margins. The upper surface of unit 3, leached to a depth of 2-3 cm, is identified as unit 2. Thermally altered cobbles were located on the surface of unit 3 extending into the rootmat. Clusters of calcined bone found in association with the cobbles were usually restricted to the first few centimeters of excavation. Three of the bone fragments found in this

context were identified as caribou (Rangifer tarandus). Additional bone was recovered throughout the unit but appeared in isolated, root-disturbed context. The rocks and bone clustered along the north side of the pit above the depression margin suggest the construction of a hearth. One radiocarbon sample originating from unit 3 in N50/E100 was dated at 1580 ± 110 years: A.D. 370 (Beta-7846).

Evaluation:

The excavation of feature 1 and the close examination of shovel tests indicates that cultural activity on the knoll was restricted in extent and confined to the late Athapaskan time period. Although at least four minor cultural events are evident in the construction of feature 1, the occupational history of the depression may be best described in terms of two closely related periods. The first, corresponding to the occupation of the surface of the Devil tephra, was the period during which the main pit was excavated and the subsequent two smaller interior pits were constructed and filled. The main depression at this period may have been the subject of repeated partial excavations and refillings, perhaps seasonally, or, may have simply filled with the accumulation of trash and debris. The association of lithic debitage and burned bone with the modified flake tool on top of the tephra suggests that the processing of medium-large mammals, including caribou, was taking place around the perimeter of the depression. The homogenous mixing of bone and charcoal in the depression fill suggests that it is the result of a different activity. Lithic debitage recorded as originating in unit 8 came from the area disturbed by a frost-jacked boulder and is suspected to have originated at the upper contact of the Devil tephra. The second period of occupation of the site occurred sometime following the deposition of the overburden (unit 3). This apparently very brief occupation was associated with the construction of a hearth.

The archeological literature pertaining to prehistoric Athapaskan sites documents frequent use of depressions or pits for a variety of purposes. Although the dimensions of feature 1 conform most closely to what have previously been identified as cache pits (Workman 1977a), the presence

of small calcined bone fragments, such as found at TLM 215, are not usually associated with such pits. Besides serving as a probable cache for caribou, the site may also have functioned as a temporary shelter on occasion. It is apparent that feature 1 was reused several times, perhaps within the same season as one part of an annual subsistence round involving the hunting of caribou. Estimated site size based on the distribution of artifacts is 52 square meters (Table D.2).

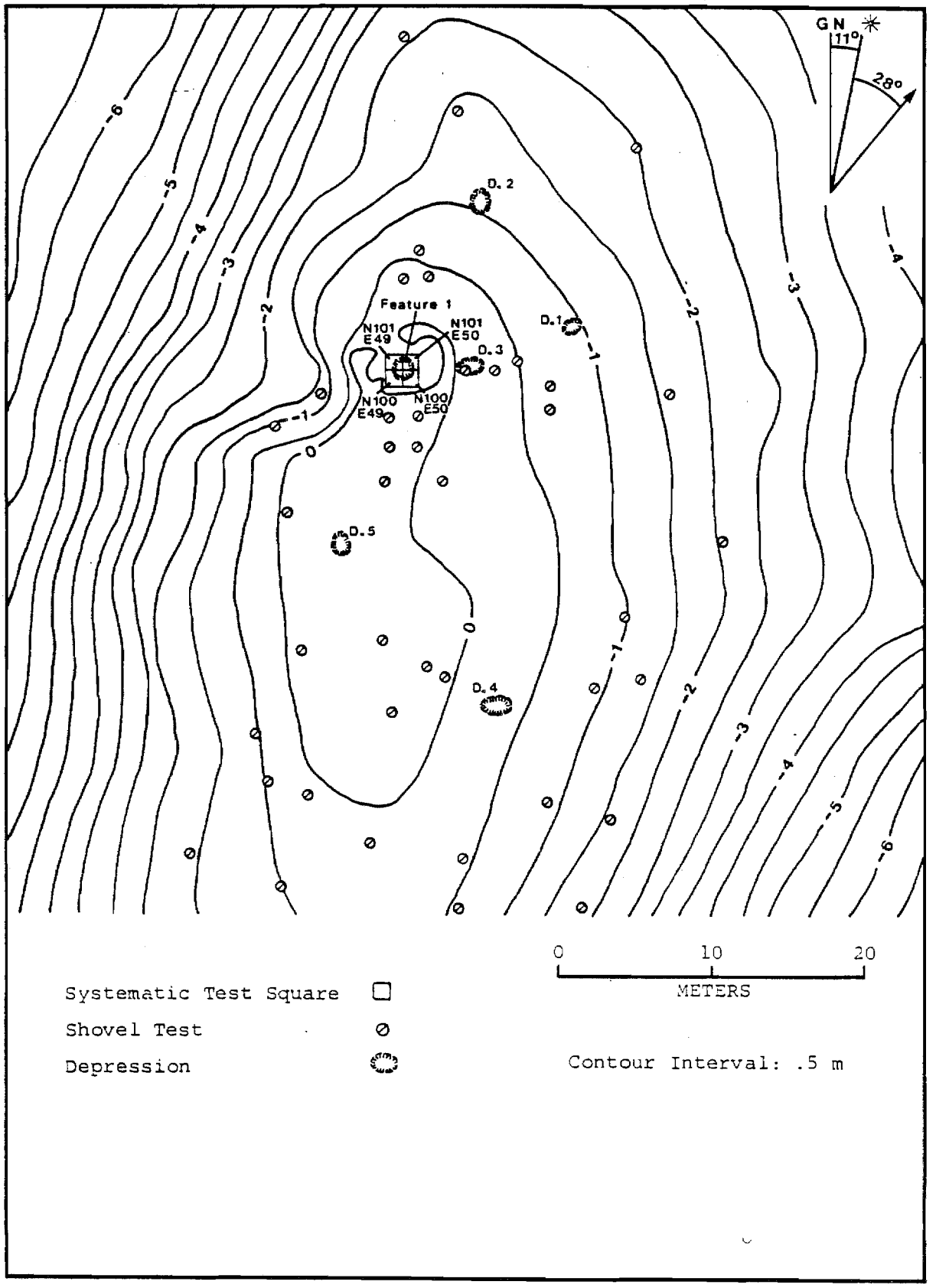


Figure D.273. Site Map, TLM 215

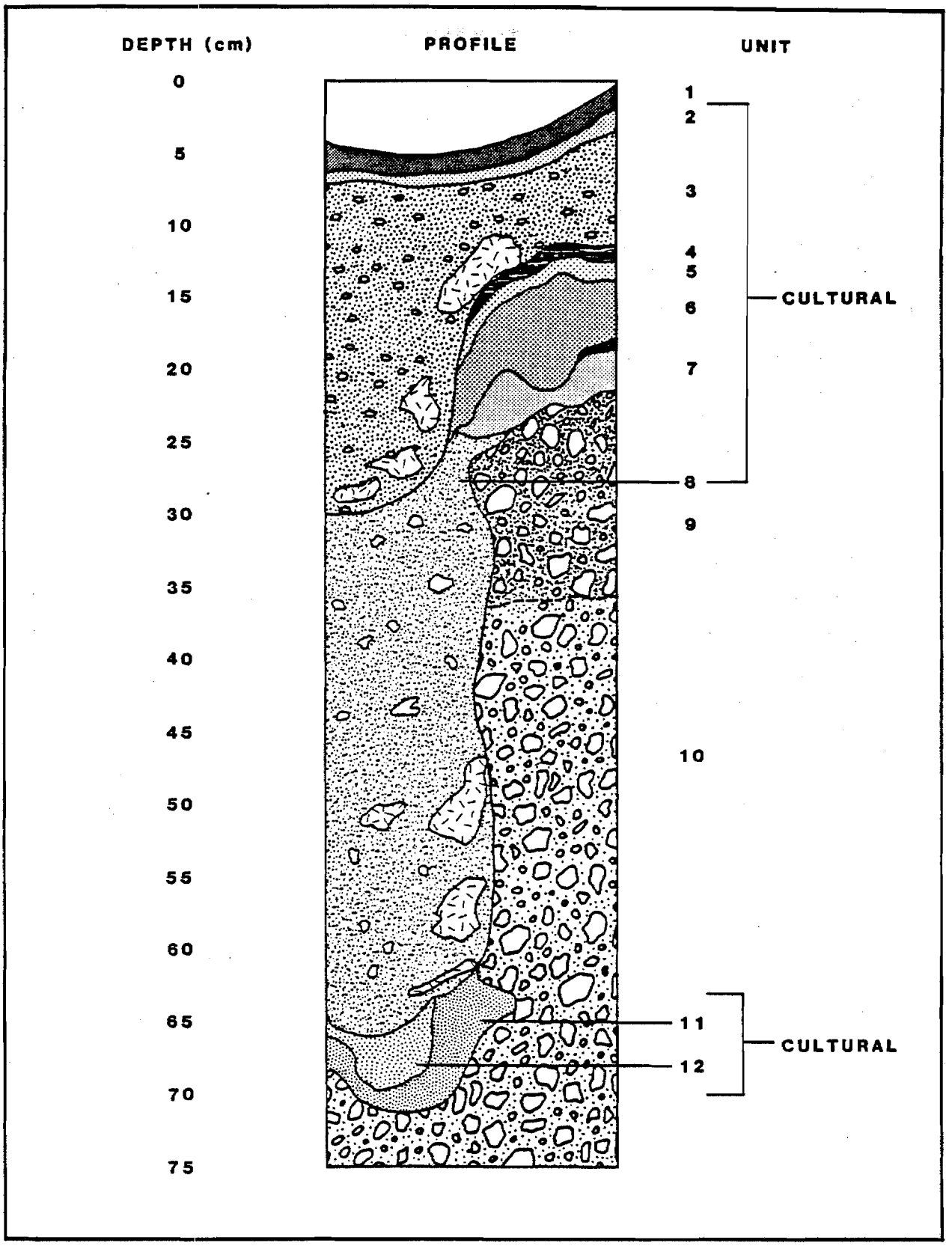


Figure D.274. Composite Profile, TLM 215

Table D.341.

Soil/Sediment Description for Composite Profile, TLM 215

Unit	Description
1a	Surface organic layer: sandy silt with roots and plant material from lowbush cranberry and lichen; very dark grayish brown (10YR 3/2). Varies in thickness from 1-3 cm. Lower boundary not always clear, grades into underlying unit. Pebbles 2-3 cm in diameter and some scattered charcoal flecks. Continuous except where truncated by previous shovel tests.
1b	Fine sandy silt humus layer; black (N 2.5/). Very thin, ranges between 1-2 cm in thickness. Upper and lower boundaries often indistinct and grade into adjacent units. Continuous except where truncated by previous shovel tests. Basalt flakes occur at contact with underlying unit.
2	Sandy silt with pebbles, stained with decomposed organic material; gray (10YR 5/1) to dark gray (10YR 4/1). Thin layer ranging from 1-6 cm, but generally 1-2 cm. Clear boundary with underlying unit.

Table D.341. (Continued)

Unit	Description
3	Sandy silt with pebbles and some cobbles; yellowish brown (10YR 5/8) and olive (5Y 5/4). Overburden drift. Poorly sorted. Cobbles found within circular scatter around feature. Continuous unit ranging from 4-26 cm in thickness. Distinct boundary with upper and lower unit, except when unit 2 ends abruptly and unit 3 forms indistinct boundary with unit 1. Root penetration. Isolated charred wood fragments and scattered charcoal flecks. Basalt and argillite flakes and bone fragments occur in unit and at contact with underlying unit. One radiocarbon date: 1580 ± 110: A.D.370 (Beta-7846).
4	Fine silt with decomposed organic material and charcoal staining; black (N 2/). Very thin, less than 1 cm in thickness. Discontinuous, at times appearing as lens. Basalt flakes occur at the contact of this unit and the units above and below.
5	Very fine grain silt; very pale brown (10YR 7/3). Varies in thickness from 0.5-6.5 cm. Undulating contact with lower unit, with some mixing of these units. Devil tephra. Discontinuous; appearing at times as lenses but in other areas as a distinct level. Some bone and scattered charcoal.

Table D.341. (Continued)

Unit	Description
6	Very fine grain silt; strong brown (7.5YR 5/8) to light yellowish brown (10YR 6/4). Varies in thickness from 0.5-19 cm. Undulating contacts with adjacent units. Mixing occurs with overlying unit in some areas; upper boundary is generally gradational. Watana tephra. Discontinuous; appearing as lenses at times. Root penetration. Some calcined bone fragments and basalt flakes.
7	Fine grain silt; gray (10YR 5/1). Ranges from 0.5-9 cm in thickness. Undulating, but generally clear contacts with adjacent units. Oshetna tephra. Discontinuous, frequently occurring as lenses. Root penetration. Overlain in some areas by a thin (0.5 cm) organic-stained layer, reworked at the contacts and indistinct when present.
8	Sand and silt mixed with pebbles; strong brown (7.5YR 5/8) to olive (5Y 5/3) with mottled appearance. Some cobbles and disintegration of shale at base of unit. Varies from 4-42.5 cm in thickness. Generally unclear contacts with adjacent units. Glacial drift mixed with tephra: cultural fill. Root penetration, declining as unit descends. Bone fragments, charcoal fragments, and basalt flakes reworked throughout.

Table D.341. (Continued)

Unit	Description
9	Sand and silt mixed with pebbles and cobbles; strong brown (7.5YR 5/8) to olive (5Y 5/3). Generally mottled. Varies from 2-30 cm in thickness. Lower boundary unclear and grades into underlying unit. Glacial drift; oxidized, poorly sorted. Truncated by presence of cultural fill (unit 8).
10	Sand mixed with large percentage of pebbles and cobbles; grayish brown (2.5Y 5/2). Glacial drift. Poorly sorted. Upper boundary ranges from clear to indistinct with overlying units. Excavation into this unit defined limit of excavation. Truncated on north and west walls by presence of cultural fill (unit 8).
11	Sand and silt, mixed; strong brown (7.5YR 5/8) to olive (5Y 5/3). Varies in thickness from 5-18 cm. Distinct boundary. Overlain by large cobble, approximately 41 cm in length. Underlain by unit 9; truncated by unit 12. Flecks of charcoal and bone.
12	Sand and silt; reddish yellow (7.5YR 6/6). Distinct upper boundary. Overlain by unit 8 and underlain by units 8 and 11. Thickness is 14 cm.

Table D.342.

Artifact Summary, TLM 215

Tools

1	Modified flake
	1 Basalt (UA84-57-2)

Lithic Material

6	Argillite flakes
49	Basalt flakes
1	Chalcedony flake
2	Rock fragments
58	

Faunal Material

746	Bone fragments

Table D.343.

Faunal Material by Stratigraphic Unit, TLM 215

Unit		Description
2 Sandy silt	1	Unidentifiable bone fragment, calcined, medium-large mammal
2/3 Contact between	1	Proximal fragment of metapodial (hindlimb), calcined, caribou (Rangifer tarandus)
sandy silt and	1	Rib fragment, calcined, large mammal
overburden drift	107	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
3 Overburden	1	Lunate fragment, calcined, caribou (Rangifer tarandus)
drift	1	Proximal fragment proximal phalanx, calcined, caribou (Rangifer tarandus)
	1	Rib fragment, calcined, medium-large mammal
	320	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
3/4, 3/5, 4/5 Overburden drift	1	Long bone shaft fragment, calcined, large mammal
to Devil tephra	1	Unidentifiable bone fragment, calcined, mammal
	102	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

Table D.343. (Continued)

Unit		Description
5 Devil tephra	3	Long bone fragments, heavily burned, large mammal
	10	Long bone and unidentifiable bone fragments, heavily burned, medium-large mammal
	39	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
6 Watana tephra	15	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
6/7 Contact between Watana and Oshetna tephra	2	Unidentifiable bone fragments, calcined, mammal
8 Cultural fill	1	Facet fragment of lumbar vertebra, calcined, caribou (Rangifer tarandus)
	119	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

Table D.343. (Continued)

Unit		Description
8/10	1	Long bone fragment, unburned, large mammal
Contact between fill and glacial drift	1	Unidentifiable bone fragment, unburned, medium-large mammal
	2	Unidentifiable bone fragments, heavily burned, medium-large mammal
	13	Unidentifiable bone fragments, calcined, medium-large mammal
Unknown (Survey testing)	3	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

Table D.344.

Artifact Summary by Stratigraphic Unit, TLM 215

Unit		Description
1b/2	2	Basalt flakes
Contact between humus layer and sandy silt		
2	3	Basalt flakes
Sandy silt		
3	11	Basalt flakes
Overburden drift	1	Chalcedony flake
3/4, 3/4/5, 3/5, 4/5	5	Argillite flakes
Overburden drift	24	Basalt flakes
to Devil tephra	1	Basalt modified flake (UA84-57-2)
	1	Rock fragment
5	1	Basalt flake
Devil tephra		
5/6	4	Basalt flakes
Contact between Devil and Watana tephras		

Table D.344. (Continued)

Unit		Description
6 Watana tephra	1	Basalt flake
8 Cultural fill	3	Basalt flakes
Unit unknown (Survey testing)	1 1	Argillite flake Rock fragment

AHRS Number TLM 216; Accession Number UA84-58

Area:	Northeast of Watana Creek Mouth
Site Map:	Figure D.275
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 216 is located, at an elevation of 600 m asl (altimeter: 1970 feet), on an ovoid-shaped knoll trending east-northeast to west-southwest. The site is situated immediately north of the center of the ca. 15 x 20 m knoll. Approximately 40 m beyond the southeast edge of the site, the surrounding terrain ascends to an elevation ca. 2 m higher than TLM 216. To the northwest the terrain descends ca. 3 m in elevation approximately 20 m from the site. At least eight other sites are within a 500 radius of TLM 216, the nearest being TLM 220 ca. 100 m to the east-northeast. TLM 184 and TLM 215, situated approximately 350 m north-northwest and 400 m north-northeast, respectively, are both ca. 10 m higher in elevation. TLM 184 is visible from TLM 216, but TLM 215 is hidden behind the spruce forest. A small lake, or pond, ca. 2 ha in size, is located west of the site and, judging by the densely vegetated grassy shorelines, is in a phase of recession. A large ca. 7 ha lake is located to the south. The latter maintains an outlet stream which discharges into Watana Creek to the east-southeast. A higher knoll to the east obstructs the view in that direction. Open views are available to the west and southwest where the smaller lake, including its surrounding vicinity, is in view. The view northwest overlooks the wet, boggy terrain between TLM 184 and this site. Similar boggy terrain is in view to the south. A wet, boggy drainage characterizes the terrain to the north which funnels into ravine immediately north of TLM 226 and then falls off into Watana Creek. The site surface supports a continuous vegetation mat with the exception of several large glacial erratics exposed through the vegetation mat and a fallen tree root system exposure. Plants present include black spruce, paper birch,

dwarf birch, Labrador tea, lowbush cranberry, lichens, and sphagnum moss. Spruce trees are less numerous west of the site and birch are more numerous on the higher topography to the east.

Testing:

TLM 216 was located when one of three shovel tests excavated during survey testing yielded artifactual material. The shovel test (shovel test 1) contained 111 calcined bone fragments and 33 argillite flakes. Subsequent testing at the site included the expansion of shovel test 1 to a 40 x 40 cm test pit (test pit 1), and the excavation of 25 grid shovel tests, and excavation of three 1 x 1 m test squares (N101/E100, N102/E99, and N103/E100). See Figure D.275 for the location of the shovel tests, test pit, and test squares. Testing subsequent to survey testing was initiated to more accurately define the areal extent of the site, relative artifact density, and stratigraphic position of the cultural component(s).

Test pit 1 produced an additional 207 calcined bone fragments, and 33 argillite flakes. Artifacts from the shovel test and test pit were recorded from three stratigraphic positions: 1) the finely sorted organic and Devil tephra contact,
2) the Devil tephra and Watana tephra contact, and 3) within the Watana tephra, with most of the material located in the latter two of these contexts. During systematic testing these stratigraphic units were redefined. A discrete cultural unit was defined that is positioned between the Devil tephra and Watana tephra units. Material recorded during survey testing from the Watana tephra is actually associated with the cultural unit. A more detailed discussion of the soil/sediment units at the site is included in a description of site stratigraphy.

The three 1 x 1 m test squares excavated during systematic testing were positioned in a checkerboard pattern with one of the test squares (N101/E100) placed so that it intersected test pit 1. Decisions regarding test square placement were based on data accumulated from shovel testing and test pit 1. Preliminary observations suggested that

the area between test pit 1 and shovel test 4 had the highest potential for stratigraphic information and artifactual material recovery that would both clarify and confirm the presence of a cultural component associated with the Watana tephra unit.

Four of the 25 grid shovel tests excavated produced cultural material. Twenty-five flakes and 24 calcined bone fragments were recovered from these shovel tests, with all but five of the flakes originating from shovel test 5. Material from shovel test 5 was in the same stratigraphic context as material from test pit 1.

Discussion:

The artifact inventory from survey and systematic testing consists of 2 modified flakes (UA84-58-80, 107), 553 lithic artifacts, and 1088 bone fragments, with most of the material consisting of small argillite flakes and small calcined bone fragments. A summary of material included in the site assemblage is listed in Table D.346. All three of the excavated test squares were productive although the distribution of material was uneven. A higher frequency of material occurred in two of the squares (N101/E100 and N102/E99).

The stratigraphic sequence at TLM 216 represents both natural and cultural processes. Stratigraphic units were clearly indentifiable with minimal postdepositional disturbance as reflected by clear to abrupt and generally smooth boundaries between the various units. Eight different units were defined with distinctions between the units based primarily on the variable of texture and color. Figure D.276 illustrates the stratigraphic relationship between the various units, and Table D.345 provides descriptive information relevant to the specific units and subunits defined at the site.

Stratigraphy at TLM 216 is similar to many sites in the project area. The basal unit is a sandy sediment with pebbles, cobbles, and boulders (unit 8), which is interpreted as being glacial in origin. This unit is overlain by a silty-sandy sediment that also contains pebbles and

cobbles (unit 7). While this latter unit may also be glacial it is differentiated from the underlying unit on the basis of silt content which may reflect an eolian component. Overlying the basal units are three volcanic tephras: the Oshetna (unit 6), the Watana (unit 4), and the Devil (unit 2). The Oshetna and Watana tephras are separated by a thin discontinuous paleosol (unit 5). The distinction between the paleosol and the Oshetna tephra was sufficient only in isolated areas to warrant separate designations, and the two units were usually described as a mixed unit (unit 5 and 6) characterized by Oshetna tephra with scattered charcoal flecks. The entire site area is covered with a thin finely sorted organic unit (unit 1b) and a continuous organic mat (unit 1a).

There are two notable exceptions to the stratigraphic sequence as presented above, these are: 1) the presence of a clearly defined cultural unit (unit 3), and 2) small isolated pockets of a light gray tephra (unit 4c) directly beneath the cultural unit. The cultural unit formed a discrete stratigraphic level distinguished by a fine silty matrix with occasional gravels, small flecks and pieces of charcoal, calcined bone fragments and flakes (unit 3b), that was capped by a brown gravelly matrix (unit 3a). The small isolated pockets of light gray tephra (unit 4c) were located in the test square profiles beneath the cultural unit and above the yellowish brown Watana tephra (unit 4b). The tephra of unit 4c may represent unmodified Watana tephra.

Seven classes of lithic raw material have been identified in the site assemblage. Five hundred of the 552 flakes collected are of argillite, with small numbers of basalt, chert, and rhyolite, and single flakes of chalcedony and quartzite. A granitic cobble fragment is also included in the inventory (Table D.346). Most of the lithics are small unmodified flakes, although a number of larger flakes are also represented in the collection. The lithics are characteristic of both initial and final stages of reduction technology.

A modified argillite flake (UA84-58-80) and a modified quartzite flake (UA84-58-107) are the only lithics that exhibit secondary modification.

The argillite flake has continuous unifacial retouch along one of the lateral margins and is broken at the distal end. The quartzite flake exhibits edge damage on its convex margins.

A single cultural component can be defined at the site based on the presence of a distinct cultural stratigraphic unit (unit 3) associated with 97% of the artifactual material. The unit is positioned stratigraphically between the Devil (unit 2) and Watana (unit 4) tephra units, and has clear to sharp horizontal and vertical boundaries. The unit was defined in two of the three test squares (N101/E100 and N102/E99), in test pit 1, and shovel test 5. The majority of the artifactual material recovered during testing at the site originates within or at the contact with unit 3, including the 2 modified flakes, 509 of the 553 lithics, and 1057 of the 1086 bone fragments. Identifiable skeletal elements consist of 1 calcined caribou (Rangifer tarandus) sesamoid, 2 calcined rib fragments of medium-large mammal, and 1 calcined vertebral fragment of medium-large mammal (Table D.347).

The cultural unit can be divided into two subunits, a lens of brown matrix with gravels (unit 3a) that caps a very fine silty matrix (unit 3b). The artifact density increases significantly at the unit 3b contact. The unit is absent in the northwest corner of N102/E99 and is only about 2 cm thick in the east wall of N101/E100. The unit increases in thickness toward test pit 1 where it reaches 11 cm in thickness. In N103/E100, unit 3 was not defined but artifactual material located at the contact between the Devil and Watana tephra units is at the same relative stratigraphic position.

Three radiocarbon dates were obtained from fragments of a single piece of wood sufficiently preserved to be identifiable as spruce. Dates on the fragments excavated during systematic testing from the cultural stratigraphic unit (unit 3) yielded determinations of 1670 ± 50 years: A.D. 280 (Beta-9898) and 1880 ± 50 years: A.D. 70 (Beta-9892). The wide range of dates on a single piece of wood prompted the dating of additional fragments of the wood collected during survey testing. The resulting date of 1530 ± 80 years: A.D. 420 (Beta-10125) failed to

resolve the issue. Despite the wide range of dates, they provide estimates for the upper limiting date for the deposition of the Watana tephra and the lower limiting date for the Devil tephra.

The portion of the inventory not in association with the unit 3 component includes artifacts found at the contact between the organic mat and Devil tephra (unit 1/2), and within the Devil tephra (unit 2). Data are insufficient to establish whether the material reflects an occupation of the site other than that associated with unit 3 or if this material is displaced from a unit 3 context.

Evaluation:

TLM 216 is located on a small, well-drained, elongated knoll and is one of a series of sites situated on well-drained terrain features bordering low wetlands west of Watana Creek. While the knoll is not a prominent feature, there is good access from the site to the marshy areas to the north and west and southward to the Susitna River along a series of kames.

Testing at the site defined a single component. The component is in direct association with a well-defined stratigraphic unit between the Devil and Watana tephra units. Therefore the component at the site documents an occupation associated with the interval of time between the two tephra falls.

Cultural material recovered during testing, consisting of burned bone fragments and lithic debitage, indicates a multifunctional site. Activities represented at the site include lithic reduction associated with the manufacturing and maintenance of stone tools and food preparation. The configuration and contour of the cultural unit itself may be indicative of a feature, although data from preliminary testing were not sufficient to establish the possible nature of the feature.

The importance of TLM 216 resides in the stratigraphic position of the cultural component. A number of sites in the immediate area have

components that are associated with the organic unit and provide evidence for occupations above the Devil tephra. While a post-Devil tephra component was not defined at the site, the component that was present provides potential for testing models regarding use of the area by people before and after an episode of tephra deposition. The site is unique in possessing an unequivocal cultural component between the Devil and Watana tephras. The presence of datable charcoal provides limiting dates for the two tephra falls. The dates of A.D. 70, A.D. 280, and A.D. 420, despite their range, suggest the relatively recent nature of the Devil tephra. Observed site size based on the distribution of artifacts is 27 square meters (Table D.2).

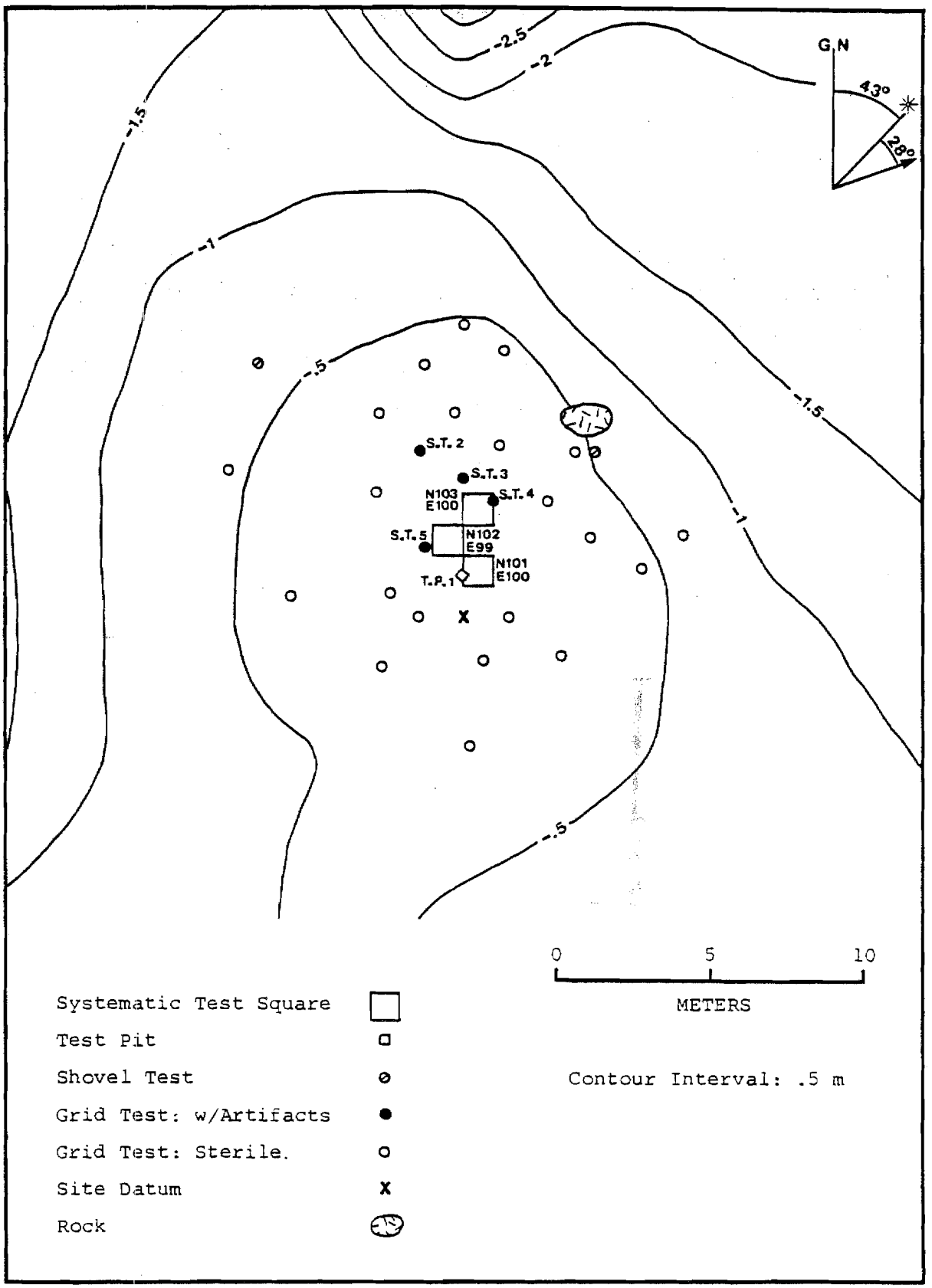


Figure D.275. Site Map, TLM 216

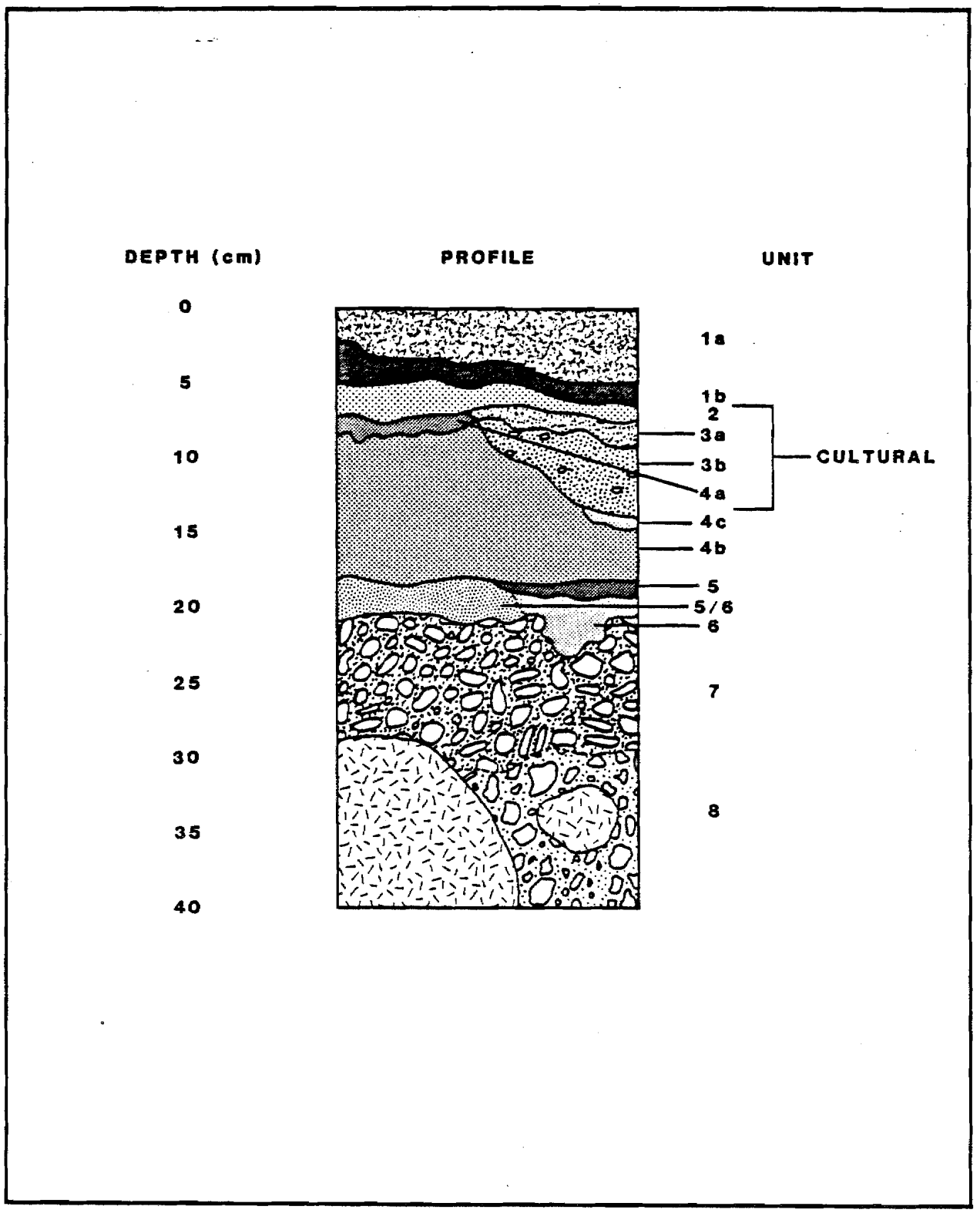


Figure D.276. Composite Profile, TLM 216

Table D.345.

Soil/Sediment Description for Composite Profile, TLM 216

Unit	Description
1a	Surface organic layer; fibrous root mat with living and partially decayed plant material from lichens, mosses, dwarf birch, Labrador tea, and other woody shrub vegetation. Surface mat varies in thickness from 1-6 cm, but usually 2-4 cm. Nonmineral O1 horizon. Continuous surface cover.
1b	Fine silty sand with finely sorted organic material; black (5YR 2.5/1). Varies in thickness from 1-3 cm. Sharp and smooth to wavy lower boundary. O2 horizon with some charcoal. Generally continuous although it bifurcates in a few isolated areas of N102/E99. Artifacts were found at the contact with unit 2.
2	Very fine silt size particles; varies in color from pinkish gray (7.5YR 6/2) to gray (10YR 5/1). Variation in color may be due to downward leaching of organic material. Varies in thickness from 1-3 cm, but usually a thin, 1 cm layer. Lower contact with unit 3a or unit 4a sharp. Tephra (Devil), eluvial. Generally continuous and found in all three of the test squares. Cultural.

Table D.345. (Continued)

Unit	Description
3a	Fine silt with some sand and occasional gravels, charcoal flecks, and plant material; varies in color from strong brown (7.5YR 4/6) to brown (7.5 YR4/4). Unit 1-2 cm thick and occurs only in areas where unit 3b was defined (N101/E100 and N102/E99). The lower contact is clear. B horizon with gravel. Continuous in N101/E100 and N102/E99 with the exception of the NE corner of the latter test square. Cultural. Artifact density increases significantly at the contact with the underlying unit (unit 3b).
3b	Very fine silty matrix with some sand and gravels as well as small charcoal flecks and pieces, calcined and burned bone fragments, and lithic debris. Color varies from dark brown (10YR 4/3) to yellowish brown (10YR 5/4). Varies from 1-10 cm in thickness, generally thickening in the western portion of N101/E100 and the southern portion of N102/E99. Lower contact with unit 4b abrupt. Where unit 4b absent, lower contact sharp with units 5 & 6 or 7. Cultural unit. Continuous in N101/E100 and in all but the NE corner of N102/E99. No evidence for this unit in N103/E100. Associated with a high frequency of artifactual material and may represent a feature.

Table D.345. (Continued)

Unit	Description
4a	Fine silt size particles; dark reddish brown (5YR 3/4). Varies in thickness from 1-4 cm. Lower contact clear to sharp. Upper extent of tephra (Watana); oxidized B horizon. Lacks continuity. At the same stratigraphic position as unit 3a and similar to unit 3a except that it does not contain gravels and does not overlie the cultural unit. Artifacts located at the upper contact with unit 2.
4b	Very fine silt size particles; light yellowish brown (10YR 6/4). Unit varies in thickness from 1-18 cm, having the greatest thickness in N103/E100. Contacts abrupt. Tephra (Watana); B horizon. Generally continuous but occasionally absent. Two flakes recorded from this unit were from the upper extent toward contact with unit 2.
4c	Very fine silt size particles; light gray (10YR 7/2). Found in a few small isolated pockets 1-4 cm thick positioned between unit 3b and unit 4b. Sharp contacts. Tephra (Watana). Distinguished from unit 4b on the basis of color. May represent unmodified tephra.

Table D.345. (Continued)

Unit	Description
5	Very fine silty matrix with charcoal and carbonized plant fragments; black (10YR 2/1). Varies from 1-2 cm in thickness. Lower contact diffuse. Paleosol. Only in a few areas was unit 5 separated clearly from unit 6 to warrant separate designations. Usually illustrated as a mixed 5 & 6 unit. Contacts of this mixed unit were clear.
6	Fine silty matrix with some sand; grayish brown (10YR 5/2). Very irregular boundaries. Varied in thickness from 1-4 cm. Lower contact diffuse when unit 6 defined separately from mixed 5 & 6. Tephra (Oshetna). Lacks continuity and only separated from unit 5 in a few isolated areas.
7	Silty sand mixed with coarse sand, pebbles, and cobbles. Color varies from strong brown (7.5YR 4/6) to dark reddish brown (5YR 2.5/2). Unit from 5-9 cm thick. Gradational lower boundary. Weathered horizon of silt and glacial material. Continuous.
8	Very coarse sand mixed with pebbles, cobbles, and boulders ranging up to 40 cm along longest axis; olive gray (5Y 4/2). Glacial material. Unconsolidated. Excavation into this unit determined limit of excavation for test squares.

Table D.346.

Artifact Summary, TLM 216

Tools

2	Modified flakes
	1 Argillite (UA84-58-80)
	1 Quartzite (UA84-58-107)

Lithic Material

500	Argillite flakes
18	Basalt flakes
1	Chalcedony flake
17	Chert flakes
1	Quartzite flake
15	Rhyolite flakes
1	Granite cobble fragment
553	

Faunal Material

1,088	Bone fragments

Table D.347.

Faunal Material by Stratigraphic Unit, TLM 216

Unit		Description
1b/2 Contact between organic silt and Devil tephra	27	Unidentifiable bone fragments, calcined, medium-large mammal
	2	Unidentifiable bone fragments, heavily burned, mammal
2/3a Contact between Devil tephra and brown cultural unit	11	Unidentifiable bone fragments, calcined, medium-large mammal
	1	Unidentifiable bone fragment, calcined, mammal
3a Within brown gravelly unit	10	Unidentifiable, bone fragments, calcined, medium-large mammal
3a/3b Contact between brown unit and cultural unit	216	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

Table D.347. (Continued)

Unit		Description
3b	1	Sesamoid, calcined, caribou (*Rangifer tarandus*)
Within cultural unit	1	Vertebra fragment, calcined, medium-large mammal
	2	Rib fragments, calcined, medium-large mammal
	2	Long bone shaft fragments, unburned, large mammal
	10	Long bone and unidentifiable bone fragments, heavily burned, medium-large mammal
	805	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

Table D.348.

Artifact Summary by Stratigraphic Unit, TLM 216

Unit		Description
1b/2	19	Argillite flakes
Contact between	2	Basalt flakes
organic mat and	1	Chert flake
Devil tephra	1	Rhyolite flake
2	4	Argillite flakes
Devil tephra	4	Basalt flakes
	1	Rhyolite flake
2/3a	62	Argillite flakes
Contact between	1	Basalt flake
Devil tephra and	1	Quartzite flake
brown cultural unit	5	Rhyolite flakes
	1	Argillite modified flake (UA84-58-80)
3a	8	Argillite flakes
Within brown gravelly unit		
3a/3b	94	Argillite flakes
Contact between	2	Basalt flakes
brown unit and	1	Chert flake
cultural unit	1	Rhyolite flake

Table D.348. (Continued)

Unit		Description
3b	307	Argillite flakes
Within cultural	8	Basalt flakes
unit	1	Chalcedony flake
	11	Chert flakes
	7	Rhyolite flakes
	1	Quartzite modified flake (UA84-58-107)
2/4	4	Argillite flakes
Contact between	1	Basalt flake
Devil tephra and	1	Chert flake
Watana tephra	1	Granite cobble fragment
4	2	Argillite flakes
Within Watana tephra		
Subsurface	3	Chert flakes
Unknown		

AHRS Number TLM 217; Accession Number UA84-59

Area:	Northeast of Watana Creek Mouth
Site Map:	Figure D.277
Survey Locale 145:	Figure E.234
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 217 is located on a ridge at an elevation of 634 m asl (altimeter: 2080 feet), northeast of the outlet of a lake, locally known as Duck Embryo Lake or Sally Lake. The ridge parallels an unnamed creek, which is generally east-west in orientation, and a tributary of Watana Creek. The site is about 300 m north of the creek, and overlooks the low, poorly drained areas associated with the drainage and areas of higher topographic relief on the south side of the drainage. The creek itself cannot be seen from the site due to intervening vegetation. While portions of Duck Embryo Lake are visible, the view of the lake is obscured by the knoll on which TLM 048 is located at a distance of approximately 400 m and 25 m higher in elevation than TLM 217. TLM 039 and TLM 175, located on knolls overlooking the lake, are also visible from the site. The site area is well drained with vegetation consisting of isolated spruce trees, dwarf birch, lowbush cranberry, Labrador tea, and a surface lichen and moss mat. A few poplars are located on the south-facing slope of the ridge. Surrounding vegetation includes upland spruce forest on terrain that rises gently to the north, and muskeg and black spruce in the poorly drained areas associated with the drainage.

Testing:

The site consists of subsurface lithic material. Ten survey shovel tests were initially excavated; one of these tests, located ca. 2 m north of the south facing slope that defines the ridge edge, produced 2 argillite flakes. A 40 x 40 cm test pit (test pit 1) was superimposed over this shovel test and yielded 337 flakes. A grid shovel testing

program was implemented to assist in determining site size and distribution of cultural remains. Twenty-seven grid shovel tests were excavated. An additional 175 flakes were recovered from four grid shovel tests. Lithics are characteristic of secondary and/or retouch flakes with 33% of the specimens passing through 1/8" screen mesh. Lithics were concentrated at the contact between the organic layer and Devil tephra. No surface artifacts were found. All artifacts encountered during survey testing were argillite, basalt, and rhyolite flakes, characteristic byproducts of secondary and retouch stages of lithic reduction.

Systematic testing of TLM 217 consisted of three 1 x 1 m test squares. These were placed inside the square region outlined by four positive shovel tests, adjacent to test pit 1 (Figure D.277). Placement of test squares was designed to provide continuous 2-meter long profiles in two cardinal directions within the site, in an effort to determine the content, extent, and stratigraphic context of artifactual materials from the known site area.

Discussion:

Survey and systematic testing at TLM 217 resulted in the recovery of 6506 lithic specimens of these, 11 lithics are classified as tools or tool fragments and 2288 faunal remains. The artifact inventory is presented in Table D.350. Distribution of materials collected by stratigraphic unit is listed in Table D.352.

Two prehistoric components are represented at the site, on the upper and lower contacts of the Devil tephra. These are separable on the basis of stratigraphy and artifact content. Figure D.278 shows the vertical superposition of the eleven soil/sediment units distinguished at TLM 217, and they are described in Table D.349. Two units, designated as units 2 and 4, are probably cultural in origin and correspond to the upper and lower components, respectively. Artifacts also occur in the fine organic layer (unit 1b), Devil tephra (3), the Watana tephra (5a and 5b), and in the contacts between these units. All seven

soil/sediment units contained artifacts. Vertical displacement, mixing, and reversal of units by bioturbation, cryoturbation, and probably cultural processes has occurred at the site, however, all cultural material is attributable to the two components.

All test squares produced abundant cultural material. Overall, the most productive square was N101/E98, which contained a very rich upper component consisting of thousands of unmodified flakes; no tools were recovered from this test square, however. The lower occupational component is best represented in N101/E99; in addition, this square contained six tools: 1 basalt point base (from the upper component), 2 rhyolite point bases (one from each component), 2 biface fragments, 1 argillite and 1 basalt (both from the lower component), and 1 argillite modified flake (from the upper component). Test square N100/E98 contained five tools: 2 basalt biface fragments (one from each component), 1 chert preform tip fragment (from the upper component), and 2 modified flakes.

A total of five classes of lithic raw materials were identified in the collected assemblage. In descending order of abundance, these are: argillite, rhyolite, basalt, chert, and quartzite. Virtually the entire lithic reduction and retouch stages of stoneworking are represented. One thousand and forty of the flakes collected, or 16%, pass through 1/8" screen mesh. Flakes containing cortex are extremely rare.

Upper component: The upper component is concentrated in a charcoal-rich layer (unit 2) and the contact between the fine organic layer (unit 1b) and Devil tephra (unit 3); artifactual material within unit 1b is also part of this component, as well as some from unit 3. Artifacts from these latter units are probably vertically displaced from the contact area which contains the greatest abundance of materials. An unknown proportion of artifacts in the Devil tephra (unit 3) probably is derived from the component (unit 4) at the lower contact of unit 3. The amount of artifactual material from the Devil tephra is very scanty in comparison to either the upper or lower component, and it serves as a natural boundary between the two occupational episodes. The upper

component contains relatively few faunal remains; the 119 calcined long bone and unidentifiable bone fragments which occurred in this component were found in two localized areas where Devil tephra was very thin and/or mixed with lower strata including pebbly glacial drift (Table D.351). In addition to thousands of small argillite, basalt, rhyolite, chert, and quartzite flakes, eight tool fragments were recovered from this component. Two lanceolate point bases (UA84-59-197, 198; Figure D.392b,a) and one reworked chert preform tip section (UA84-59-22; Figure D.392d) occurred in this component. In addition, a side-struck edge fragment of a basalt biface (UA84-59-25; Figure D.392e), and three modified flakes (UA84-59-23, 26, 173) were recovered.

Charcoal is very abundant in the upper component comprising the majority of the sediment in unit 2. It is most likely that this deposit of charcoal is cultural in origin. The deposit is thickest in the adjacent areas of test squares N100/E98 and N101/E98, toward the western end of the excavated area. While the abundant charcoal and possible wood ash in this unit may indicate the presence of a prehistoric hearth area at the site, no hearth structure, burned earth, or thermally altered rock was found during excavation, nor did any lithic artifact exhibit signs of burning. A radiocarbon sample obtained from this component, yielded a date of 2070 ± 60 years: 120 B.C. (Beta-9899).

Lower component: This component is represented chiefly by a homogeneous brown silty layer containing abundant burned bone fragments, charcoal, and lithic artifacts (unit 4), underlying the Devil tephra (unit 3) and above oxidized Watana tephra (unit 5a). Unit 4 appears to be a culturally deposited unit comprised of a mixture of Watana tephra (unit 5) and some pebbly glacial drift (unit 7), with a greasy texture. Like the cultural unit 2 above, unit 4 is localized in areal extent, and includes artifacts on the contact of Devil and Watana tephras (unit 3/5), the Watana tephra (unit 5), and glacial drift (unit 7)

The assemblage of the lower component differs from that of the upper component primarily in its faunal content. Faunal remains are almost nonexistent in the upper component. The lower component, however, has

2164 burned mammal bones as its dominant artifact category. Most of these remains are small, calcined long bone and unidentifiable bone fragments of medium-large mammals, but two rib fragments have been identified. Identifiable skeletal elements attributable to caribou (Rangifer tarandus) consist of a tooth fragment, hindlimb elements, and extremity fragments.

Lithic artifacts from each component are striking in their similarity. Specifically, a rhyolite lanceolate point base (UA84-59-223; Figure D.392c) and an argillite side-struck biface edge (UA84-59-222; Figure D.392f) are stylistically and technologically similar to artifacts recovered from the upper component. Other tool fragments recovered from this component include a basalt biface tip fragment (UA84-59-64; Figure D.392g) and a basalt biface fragment (UA84-59-246; Figure D.392h). While fewer flakes were encountered in this component than in the upper one, they are still abundant and encompass the same range of raw material types as the upper component.

The proximity of the two components stratigraphically and their stylistic similarity suggests that they may be two occupational episodes separated by a short span of time, during which the Devil tephra was deposited.

Evaluation:

TLM 217 is a two-component site limited in areal extent but relatively dense in artifacts. The upper component lies directly above the Devil tephra, and is dominated by chipping debris from later stages of tool manufacture, broken fragments of lanceolate points and bifaces, and abundant charcoal. Charcoal from this component dates to 2070 ± 60 years: 120 B.C. (Beta-9899).

The lower component, lying directly below Devil tephra, contains similar lithic artifacts as the upper component (lanceolate point bases, broken bifaces, and final-stage debitage) but also contains abundant burned bones. The stratigraphic position of this component probably puts its

age earlier than ca. 130 B.C. The age of the upper Watana tephra surface is relatively poorly known, as few absolute radiometric dates are available for the contact between the Devil and Watana tephras. Observed site size based on the distribution of artifacts is 22 square meters (Table D.2).

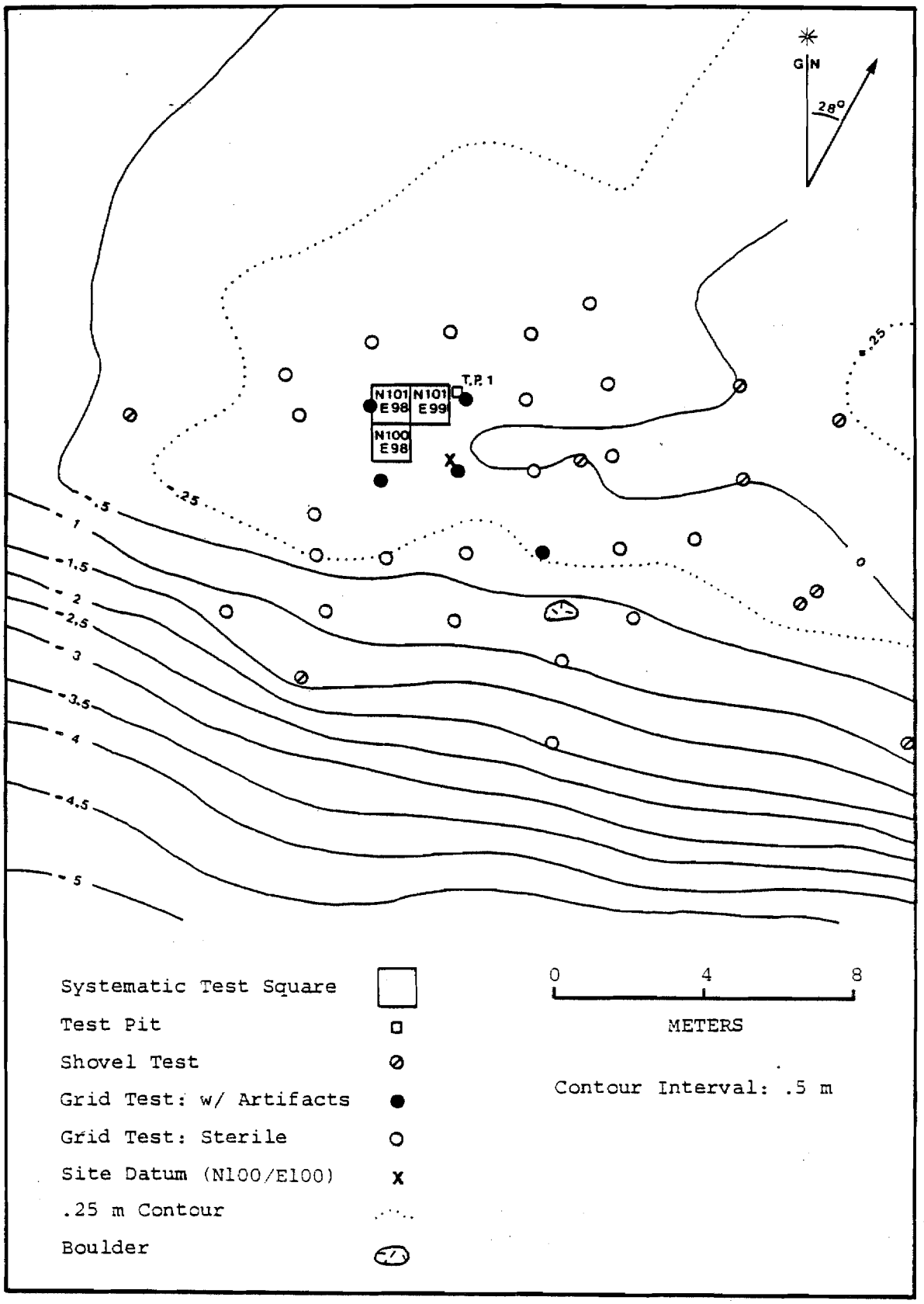


Figure D.277. Site Map, TLM 217

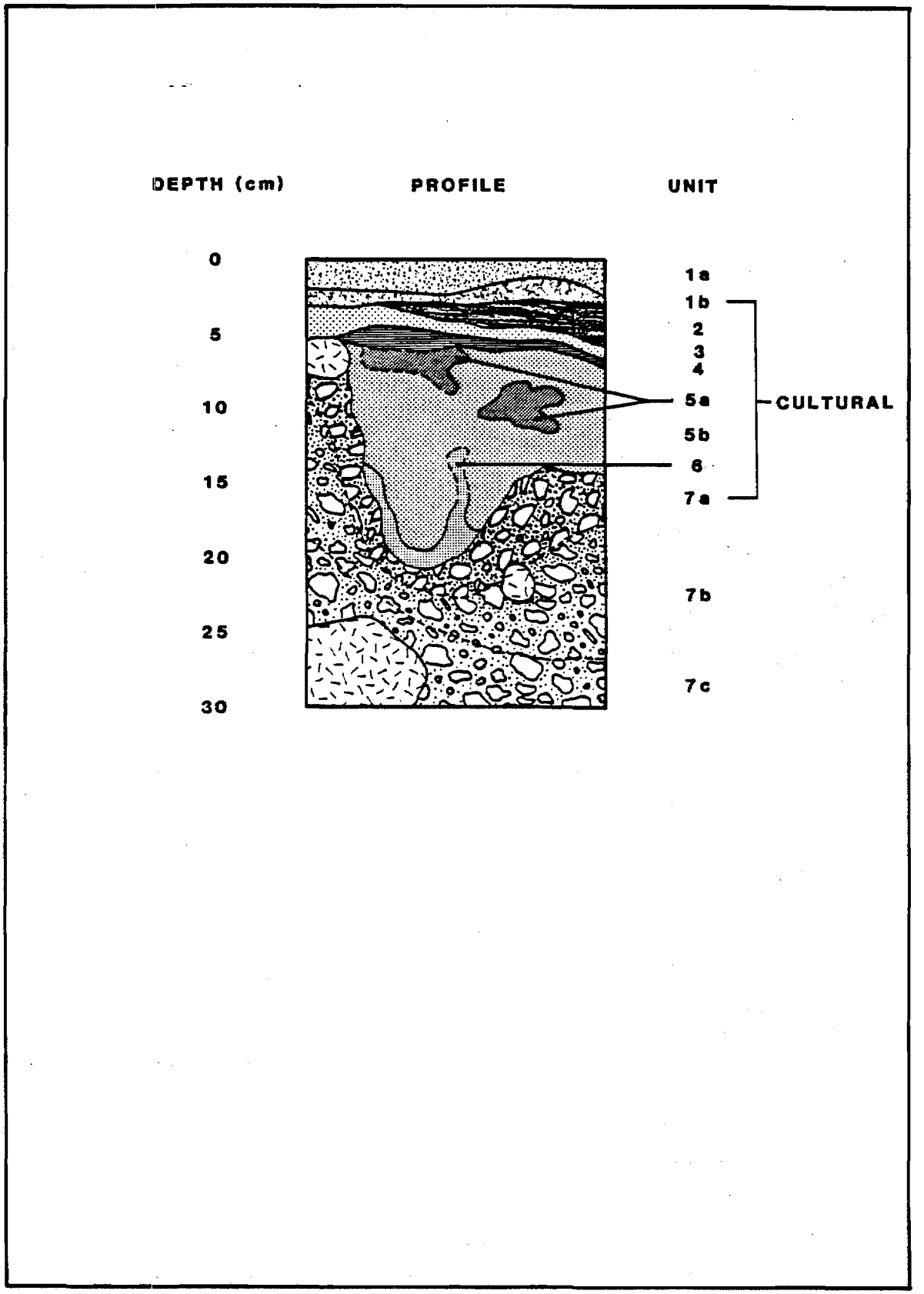


Figure D.278. Composite Profile, TLM 217

Table D.349.

Soil/Sediment Description for Composite Profile, TLM 217

Unit	Description
1a	Surface organic layer consisting of dense mat of roots and organic material, with small amount of sandy silt intermixed toward base of unit. Varies in thickness from 1-10 cm, generally 3-5 cm. Lower contact continuous and clear with a wavy appearance.
1b	Fine silt and finely divided organic material (humus), with numerous roots and rootlets and scattered flecks of charcoal. Mixture of fine silt and organics is not homogeneous, with pockets of silt containing small amounts of sand in places. Continuous. Diffuse to mixed contact with unit 2 and an abrupt, wavy contact with unit 3. Internally mixed due to root activity, rodent burrowing, and cryoturbation. Cultural.
2	Dense concentrations of charcoal and lithic artifacts, with small amount of sandy silt and organics (humus and rootlets); very dark gray (10YR 3/1). Localized. Discontinuous. Probably cultural in origin. Contact with unit 1b abrupt to diffuse depending on localized intermixture of charcoal. Contact with unit 3 usually abrupt, though unit 3 may be heavily carbon stained and in places mixed at the contact. Isolated pockets of unit 3 sometimes occur within unit 2. Thickness varies from 0-7 cm. Contains abundant artifacts.

Table D.349. (Continued)

Unit	Description
3	Extremely fine silt with some charcoal flecks, rootlets, and carbon staining; pale brown (10YR 6/3) to pinkish white (7.5YR 8/2). Extremely well sorted in pure state, but often mixed with unit 2 above or units 4 or 7 below. Thickness varies from 0-4 cm, with a mode of about 1 cm. Mottling occurs in thicker sections, creating a diffuse boundary between unit 3 and units 4 or 5. Unit powders readily upon drying. Devil tephra. Artifacts encountered in this unit.
4	Fine silt with abundant charcoal, burned bone fragments, and lithic artifacts; color variability due to illuviation, oxidation, and presence of charcoal; dark yellowish brown (10YR 3/6) to brown (7.5YR 4/4). Localized and probably cultural in nature. Silt often mixed with small pea gravel (probably from underlying glacial drift) and some sand. Has a greasy texture. Contact with unit 3 is abrupt to diffuse, with a wavy appearance. Contact with unit 5 is usually diffuse but may be abrupt in places, with a highly pitted and discontinuous plan view (due to extreme cryoturbation of surface). Varies from 0-14 cm in thickness. Contains abundant cultural material.

Table D.349. (Continued)

Unit	Description
5a	Very fine silt with granular structure due to heavy illuviation of oxides; reddish brown (2.5YR 2.5/4) to dark reddish brown (5YR 3/4) grading to yellowish brown (10YR 5/4) of unit 5b. Oxidized Watana tephra. Patchy and discontinuous, often occurring in isolated pockets within the undulating matrix of underlying drift. Thickness varies from 0-10 cm, usually less than 3 cm. Contacts usually abrupt, may be mixed with units 4 or 5b. Contains some artifacts.
5b	Very fine, well-sorted silt; yellowish brown (10YR 5/4) to pale brown (10YR 5/6). Unoxidized Watana tephra. Varies from 0 to over 20 cm thickness in some pockets. Discontinuous, usually occurring as large pockets of pure sediment within heavily undulating surface of underlying drift. Contacts abrupt with underlying units 6 and 7, abrupt to mixed with overlying units 3 and 4. Contains some artifacts.
6	Sandy silt with flecks to chunks of charcoal; light olive brown to grayish brown (2.5Y 4/4, 2.5YR 4/2 to 10YR 3/3). Oshetna tephra. Thin, very discontinuous isolated stringers within unit 5b or draping the surface of unit 7a. Thickness varies from 0-6 cm, usually less than 1 cm. Contacts vague to abrupt.

Table D.349. (Continued)

Unit	Description
7a	Poorly sorted rounded to subangular gravels to 10 cm in size and sand; strong brown (7.5YR 4/6) to dark yellowish brown (10YR 4/4) in color. Weathered glacial drift. Light to moderate oxidation. Thickness varies from 2-20 cm. Continuous. Very pitted and wavy abrupt upper contact. Gradational lower boundary. Contains a few artifacts, probably derived from upper units.
7b	Coarse sand with subangular to rounded pebbles and cobbles; olive brown (5Y 4/2 to 2.5Y 4/4). Glacial drift. Lightly weathered transitional unit between 7a and 7c. Poorly sorted.
7c	Unweathered poorly sorted sandy gravel and rocks with pockets of clay; olive (5Y 5/2) to olive brown (2.5Y 4/2). Glacial drift. Narrow gradational boundary between 7a and 7b and this unit. Excavation ceased within this unit.

Table D.350.

Artifact Summary, TLM 217

Tools

3	Modified flakes
	2 Argillite (UA84-59-26, 173)
	1 Basalt (UA84-59-23)
4	Biface fragments
	3 Basalt (UA84-59-25, 64, 246)
	1 Argillite (UA84-59-222)
1	Preform
	1 Chert (UA84-59-22)
3	Lanceolate point bases
	1 Basalt (UA84-59-198)
	2 Rhyolite (UA84-59-197, 223)
11	

Table D.350. (Continued)

Lithic Material	
2733	Argillite flakes
1130	Basalt flakes
149	Chert flakes
2	Quartzite flakes
1441	Rhyolite flakes
1040	Flakes less than 1/8" mesh
6495	
Faunal Material	
2288	Bone fragments

Table D.351.

Faunal Material by Stratigraphic Unit, TLM 217

Unit		Description
1b/3 Contact between finely divided organics and Devil tephra	105	Long bone and unidentifiable fragments, calcined, medium-large mammal
2 Cultural unit above Devil tephra	3	Unidentifiable fragments, calcined, mammal
3 Devil tephra	16	Unidentifiable fragments, calcined, medium-large mammal
4 Cultural unit below Devil tephra	1	Premolar fragment, calcined, caribou (Rangifer tarandus)
	1	Patella fragment, calcined, caribou (Rangifer tarandus)
	1	Proximal metapodial fragment (hindlimb), calcined, caribou (Rangifer tarandus)
	1	Distal metapodial fragment, calcined, caribou (Rangifer tarandus)
	3	Metapodial shaft fragments, calcined, probable caribou (Rangifer tarandus)
	1	Possible distal metapodial fragment, calcined, caribou (Rangifer tarandus)

Table D.351. (Continued)

Unit		Description
	1	Rib articular facet, calcined, medium-large mammal
	1	Long bone fragment, heavily burned, medium-large mammal
	1,045	Long bone and unidentifiable fragments, calcined, medium-large mammal
	3	Unidentifiable fragments, calcined, mammal
3/5 Contact between Devil and Watana tephras	1	Possible rib fragment, calcined, medium-large mammal
	1	Long bone shaft fragment, calcined, medium-large mammal
	21	Long bone and unidentifiable fragments, calcined medium-large mammal
5 Watana tephra	9	Unidentifiable fragments, calcined, medium-large mammal
5a Oxidized Watana tephra	1	Possible mandibular or maxillary fragment, calcined, medium-large mammal
	1	Proximal fragment medial phalanx, calcined, caribou (Rangifer tarandus)
	1	Probable phalanx fragment, calcined, possible caribou (Rangifer tarandus)
	1	Probable vestigial phalanx fragment, calcined, probable caribou (Rangifer tarandus)

Table D.351. (Continued)

Unit		Description
	1	Possbile distal phalanx fragment, calcined, artiodactyl
	780	Long bone and unidentifiable fragments, calcined, medium-large mammal
5b "Buff" Watana tephra	1	Distal fragment metapodial, calcined, caribou (Rangifer tarandus)
	98	Long bone and unidentifiable fragments, calcined, medium-large mammal
7a Oxidized glacial drift	88	Long bone and unidentifiable fragments, calcined, medium-large mammal
Subsurface unknown	101	Long bone and unidentifiable fragments, calcined, medium-large mammal
	1	Unidentifiable fragment, heavily burned, medium-large mammal

Table D.352.

Artifact Summary by Stratigraphic Unit, TLM 217

Unit		Description
1b	467	Argillite flakes
Fine organics	89	Basalt flakes
	28	Chert flakes
	214	Rhyolite flakes
	393	Flakes less than 1/8" mesh
	1	Argillite modified flake (UA84-59-173)
1b/3	547	Argillite flakes
Contact between	253	Basalt flakes
fine organics	22	Chert flakes
and Devil tephra	2	Quartzite flakes
	308	Rhyolite flakes
	207	Flakes less than 1/8" mesh
	1	Argillite modified flake (UA84-59-26)
	1	Basalt modified flake (UA84-59-23)
	1	Basalt biface fragment (UA84-59-25)
	1	Chert preform fragment (UA84-59-22)
	1	Basalt lanceolate point base (UA84-59-198)
	1	Rhyolite lanceolate point base (UA84-59-197)
2	1108	Argillite flakes
Cultural unit	419	Basalt flakes
above Devil	24	Chert flakes
	501	Rhyolite flakes
	289	Flakes less than 1/8" mesh

Table D.352. (Continued)

Unit		Description
3	48	Argillite flakes
Devil tephra	30	Basalt flakes
	8	Chert flakes
	25	Rhyolite flakes
	17	Flakes less than 1/8" mesh
4	160	Argillite flakes
Cultural unit	155	Basalt flakes
	23	Chert flakes
	134	Rhyolite flakes
	26	Flakes less than 1/8" mesh
	1	Basalt biface tip (UA84-59-64)
	1	Basalt biface fragment (UA84-59-246)
3/5	92	Argillite flakes
Contact between	19	Basalt flakes
the Devil and	8	Chert flakes
Watana tephras	58	Rhyolite flakes
	39	Flakes less than 1/8" mesh
	1	Argillite biface fragment (UA84-59-222)
	1	Rhyolite lanceolate point base (UA84-59-223)
5	1	Rhyolite flake
Watana tephra		

Table D.352. (Continued)

Unit		Description
5a	45	Argillite flakes
Oxidized Watana	81	Basalt flakes
	4	Chert flakes
	4	Rhyolite flakes
	7	Flakes less than 1/8" mesh
5b	4	Argillite flakes
Unoxidized Watana	6	Basalt flakes
	1	Chert flake
7	1	Argillite flake
Glacial drift		
Subsurface	261	Argillite flakes
unknown	78	Basalt flakes
	31	Chert flakes
	196	Rhyolite flakes
	62	Flakes less than 1/8" mesh

AHRS Number TLM 218; Accession Number UA83-240

Area:	Northeast of Watana Creek Mouth
Site Map:	Figure D.279
Survey Locale 143:	Figure E.231
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site, consisting of two loci (A and B), lying at ca. 670 m asl (2200 feet), is on the northern end of a small terrace near the rim of the upper Watana Creek canyon at the edge of a glaciolacustrine plain which extends to the west. Cultural material was located on two small discrete knolls ca. 50 m apart along the east-west trending edge of the terrace. Locus A is restricted to the eastern knoll, and locus B to the western knoll. To the north, the terrain descends gradually for approximately 50 m before the gradient increases to a ca. 45-degree slope down to an unnamed creek 300 m north. This creek, which drains the high plain to the east, joins Watana Creek northwest of the site. The most distant of three lakes in the site vicinity is situated southeast and is ca. 0.5 ha in size. Two other lakes are situated to the south-southwest, both approximately 1 ha in size. The lake situated to the southeast has no apparent inlet stream, and the shoreline is overgrown by grasses and sedges. From either of the loci the west valley rim of Watana Creek is visible to the north, west, and southwest. A prominent incised valley is in view to the northwest. To the east, the view from locus B encompasses the broad glaciolacustrine plain. The view of the lake to the southeast is somewhat obstructed by the terrace edge, and a higher knoll ca. 150 m south obstructs the view in that direction. Vegetation on the site consists of dwarf birch, black and white spruce, willow, and an occasional small alder, but primarily of lichen, heath, and blueberry.

Testing:

Cultural material from the site is composed of two large chert flake cores (UA83-240-1,2; Figure D.392k,j) recovered from a surface exposure at locus A, and an argillite biface fragment (UA83-240-3; Figure D.392i) and argillite flake found during subsurface testing at locus B (Table D.353). A 40 x 40 cm test pit (test pit 1) placed at locus A produced no additional cultural material. The argillite biface fragment was recovered from the Watana tephra unit of test pit 2 (locus B), and the flake from the original shovel test at the location of test pit 2. Twelve shovel tests scattered across the knoll top at locus B produced no cultural material, nor did the eight shovel tests placed at 5 m and 10 m intervals to the north, south, east, and west of test pit 1. Estimated size for locus A based on the distribution of artifacts is 12 square meters. Estimated size for locus B based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.353.

Artifact Summary, TLM 218

Provenience		Description
Lithic Material		
Surface:		
Locus A	2	Chert flake cores (UA83-240-1, 2)
Subsurface:		
Locus B		
Test Pit 2	1	Argillite flake
	1	Argillite biface fragment (UA83-240-3)

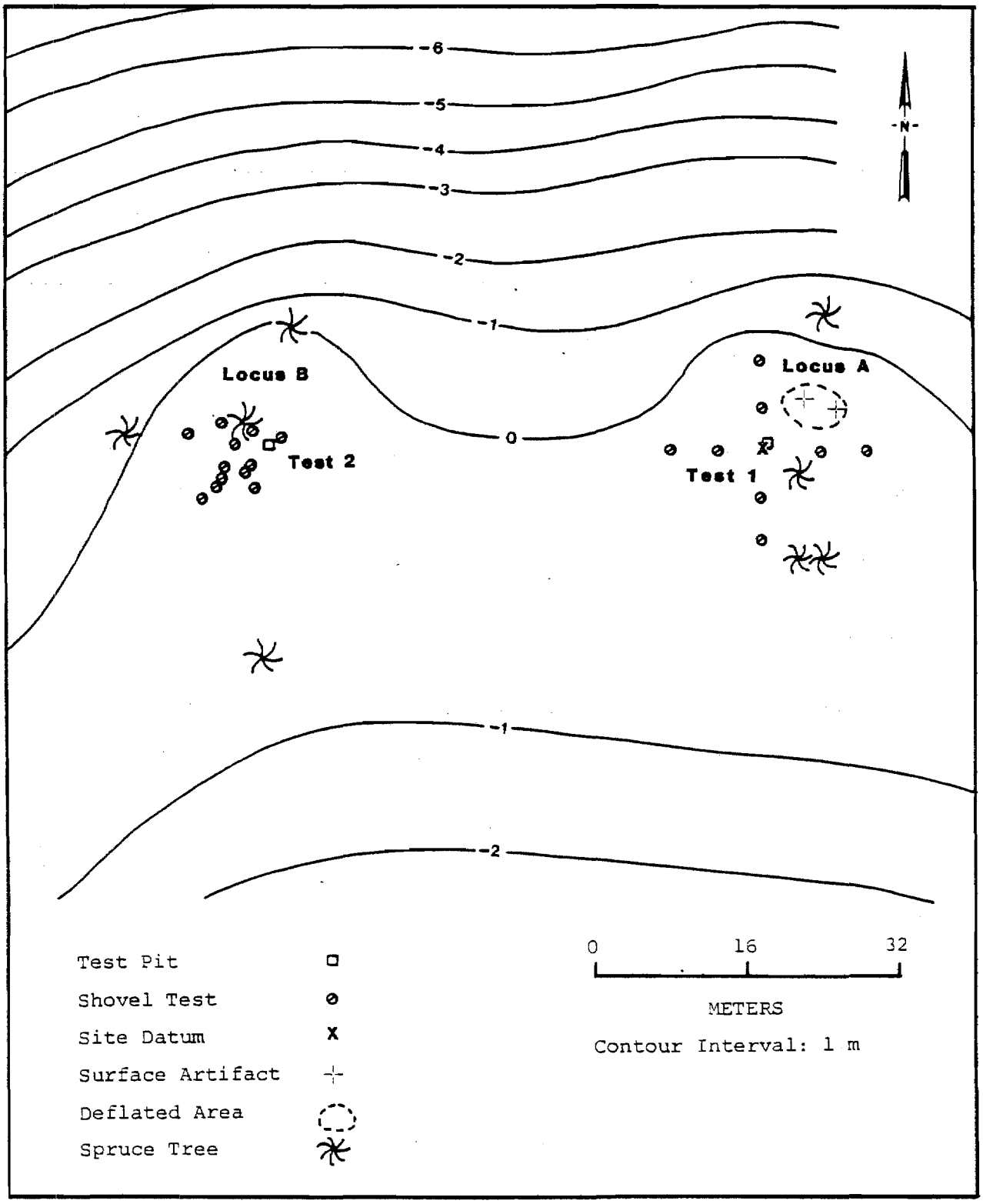


Figure D.279. Site Map, TLM 218

AHRS Number TLM 219; Accession Number UA83-241

Area:	Northeast of Watana Creek Mouth
Site Map:	Figure D.280
Survey Locale 143:	Figure E.231
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 219 is located at the top of a conical knoll at an elevation of ca. 716 m asl (2350 feet), northeast of the mouth of Watana Creek. The knoll top is ca. 8 m higher than the surrounding terrain and is the highest in an isolated series of five knolls. A small unnamed creek, easily accessible from the site, is situated north and northeast of the knoll, and eventually joins a northern branch before emptying into Watana Creek. A lowland wet bog extends on either side of the rocky creek channel which is partially covered by vegetative overgrowth. This creek drains the upland glaciolacustrine plain east of Watana Creek and west of foothills in the distance. Directly north, opposite the creek, are a terrace and undulating ridges that gradually ascend to the foothills toward the northeast. Similar topography extends southward. A panoramic vantage point would be available in the absence of two large spruce trees on the southeastern slope. Kame and kettle terrain is in clear view in all directions except to the southeast. The western valley rim of Watana Creek is in view to the west as is the western part of survey locale 143. On-site vegetation includes lowbush cranberry, crowberry, lichens, bearberry, blueberry, Labrador tea, mosses, dwarf birch, occasional willow and fireweed, dwarf dogwood, small balsam poplar, white spruce, and mushrooms. Black spruce becomes the dominant tree at the base of the knoll and on into the surrounding wet bog.

Testing:

A gray argillite flake, a gray chert sidescraper (UA83-241-2; Figure D.392m), and a yellowish brown chert burin (UA83-241-1; Figure D.392l), were collected from a deflated exposure and just downslope from the knoll crest (Table D.354). A 40 x 40 cm test pit (test pit 1) was placed upslope on a nondeflated area. Excavation of the test pit and subsequent surface survey produced negative results. Four shovel tests placed at 5 and 10 m intervals north and west of test pit 1 and one shovel test placed 5 m south were sterile. Estimated site size based on the distribution of artifacts is 20 square meters (Table D.2).

Table D.354.

Artifact Summary, TLM 219

Provenience		Description
Lithic Material		
Surface:	1	Argillite flake
	1	Chert scraper (UA83-241-2)
	1	Chert burin (UA83-241-1)

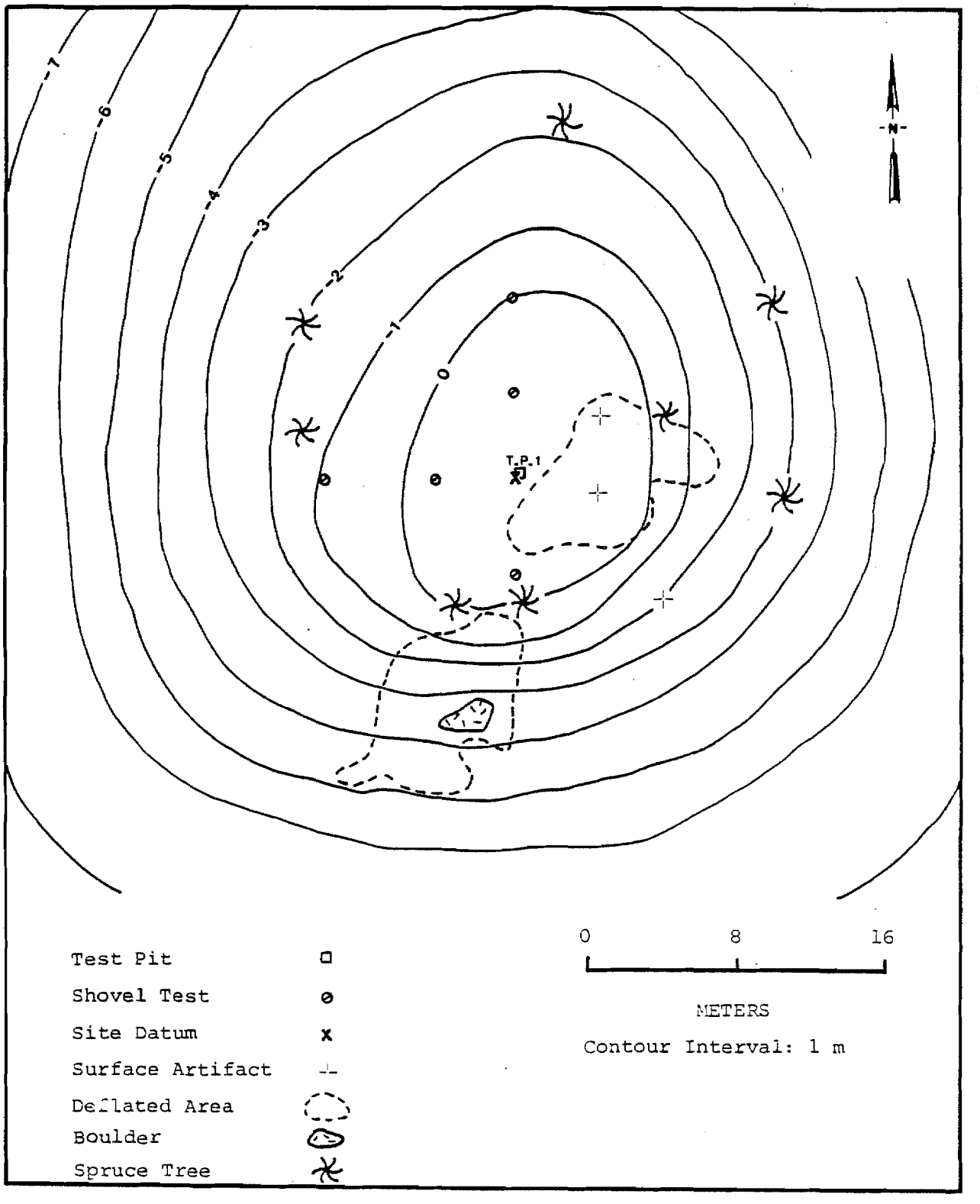


Figure D.280. Site Map, TLM 219

AHRS Number TLM 220; Accession Number UA84-60

Area:	North of Watana Creek
Site Map:	Figure D.281
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 220 is located on the eastern slope of a network of kames at an elevation of 600 m asl (altimeter: 1967 feet). The site is situated on the eastern extent of an east-west oriented ridge. The site is higher than the surrounding terrain to the east and lower than the terrain to the west which ascends ca. 2 m higher in elevation approximately 100 m south of the site. At least eight other sites are situated within a 400 m radius. Three of these sites, TLM 216, TLM 225, and TLM 226, are approximately 100 m distant to the southwest, east, and north-northeast, respectively. Boggy terrain characterizes a drainage between TLM 220 and TLM 221, 200 m to the north. The wet bog is approximately 100 m wide and trends northwest and southeast, draining into Watana Creek to the east. Three lakes are accessible from the site. The smallest of the three is ca. 45 m in diameter (i.e., a pond) with the center about 100 m east-northeast. The intermediate-sized lake is ca. 2 ha. and ca. 200 m west of the site. There are no evident outlet streams for these two lakes. The grassy character of the shorelines may indicate that these two lakes are receding. The third and largest lake is ca. 7 ha in size and is ca. 400 m south of the site. Despite the receding character of the shoreline, the lake maintains an outlet stream that discharges into Watana Creek approximately 500 m southeast of the site. Views from the site are currently obstructed by forest. The view north is the least obstructed where the boggy terrain between TLM 221 and this site is in clear view. TLM 225 can be seen 100 m north-northeast across the pond. TLM 184 is discernible approximately 350 m northwest. The view to the west is limited to approximately 50 m due to the higher terrian. The vegetation on the site consists of paper birch, black spruce, dwarf

birch, Labrador tea, blueberry, sphagnum moss, white lichen, crowberry, and tufts of grass.

Testing:

TLM 220 was discovered when calcined bone was observed in soils disturbed by the roots of a fallen white spruce. Closer investigation revealed the presence of a sandy gravel layer overlying the Devil tephra and a small depression on the undisturbed north side of the tree. Additional bone was noted in another nearby fallen tree. Seventy-eight grid shovel tests were placed in the vicinity of the original discovery as part of the program to assist in determining site size and the distribution of cultural material, seventeen of which produced cultural material.

Systematic testing consisted of the excavation of three 1 x 1 m test squares on the south side of the discovery location. One square (N97/E101) was placed to include a portion of the small pit (feature 1) and define the origin of the atypical post-Devil tephra unit. A second square (N93/E100) was placed in an area that appeared to have the highest concentration of bone in the upper levels. The third square was situated near the approximate center of three shovel tests that produced lithic material from both the upper and lower levels in an attempt to confirm the presence of two components at the site. The results of the grid shovel testing program suggested that this square placement would afford the most advantageous perspective of upper level activity areas and potential multiple component identification.

Discussion:

Survey testing and systematic testing produced an artifact assemblage of 135 lithic specimens and 1,303 faunal specimens. Three of the lithics were classified as tools or tool fragments. Three of the faunal specimens were identified as tools, and two were identified as exhibiting intentional modification. Two cultural components were identified. One was contained in the organic units above the Devil

tephra, and a second, earlier, component was located on the surface of the Watana tephra at the contact with the Devil tephra. Three features are associated with the post-Devil tephra occupation; feature 1 is a small birch bark-lined cache pit and features 2 and 3 are hearths. Feature 1 truncates feature 2 and is thus temporally younger.

All three 1 x 1 m squares produced cultural material. The square producing the most lithic material was N93/E104. Test square N97/E101 produced the most faunal material and the least lithic material, and N93/E100 contained the only conclusive evidence of the pre-Devil tephra occupation. The complete artifact inventory for all phases of testing is listed in Table D.356. The distribution of materials by stratigraphic unit is listed in Table D.358. Lithic material is comprised of white quartzite, chert, quartz, rhyolite, basalt, argillite, and obsidian. An exotic cobble with natural markings was collected from the surface. Faunal material includes bone, teeth, and antler identified as caribou, plus unidentifiable fragments mostly attributable to medium-large mammals (Table D.357).

Stratigraphy at TLM 220 represents a number of processes, both natural and cultural. The basal material is a sandy glacial drift (unit 8) containing assorted pebbles and cobbles. This drift exhibits a zone of cementation by iron oxides at its upper surface. The glacial drift is overlain with three volcanic tephras; the Oshetna (unit 7), the Watana (unit 6), and the Devil (unit 5). Separating the Watana and Oshetna tephras is a discontinuous paleosol containing charcoal and intermixed tephra materials. Since this paleosol is generally assumed to be associated with the Oshetna tephra it is included in the unit 7 designation. Square N97/E101 contains a cultural unit (unit 4) comprised of bone in various stages of reduction by heat, and other organic materials intermixed with burned earth and small thermally altered cobbles. This hearth unit appeared to originate in the northwest quadrant as the tephra unit beneath it (Devil) was discolored from heat. The remaining material found in the other quadrants is interpreted as generalized scatter decreasing in thickness away from the northwest quadrant. A cache pit (feature 1) was excavated through this

hearth material and the three tephra sequence below it to a point approximately 30 cm into the drift. This material was deposited around the edge of the excavation and formed a distinct stratigraphic unit (unit 3) of mixed drift, tephras, and cultural material. A deposit of mixed tephras and drift with organic material found within feature 1 is designated as unit 9. A well-developed 02 horizon (unit 2) overlies unit 5 (Devil tephra) in the southern squares and units 3 (cultural overburden) and 9 (feature 1 fill) in N97/E101. The current living vegetation surface is designated as unit 1. A summary of the site stratigraphy is presented in Table D.355 and visual representations illustrating superposition and cultural association are found in Figures D.282 and D.283.

Upper component: The upper component at TLM 220, as determined by systematic testing, is a series of post-Devil tephra occupations primarily associated with the vegetation mat (unit 1) and the underlying 02 horizon (unit 2). Materials forming the upper component are also contained in the culturally derived unit 3 (pit spoil), unit 4 (hearth material), and unit 9 (cache pit fill). Upper component material was found in association with downward root disturbance in units 5 (Devil tephra), 6 (Watana tephra), and 8 (drift). Even though there is no evidence to suggest that a lower component is present in the vicinity of feature 1, there is a possibility that these materials could have been excavated and incorporated into unit 3 (pit spoil) or unit 9 (pit fill).

Artifacts from the upper component consist primarily of unburned caribou bone and both unburned and calcined bone fragments. Faunal material appeared in the organic units of all test squares in approximately equal frequencies. A longitudinally split metapodial beamer (UA84-60-75; Figure D.393c) was recovered from the rootmat of shovel test N92/E100 and articulated with a fragment (UA84-60-28) removed during the shovel insertion. A complete posterior face of a longitudinally split metapodial fragment (UA84-60-76), with a square tip came from N93/E100. This bone fragment is a remnant of tool manufacture.

The unmodified bone includes mostly unburned skull (also teeth), axial, forelimb, hindlimb, and extremity elements of caribou. It appears that only one individual is represented by these bones. All of the teeth exhibit a moderate amount of wear. Unit 3 (pit spoil) contained random clusters of calcined bone probably originating from unit 4 (hearth) below. The bone incorporated in the two organic units indicates that the area surrounding the cache pit was occupied after the pit was excavated.

White quartz flakes appeared in all squares. N93/E104 had a cluster of shatter flakes and may be near the epicenter of the flaking activity. Insufficent evidence exists to suggest that lithic reduction was a major activity in this occupation component. Several basalt flakes indicative of tool modification or sharpening were recovered from N93/E100. Grid shovel test N99/E101 yielded a tci tho (UA84-60-191; Figure D.393d) at the contact between the organic mat (unit 1) and the fine sandy silt (unit 2).

The material comprising the hearth (feature 2) and its subsequent scatter (unit 4) contained between the Devil tephra and the pit spoil, represented a period of intense localized activity. The matrix of this unit was an accumulation of organics and sand with a high percentage of burned and calcined bone. A large rock measuring 36 x 22 cm and 17 cm thick was found between the northeast and southeast quadrants along the east wall of N97/E101 approximately 35 cm from the assumed hearth center. Numerous bone fragments were recovered from around this rock. The upper surface of the rock was pitted from repeated impacts with a hard object. This rock may have been an anvil for crushing bone. The most diagnostic object recovered from the site during testing was a tang and lower portion of a unilaterally barbed bone point (UA84-60-139; Figure D.393a). This artifact came from the first 2 cm of unit 4 (hearth). It is produced on the posterior ridge of a metapodial with a triangular tapering tang. The tang shows longitudinal 2 mm wide parallel manufacturing marks originating at the shoulder. The sides are parallel and it is broken approximately at the lower third of the point with a transverse dorsal angular fracture. It is triangular in

cross-section with three shallow barbs formed on the dorsal edge. A single longitudinal incised line runs medially along the left side below the barbs. There are three chevron-shaped marks on the tang's midpoint which may be ownership marks. A second hearth (feature 3) was encountered in the west wall of N93/E104 but produced less significant amounts of material.

Feature 1 (cache pit) measured 65 x 35 cm at completion of excavation. It was excavated approximately 50 cm below the ground surface at the time of occupation. The pit was lined with 4 sheets of birch bark overlapping at the base. The bark was then folded over to form a package and covered with backfill. The matrix contained within the birch bark was designated as unit 9. This material was within the zone of annual frost and was still frozen at the time of excavation. One piece of antler scrap came from inside the bark container. This specimen is an enlongate triangular piece of incised palm with transverse adze marks across the base (UA84-60-148; Figure D.393b).

Lower component: An earlier occupation period was identified at the contact between the Watana (unit 6) and Devil (unit 5) tephras in the north quadrants of N93/E100. Nineteen basalt flakes and 3 chert flakes were recovered on the contact surface. One small obsidian flake (UA84-60-9) showed modification along the distal end; another obsidian flake appears to be a piece of generalized shatter. Grid shovel testing yielded another obsidian flake at the same level about 4 m east of N93/E100. Faunal material from this square was found at the contact between the Devil and Watana tephras and within the Watana tephra. It consisted of small unidentifiable calcined bone fragments, calcined caribou extremity elements, and a phalanx fragment tentatively identified as wolf (Canis lupus).

The south quadrants of N93/E100 were significantly disturbed to the mid-Watana tephra level through both root action and upper component activity. Some of the flakes included in the counts for the upper component may be mixed slightly with lower component materials due to this root action. No evidence of this earlier component was discovered

in the other two test squares. A single chert flake was recovered from within the Devil tephra in N93/E104 but is likely out of original context.

Evaluation:

TLM 220 occupies the lower portion of a slope forming a low spot in a linear kame bordering a lake bed. The surrounding area is dotted with low areas representing old drainage channels and kettles. These low areas are full of marshes and receding lakes and ponds that fill and overflow with seasonal precipitation. The site may be situated to take advantage of the shelter of trees and surrounding terrain rather than provide the site with a panoramic view.

Two components have been documented at the site. The upper component is a late Athapaskan (possibly early historic) occupation emphasizing caribou procurement activities such as hunting (bone point), skin working (beamer), and grease production (hearths, anvil stone, crushed bone). The small cache pit (feature 1) may be attributed to berry collecting. Food storage was a site activity at this period. The bone debitage, metal-cut antler, and the small lithic flakes indicate that some level of tool modification and manufacture was also taking place.

It is possible that the site was occupied during the fall when berries were available and the caribou began their fall migration. This area would provide a good catchment due to the channeling effect of the local topography and the availability of local materials to construct caribou fences or surrounds, although no fences were encountered. Ethnographically, fall caribou hunting is generally characterized as a communal activity. The artifacts and features at the site suggest a group comprised of a cross-section of sexes and ages, performing varied tasks.

The lower component is located at the contact of the Devil and Watana tephras and appears to be restricted in extent to the south portion of the slope. The artifact assemblage of the lower component is lithic in

nature represented by a scatter of generalized flakes resembling that of the upper component. The only significant difference between the two components is the material types utilized. If the lower component can be assumed to be similar to the upper component based on site selection, a similar biotic regime, and a similarity of nondiagnostic lithic debitage representing tool modification, then the lower component may encompass an area larger than can be defined on the basis of the lithic assemblage alone.

The site represents a period of Athapaskan occupation not yet fully documented in the Middle Susitna River area. The excellent preservation of organic artifacts provides an opportunity to reconstruct protohistoric and early historic lifeways. Observed site size based on the distribution of artifacts is 145 square meters (Table D.2).

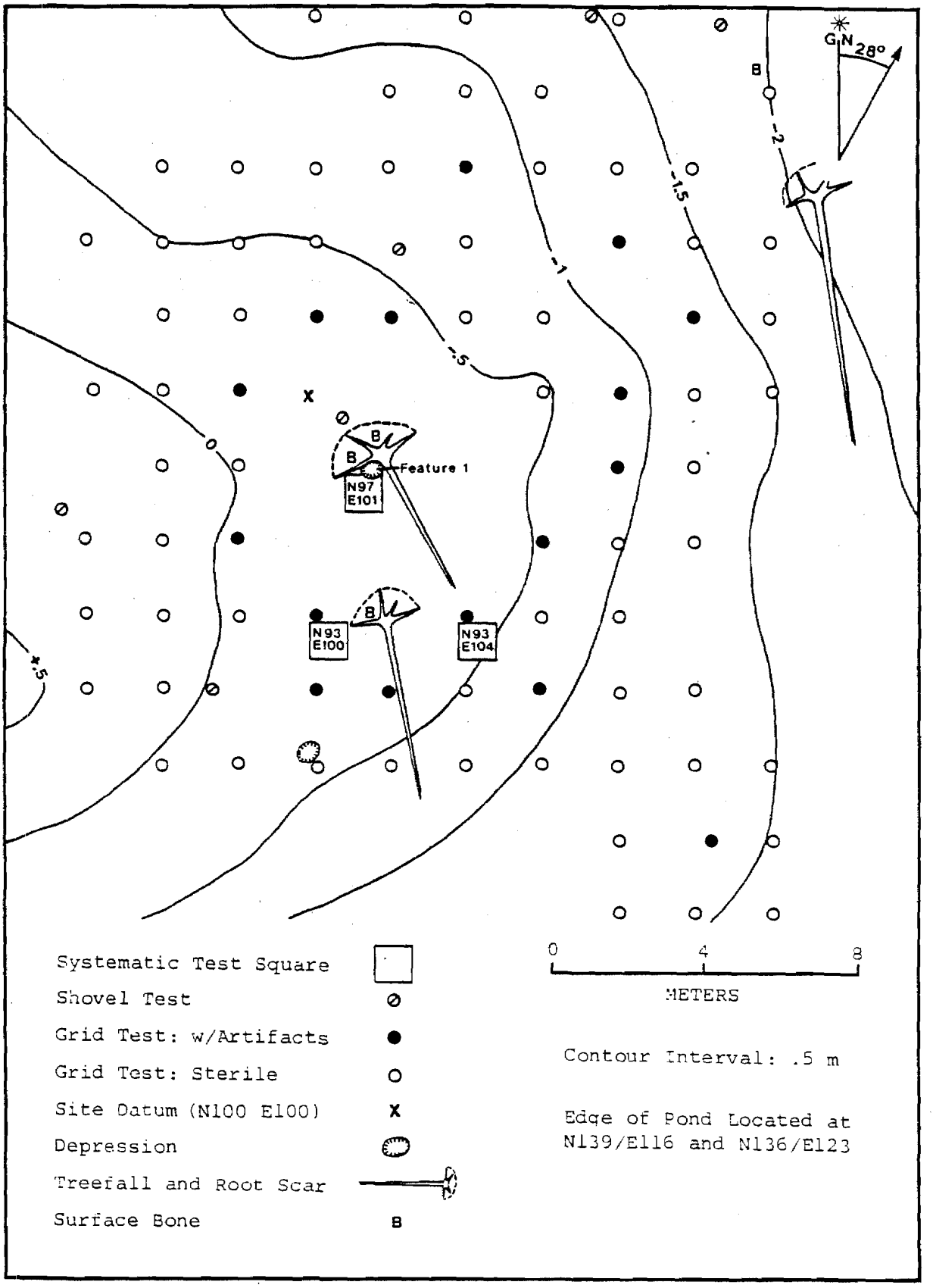


Figure D.281. Site Map, TLM 220

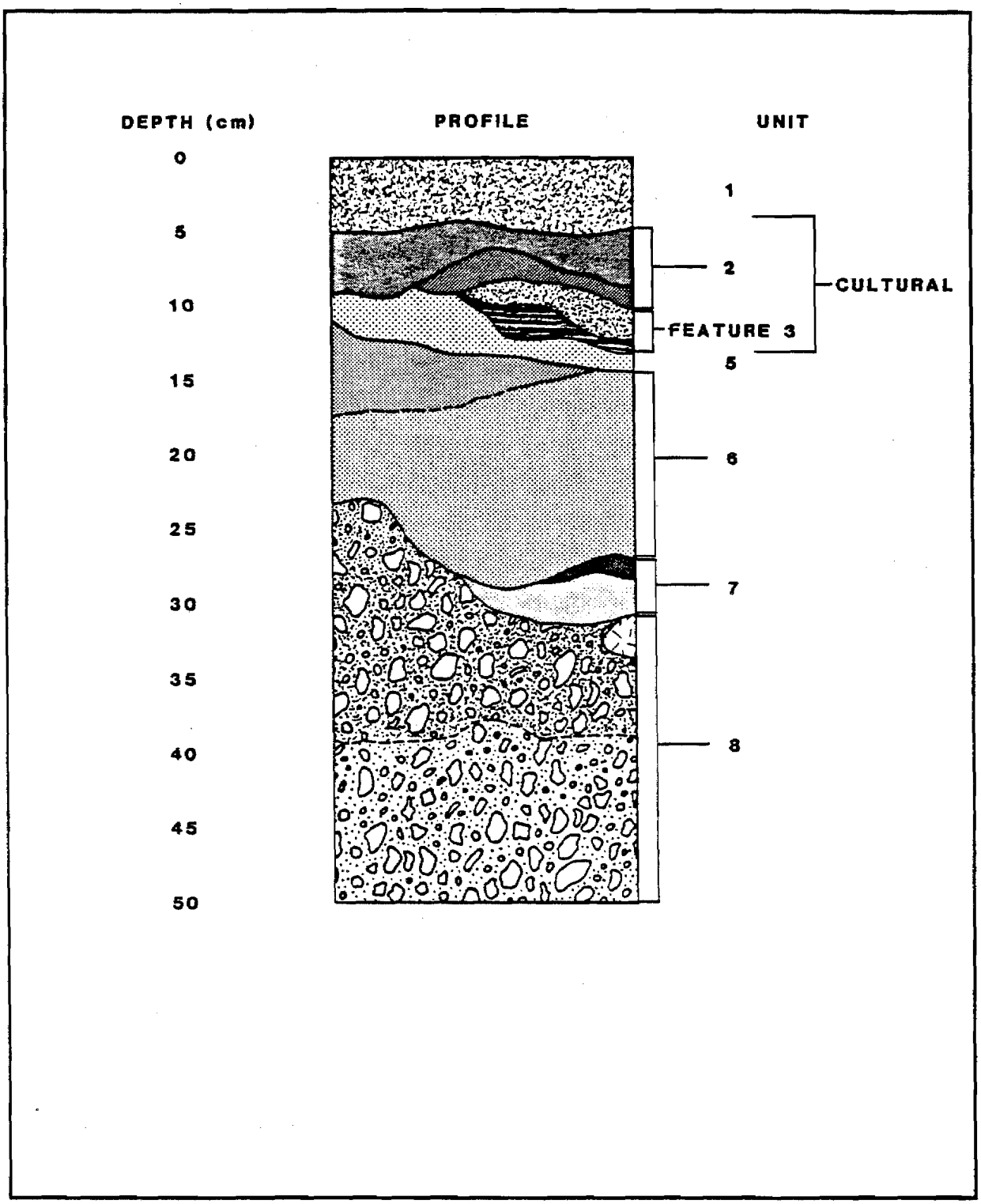


Figure D.282. Composite Profile, TLM 220 N97/E101

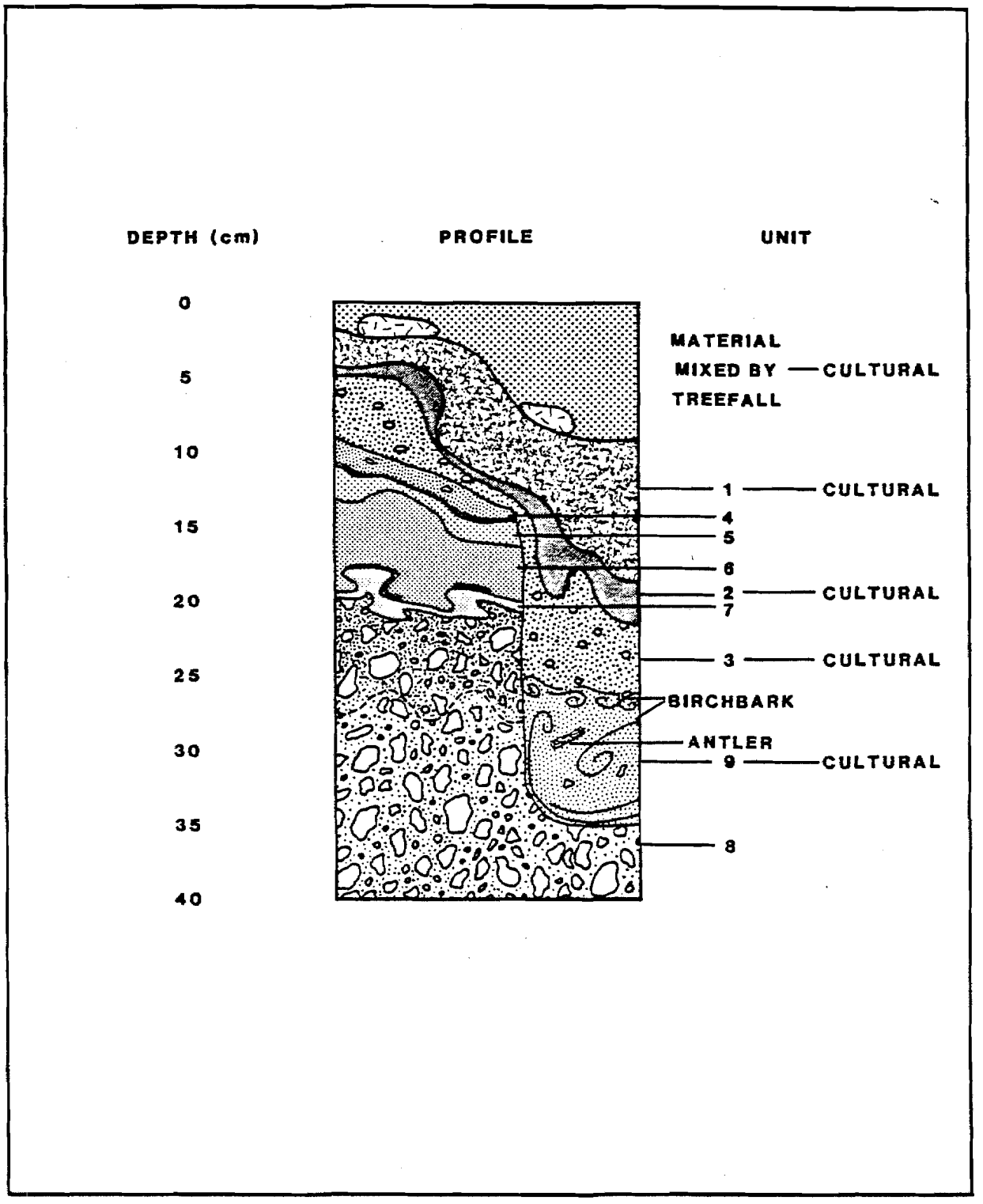


Figure D.283. Composite Profile, TLM 220 N93/E100, N93/E104

Table D.355.

Soil/Sediment Description for Composite Profile, TLM 220

Unit	Description
1	Surface organic root mat, generally consisting of a thick, densely intertwined blanket of roots, decomposing roots, and bark; dark brown (7.5YR 3/2). Thickness varies from 2-9 cm. Compressed in N93/E100 by the presence of a game trail. Other surface disturbances (tree falls) in N97/E101. Lower contact generally distinct, regular to wavy, with pockets of mixing with unit 2.
2	Fine sandy silt, with organics, charcoal, carbon-staining and dense root penetration; grades downward from a dark brown (7.5YR 3/2) to very dark gray (7.5YR N/3). An 02 horizon. Thickness ranges 1-9 cm, with an average of 5 cm. Continuous with a regular to wavy contact with unit 1 and a regular to smooth contact with underlying units, distinct, throughout.
3	Compact sandy silt with pebbles and thermally altered rocks; dark grayish brown (2.5Y 5/2). Poorly sorted. Thickness ranges from 0.5-20 cm. Heavy root penetration and disturbance. Distinct, continuous, undulating contact with unit 2 above to discontinuous undulation indistinct contacts with units below, at times blending into and mixing with unit 4. Large number of bone fragments dispersed throughout unit. Cultural.

Table D.355. (Continued)

Unit	Description
4	Hearth material. Sand mixed with tephras, bone, charcoal and portions of burned earth; some mottling, but generally strong brown; (7.5YR 4/6). Some root disturbance and penetration but less than overlying units. Fill material found in test square N97/E101, within northwest quad. Ranging in thickness from 4-7 cm. Indistinct contacts with unit 3 above, with some blending. Distinct contacts with units below. Large number of burned and calcined bone fragments including grooved bone point.
5	Very fine grain silt; very pale brown (10YR 7/3) to dark gray (10YR 3/1), color variation due to leaching. Well-sorted with some sand and pebble inclusions (intrusions from below). Devil tephra. Varies in thickness from 0.5-9 cm, generally 2-5 cm. Continuous in some areas (N93/E104) and discontinuous in others. Some root penetration but little present root disturbance. Contacts are distinct and regular except where it has graded off N93/E100. Test square N94/E100 encountered lithics at the contact with the underlying unit (6), but disturbed within this unit.

Table D.355. (Continued)

Unit	Description
6	Varying from a fine grain silt to a sandy silt; variation in color from reddish yellow (7.5YR 6/6) to strong brown (7.5YR 5/6), due to iron oxides and leaching. Generally thick unit, ranging from 3.5-22 cm, averaging 12-15 cm. Sand and pebble inclusions increase as unit descends. Root penetration present but decreasing from overlying units. Watana tephra. Varying in areas to smooth. Continuous contacts to scalloped, bowl-like deposits underlain by unit 7. Some calcined bone present and three lithic flakes all within upper limits of the unit.
7	Fine-grained silt, gray (10YR 5/1), overlain sporadically by an organic lens, black (N 2/). Ranging in thickness from 0.5-12 cm. Appears in some areas thin (N93/E104), in others as a thick continuous layer (N93/E100). Undulating drifts to dramatically in some areas. Contacts variable. Oshetna tephra. Few, if any, inclusions, well-sorted fine grain sediment.
8	Sand and silt mixed with pebbles and cobbles; strong brown (7.5YR 5/8) to olive (5Y 5/3). Poorly sorted glacial drift. Oxidized grading into lower portion of unit which is unoxidized. Continuous. Pebbles and cobbles are well rounded and polished bones are weathered and cracked by frost action. Indistinctive contacts with overlying unit. Extent of unit unknown, excavated to an average of 15 cm.

Table D.355. (Continued)

Unit	Description
9	Mixed tephras and glacial drift; olive brown (2.5Y 4/4) with some degree of mottling. Poorly sorted, cultural fill. Pebbles and gravels mixed with burned and unburned bone, and charcoal. Feature fill underlying pit within test square N97/E101. Preserved birch bark wrappings. Antler beam section present.
Feature 3	Fine silt, with charcoal and bone fragments; dark grayish brown (10YR 4/2). Presence of sand, particles of burned earth; red (2.5YR 4/6). Thin lens of material (1 cm) within N93/E104. Possible feature fill. Mixed tephra and cultural material. Distinct boundary with unit 2 above unit 5/6 below. Thermally altered rock (uncollected) and calcined bone are present.

Table D.356.

Artifact Summary, TLM 220

Tools

2	Modified flakes
	1 Chert (UA84-60-5)
	1 Obsidian (UA84-60-19)
1	Tci tho
	1 Diorite (UA84-60-191)
2	Modified antler and bone fragments
	1 Antler (UA84-60-148)
	1 Bone (UA84-60-76)
2	Point fragments
	2 Bone (UA84-60-139, two pieces)
2	Beamer fragments
	2 Bone (UA84-60-28 articulates with 75)
9	

Lithic Material

3	Argillite flakes
37	Basalt flakes
10	Chert flakes
2	Obsidian flakes
75	Quartz flakes

Table D.356. (Continued)

1	Quartzite flake
3	Rhyolite flakes
1	Thermally altered rock
1	Cobble
133	

Faunal Material

1,297	Tooth and bone fragments

Table D.357.

Faunal Material by Stratigraphic Unit, TLM 220

Unit		Description
Surface	2	Beamer fragments right metapodial (hindlimb) distal end and shaft fragment, unburned, caribou (Rangifer tarandus) (UA84-60-28 articulates with 75)
	1	Right distal humerus fragment, unburned, caribou (Rangifer tarandus)
	1	Probable femur fragment, unburned, probable caribou (Rangifer tarandus)
	1	Possible radius shaft fragment, unburned, probable caribou (Rangifer tarandus)
	1	Long bone shaft fragment, unburned, medium-large mammal
1 Organic mat	1	Modified left metapodial (hindlimb) shaft fragment, unburned, caribou (Rangifer tarandus) (UA84-60-76)
	1	Left metapodial (hindlimb) proximal end, unburned, caribou (Rangifer tarandus)
	1	Medial phalanx, unburned, caribou (Rangifer tarandus)
	3	Long bone and unidentifiable bone fragments, unburned, medium-large mammal

Table D.357. (Continued)

Unit		Description
1/2 Contact between organic mat and fine sandy silt with organics	1	Antler tine, unburned, caribou (Rangifer tarandus)
	1	Right mandibular fragment with third and fourth premolars, burned, caribou (Rangifer tarandus)
	1	Right mandibular third molar, burned, caribou (Rangifer tarandus)
	1	Right mandibular second molar, burned, caribou (Rangifer tarandus)
	1	Lumbar vertebra, unburned, deep cut mark, caribou (Rangifer tarandus)
	1	Left proximal radius fragment, unburned, caribou (Rangifer tarandus)
	1	Radius shaft fragment, unburned, probable caribou (Rangifer tarandus)
	1	Scaphoid, unburned, caribou (Rangifer tarandus)
	1	Magnum, unburned, caribou (Rangifer tarandus)
	1	Left metapodial shaft fragment, unburned, gnaw marks, caribou (Rangifer tarandus)
	1	Left proximal metapodial (hindlimb) fragments, unburned, caribou (Rangifer tarandus)
	1	Left cuboid, unburned, caribou (Rangifer tarandus)
	1	Left cuneiform, unburned, caribou (Rangifer tarandus)

Table D.357. (Continued)

Unit		Description
	1	Epiphysis fragment, unburned, medium-large mammal
	1	Rib fragment, unburned, medium-large mammal
	1	Humerus shaft fragment, unburned, medium-large mammal
	4	Long bone shaft fragments, unburned, medium-large mammal
	1	Long bone shaft fragment, unburned, cut marks, medium-large mammal
	2	Long bone fragments, unburned, medium-large mammal
	1	Unidentifiable fragments, unburned, medium-large mammal
2 Fine sandy silt with organics	1	Right maxillary fragment with fourth premolar, first molar and second molar, unburned, caribou (Rangifer tarandus)
	1	Right maxillary fragment with third premolar, unburned, caribou (Rangifer tarandus)
	1	Third right maxillary molar, unburned, caribou (Rangifer tarandus)
	1	Second right maxillary premolar, unburned, caribou (Rangifer tarandus)
	1	Left mandibular fragment with second and third premolar, unburned, caribou (Rangifer tarandus)
	1	Left mandibular fourth premolar, unburned, caribou (Rangifer tarandus)

Table D.357. (Continued)

Unit		Description
	1	Thoracic vertebra, unburned, caribou (Rangifer tarandus)
	1	Right scapula, unburned, caribou (Rangifer tarandus)
	1	Probable humerus shaft fragment, unburned, possible caribou (Rangifer tarandus)
	1	Right radius shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Probable ulna fragment, unburned, probable caribou (Rangifer tarandus)
	1	Astragalus fragment, calcined, caribou (Rangifer tarandus)
	2	Possible cranial fragments, calcined, medium-large mammal
	11	Long bone and unidentifiable fragments, unburned, medium-large mammal
	170	Long bone and unidentifiable fragments, burned and calcined, medium-large mammal
	22	Long bone and unidentifiable fragments, heavily burned, medium-large mammal
	6	Unidentifiable fragments, calcined, mammal

Table D.357. (Continued)

Unit		Description
3 Dark grayish brown sandy silt with pebbles	1	Distal metapodial fragment, heavily burned, caribou (Rangifer tarandus)
	1	Distal fragment medial phalanx, burned, caribou (Rangifer tarandus)
	1	Vestigial phalanx fragment, calcined, probable caribou (Rangifer tarandus)
	2	Flat bone fragments, unburned, medium-large mammal
	10	Long bone and unidentifiable fragments, unburned, medium-large mammal
	50	Long bone and unidentifiable, burned and calcined, medium-large mammal
	1	Unidentifiable fragment, heavily burned, medium-large mammal
3/4 Contact between grayish brown sandy silt and mottled cultural unit	1	Metapodial (hindlimb) shaft fragment, burned, caribou (Rangifer tarandus)
	1	Cuneiform, burned, caribou (Rangifer tarandus)
	1	Distal fragment medial phalanx, heavily burned, caribou (Rangifer tarandus)
	1	Vestigial phalanx fragment, calcined, probable caribou (Rangifer tarandus)
	1	Rib fragment, heavily burned, medium-large mammal
	1	Long bone shaft fragment, unburned, medium-large mammal

Table D.357. (Continued)

Unit		Description
	54	Long bone and unidentifiable fragments, burned, medium-large mammal
	28	Long bone and unidentifiable fragments, calcined, medium-large mammal
	1	Unidentifiable fragment, heavily burned, medium-large mammal
4 Mottled cultural unit	2	Bone point fragments, unburned, medium-large mammal (UA84-60-139)
	1	Scapula fragment (glenoid fossa) unburned, caribou (Rangifer tarandus)
	1	Vestigial phalanx, unburned, caribou (Rangifer tarandus)
	1	Possible metapodial shaft fragment, burned, probable caribou (Rangifer tarandus)
	1	Cranial fragment, calcined, medium-large mammal
	1	Possible rib fragment, heavily burned, large mammal
	1	Long bone shaft fragment, unburned, large mammal
	465	Long bone and unidentifiable fragments, burned and calcined, medium-large mammal
	1	Unidentifiable fragment, heavily burned, medium-large mammal
	1	Rib fragment, calcined, small mammal
	1	Unidentifiable fragment, calcined, bird or small mammal
	1	Unidentifiable fragment, unburned, mammal

Table D.357. (Continued)

Unit		Description
2/5 Contact between fine sandy silt and Devil tephra	3 26	Unidentifiable fragments, heavily burned, medium-large mammal Unidentifiable fragments, calcined, mammal
5/6 Contact between Devil and Watana tephras	1 1 52	Sesamoid, calcined, caribou (Rangifer tarandus) Medial phalanx distal fragment, calcined, caribou (Rangifer tarandus) Long bone and unidentifiable fragments, calcined, medium-large mammal
1, 2, 5/6 Organic mat, fine sandy silt, contact between Devil and Watana tephras	39 1	Long bone and unidentifiable fragments, calcined, medium-large mammal Unidentifiable fragment, unburned, medium-large mammal
6 Watana tephra	1 1 1 1 1	Distal metapodial fragment, calcined, caribou (Rangifer tarandus) Probable metapodial shaft fragment, calcined, probable caribou (Rangifer tarandus) Proximal medial phalanx fragment, calcined, caribou (Rangifer tarandus) Distal fragment medial phalanx , calcined, caribou (Rangifer tarandus) Phalanx fragment, calcined, probable wolf (Canis lupus)

Table D.357. (Continued)

Unit		Description
	1	Caudal vertebra, calcined, medium-large mammal
	255	Long bone and unidentifiable fragments, calcined, medium-large mammal
9 Mixed glacial units drift and tephra	1	Modified antler fragment, unburned, cut marks, probably caribou (Rangifer tarandus) (UA84-60-148)
	1	Magnum, burned, caribou (Rangifer tarandus)
	16	Long bone and unidentifiable fragments, calcined, medium-large mammal
	4	Long bone and unidentifiable fragments, heavily burned, medium-large mammal
Subsurface unknown	5	Long bone and unidentifiable fragments, calcined, medium-large mammal
	10	Long bone and unidentifiable fragments, heavily burned, medium-large mammal

Table D.358.

Artifact Summary by Stratigraphic Unit, TLM 220

Unit		Description
Surface	1	Exotic cobble
1	2	Basalt flakes
Organic mat	2	Quartz flakes
1/2	4	Quartz flakes
Contact between	1	Diorite tci tho (UA84-60-191)
organic mat and	1	Thermally altered rock
fine sandy silt		
2	9	Basalt flakes
Fine sandy silt	6	Chert flakes
	67	Quartz flakes
	1	Quartzite flake
	3	Rhyolite flakes
	1	Chert modified flake (UA84-60-5)
2/3	3	Argillite flakes
Contact between the	4	Basalt flakes
fine sandy silt and		
Devil tephra		

Table D.358. (Continued)

Unit		Description
3/4	1	Quartz flake
Contact between cultural fill and hearth		
4	2	Basalt flakes
Hearth	1	Chert flake
	1	Obsidian flake
	1	Quartz flake
5	1	Chert flake
Devil tephra		
5/6	17	Basalt flakes
Contact between	2	Chert flakes
the Devil and	1	Obsidian flake
Watana tephras	1	Obsidian modified flake (UA84-60-19)
6	3	Basalt flakes
Watana tephra		

AHRS Number TLM 221; Accession Number UA84-62

Area:	North-northeast of Watana Creek Mouth
Site Map:	Figure D.284
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 221 is located on the southern portion of an elongate, northwest-southeast trending glacial kame west of Watana Creek. This kame overlooks the boggy headwaters of a small, ill-defined tributary drainage of Watana Creek, about 100 m to the south. At an elevation of 604 m asl (altimeter: 1981 feet), the site is ca. 4 m higher than the nearby swamp, affording a commanding view of this boggy terrain. Higher kames lying south and east of the swamp 200 m distant limit the view in this direction. A large site complex, including TLM 216, TLM 220, TLM 225, and TLM 226, occupies this higher terrain. To the north and east, the kame is connected to higher terrain by level to gradually rising slopes. In this position the site occupies the southernmost margin of a connected series of higher kames to the north. The view to the north is impeded by dense spruce forest, but a few of the higher kames can be seen, including one ca. 150 m distant on which TLM 215 is located. The kame on which the site is located is well drained and dry, with a small (ca. 100 square meters) level top which is relatively clear of dense shrub growth. Vegetation on-site consists of lichen, sphagnum moss, labrador tea, dwarf birch, grasses, black spruce, and paper birch. Black spruce bog is located to the south in lower terrain, while to the north the surrounding vegetation is similar to that on-site, although significantly denser.

Testing:

During survey testing calcined bone was found in a shovel test near the center of the kame. A subsequent 40 x 40 cm test pit (test pit 1) at

this spot yielded 580 calcined bone fragments, 2 unburned bone fragments, and 47 thermally altered rock fragments. These materials were found in the vegetation mat or in thermally oxidized silts above or at the contact with the Devil tephra. A grid shovel testing program was implemented to assist in determining site size and distribution of cultural materials. Fifty-six grid shovel tests were excavated, five of which yielded artifacts. These artifacts included 1 basalt flake, 6 unburned bone fragments, 1 thermally altered rock, and 1 unburned bone fragment found on the surface of the site.

Systematic testing at TLM 221 consisted of a single 1 x 1 m test square, N97/E99 (Figure D.284). This was placed adjacent to test pit 1 to determine the nature and stratigraphic position of the cultural material and the thermally oxidized silt layer in this relatively rich portion of the site.

Discussion:

Systematic testing resulted in the recovery of 235 bone fragments, 167 thermally altered rocks and rock fragments, and 2 white glass historic period trade beads (UA84-62-18). In addition, one thermally altered rock found on the surface south of test square N97/E99 showed signs of grinding on one face. Table D.360 lists the total number of artifacts recovered at TLM 221 during systematic testing and survey testing. Table D.361 gives the distribution of faunal materials by stratigraphic unit, and Table D.362 does the same for lithic materials and the beads.

Eight soil/sediment units were defined in the test square. These are depicted in Figure D.285, and described in Table D.359. Beneath the surface organic mat (unit 1a) is a layer of finely divided organics mixed with silt (unit 1b) and, particularly in the northeast quadrant of N98/E99, a circular hearth feature composed of thermally altered rock about 50 cm in diameter. Within and beneath this feature area, and extending for about 25 cm around it, is a mixed silty layer (unit 2) which was deposited on top of fine organics during construction of the hearth by scooping tephra from underlying Devil (unit 3) and Watana

(unit 4) tephras. Artifacts were encountered in the organic mat, fine organic layers above and below the mixed silt (unit 2), and from the mixed silt. No artifacts were found from the Devil tephra (unit 3), Watana tephra (unit 4), the Oshetna paleosol and tephra (units 5 and 6), or glacial drift (unit 7). All artifacts encountered are associated with the hearth feature directly below the organic mat, making up a single component in units 1a, 1b, and 2.

The occurrence of two white glass beads associated with the component indicates the site is attributable to the historic or protohistoric period. This style of bead dates from the late nineteenth century in Interior Alaska (Ketz 1983). A charcoal sample taken from the hearth feature yielded a modern date (Beta-10792).

Faunal material consists of 825 unburned, burned, heavily burned, and calcined bone fragments. Caribou is the only identified species, and is represented by bones of the forelimb, hindlimb, and extremities. None of the pieces have been modified to form a tool, although evidence of spiral fracture, and gnawing are visible on some fragments (e.g., UA84-62-20).

Evaluation:

TLM 221 is located on a small, well-drained kame with good access and visibility to a small wetland to the south. The site contains a single component, apparently historic or protohistoric in age, consisting of a hearth feature with abundant thermally altered rock and burned bone scattered about it. There is evidence for other activities at the site: lithic reduction, from the single basalt flake found, and some grinding activity, as represented by the ground thermally altered rock. These activities are poorly represented in the present collection, and little can be said regarding them. Owing to the small size of the site and limited diversity of materials, it is likely the occupation was of limited duration, perhaps representing the processing and consumption of a single animal.

The thermally altered rock hearth feature and historic trade beads are common features of late Athapaskan occupations in the area. Numerous other sites within the immediate vicinity of TLM 221 are possibly contemporaneous with this site, including TLM 104, TLM 215, TLM 220, TLM 222, and TLM 226 (in which an identical bead was found). TLM 221 is thus a small part of an apparently extensive occupational episode of the western Watana Creek area during late Athapaskan times. Observed site size based on the distribution of artifacts is 28 square meters (Table D.2).

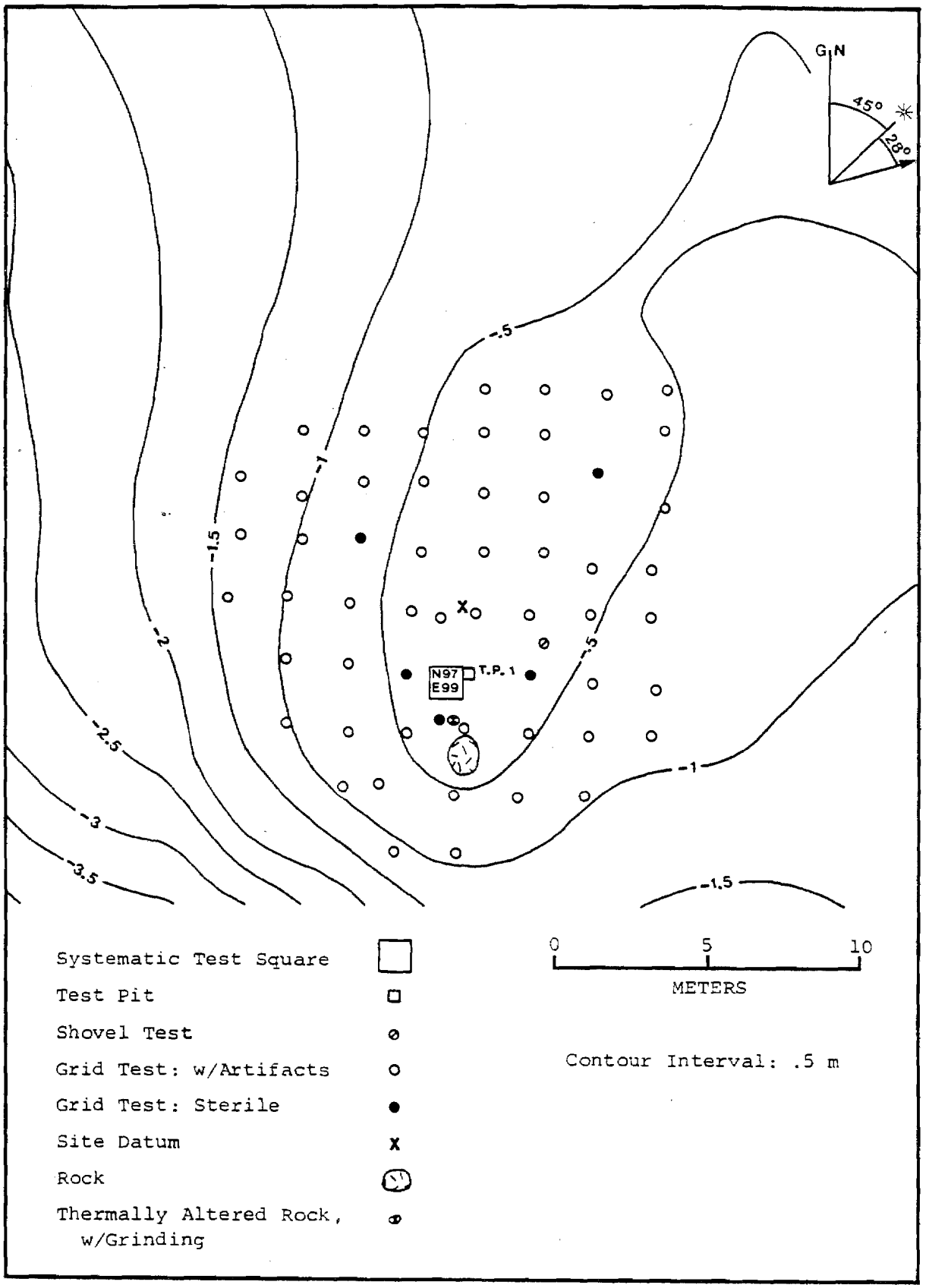


Figure D.284. Site Map, TLM 221

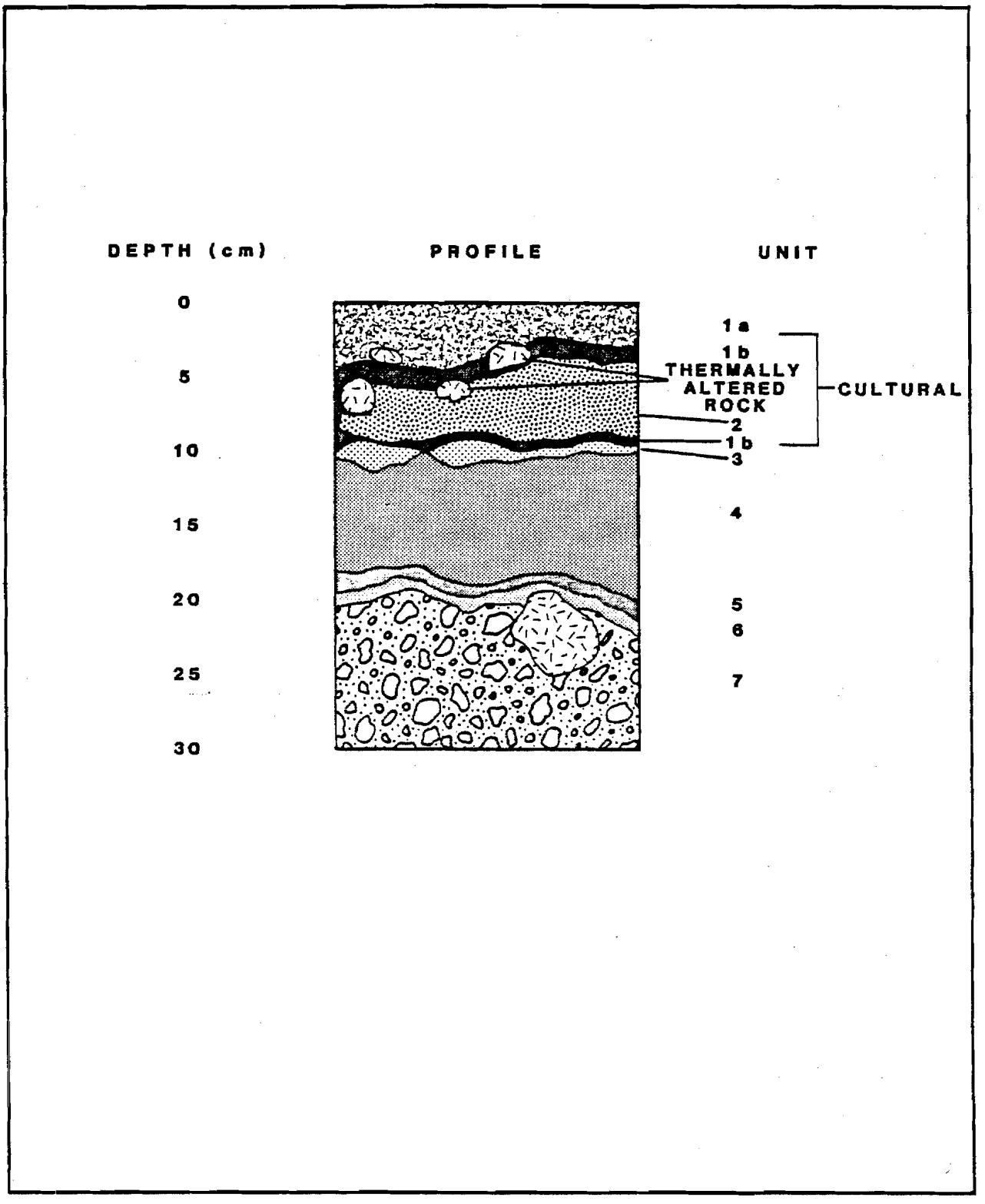


Figure D.285. Composite Profile, TLM 221

Table D.359.

Soil/Sediment Description for Composite Profile, TLM 221

Unit	Description
1a	Surface organic mat, composed of dense accumulation of roots and organic debris with some silt. Varies in thickness from 2-7 cm, with a mode of 3-4 cm. Fineness of organic debris and amount of silt increases with depth, resulting in a gradual through narrow band of transition with underlying unit 1b. Clear, wavy, level contact. Artifacts are encounted in this unit, most often protruding into it from 1a/1b contact or below.
1b	Humic rich silt; very dark grayish brown (10YR 3/2) to black (5YR 2.5/1). O2 horizon. Varies in thickness from 1-3 cm, usually 2 cm. Some areas contain charcoal flecks, especially near the hearth feature in NE quad. This unit is in places divided by inclusion of lens of unit 2 (cultural fill and hearth feature). The transition between 1b and 2 is gradual on top of unit 2 and abrupt at base of unit 2. Contact with unit 3 (Devil tephra) is abrupt and wavy. Artifacts encountered on upper contact and within this unit.

Table D.359. (Continued)

Unit	Description
2	Sandy silt with charcoal, thermally altered rock fragments and burned bone; brown (10YR 4/3) to dark yellowish brown (4/4). Occurs as a lens of fill within unit 1b, beneath north feature in NE quad and extending outward into SE, NW, and small part of SW quads. Varies in thickness from 1-5 cm. Thermally oxidized beneath hearth feature. Probably derived from Devil and Watana tephras as fill. Artifacts found in this unit, and the unit itself is an artifact of cultural deposition.
3	Extremely fine, well-sorted silt, with scant charcoal flecks; pinkish gray (7.5YR 7/2) to grayish brown (10YR 5/2). Devil tephra. Varies from less than 1-4 cm thick, usually 1-2 cm. Continuous throughout square except NE corner, where it has been scooped out for hearth feature. Abrupt wavy upper and lower contacts.
4	Well-sorted fine silt with areas of mottling and oxidation; strong brown (7.5 YR 5/6) to brownish yellow (10YR 6/6). Watana tephra. Varies from 3-13 cm thick, generally 6-8 cm. Abrupt to slightly diffuse contact with unit 3 (Devil tephra) and diffuse very wavy discontinuous contact with unit 5 or 6 (Oshetna paleosol and tephra).

Table D.359. (Continued)

Unit	Description
5	Sandy silt, with scant charcoal flecking; dark brown (10YR 3/2) to very dark grayish brown (3/3). Varies from 0-3 cm thick. Thin and discontinuous, often mixed with unit 6 (designated 5&6). Oshetna paleosol.
6	Fine silty sand, well sorted; light brownish gray (2.5Y 6/2). Oshetna tephra. Discontinuous, varying from 0-3 cm thick. Distinct wavy contacts with unit 4 (Watana tephra) and unit 7 (glacial drift), distinct or often mixed with unit 5 (Oshetna paleosol).
7	Oxidized poorly sorted silty sand with pebbles and occasional cobbles; strong brown (7.5YR 4/6). Glacial drift. Limit of excavation.

Table D.360.

Artifact Summary, TLM 221

Tools	
1	Ground thermally altered rock (UA84-62-14)
Lithic Material	
1	Basalt flake
215	Thermally altered rock fragments
216	
Faunal Material	
825	Burned and unburned bone fragments
Historic Remains	
2	Glass trade beads (UA84-62-18)

Table D.361.

Faunal Material by Stratigraphic Unit, TLM 221

Unit		Description
Surface	1	Long bone fragment, unburned, weathered, medium-large mammal
	1	Unidentifiable fragment, heavily burned, medium-large mammal
	3	Unidentifiable fragments, calcined, mammal
1 Organic mat	1	Probable femur shaft fragment, unburned, weathered, probable caribou (Rangifer tarandus)
	1	Radius shaft fragment, unburned, weathered, probable caribou (Rangifer tarandus)
	1	Distal metapodial fragment, burned, caribou (Rangifer tarandus)
	3	Long bone fragments, unburned, weathered, medium-large mammal
	2	Unidentifiable fragments, unburned, medium-large mammal
	44	Unidentifiable fragments, burned, medium-large mammal

Table D.361. (Continued)

Unit		Description
1a/1b Contact between organic mat and finely divided organics	1	Right tibia shaft fragment, unburned, weathered, gnaw marks, caribou (Rangifer tarandus)
	1	Proximal phalanx fragment, unburned, caribou (Rangifer tarandus)
	1	Long bone fragment, unburned, medium-large mammal
	1	Unidentifiable fragment, unburned, medium-large mammal
	1	Unidentifiable fragment, calcined, mammal
1b Within finely divided organics	1	Unidentifiable fragment, unburned, medium-large mammal
	3	Unidentifiable fragments, calcined, medium-large mammal
1, 1/4 Within organic mat and at contact between organic mat and Watana tephra	1	Possible metapodial fragment, heavily burned, probable caribou (Rangifer tarandus)
	45	Long bone and unidentifiable fragments, calcined and heavily burned, medium-large mammal
1/4 Contact between organic mat and Watana tephra	1	Distal metapodial fragment, calcined, caribou (Rangifer tarandus)
	1	Sesamoid, calcined, caribou (Rangifer tarandus)
	1	Distal fragment proximal or medial phalanx, calcined, caribou (Rangifer tarandus)

Table D.361. (Continued)

Unit		Description
	1	Medial phalanx fragment, burned, caribou (Rangifer tarandus)
	95	Long bone and unidentifiable fragments, burned, medium-large mammal
	103	Long bone and unidentifiable fragments, heavily burned, medium-large mammal
	47	Unidentifiable fragments, calcined, medium-large mammal
2 Sandy silt with charcoal (hearth feature	1	Probable distal tibia, unburned, immature, caribou (Rangifer tarandus)
	1	Proximal fragment proximal phalanx, burned, caribou (Rangifer tarandus)
	1	Proximal fragment distal phalanx, burned, caribou (Rangifer tarandus)
	1	Vestigial phalanx, unburned, caribou (Rangifer tarandus)
	1	Flat bone fragment, unburned, medium-large mammal
	22	Long bone and unidentifiable fragments, unburned, medium-large mammal
	9	Long bone and unidentifiable fragments, calcined, medium-large mammal
	185	Long bone and unidentifiable fragments, heavily burned, medium-large mammal
3 Devil tephra	2	Unidentifiable fragments, calcined, mammal
	1	Unidentifiable fragment, heavily burned, mammal

Table D.361. (Continued)

Unit		Description
Subsurface unknown	1	Possible radius fragment, heavily burned, probable caribou (Rangifer tarandus)
	1	Distal metapodial fragment (hindlimb), heavily burned, caribou (Rangifer tarandus)
	1	Vestigial phalanx fragment, calcined, caribou (Rangifer tarandus)
	2	Long bone fragments, unburned, medium-large mammal
	2	Flat bone fragments, heavily burned, medium-large mammal
	233	Long bone and unidentifiable fragments, heavily burned, medium-large mammal

Table D.362.

Artifact Summary by Stratigraphic Unit, TLM 221

Unit		Description
Surface	1	Ground thermally altered rock (UA84-62-14)
1a Organic mat	3	Thermally altered rock fragments
1a/1b Contact between organic mat and finely divided organics	1	Basalt flake
1b	2	White glass trade beads (UA84-62-18)
Finely divided organics	48	Thermally altered rock fragments
1 and 2 Organic mat and sandy silt with charcoal (hearth feature)	48	Thermally altered rock fragments
2 Sandy silt with charcoal (hearth feature)	116	Thermally altered rock fragments

AHRS Number TLM 222; Accession Number UA84-69

Area:	North-northeast of Watana Creek Mouth
Site Map:	Figure D.286
	Locus A, Figure D.287
	Locus B, Figure D.288
	Locus C, Figure D.289
	Locus D, Figure D.290
	Locus E, Figure D.291
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 222, composed of five loci (A-E), is situated on a complex set of kames west of Watana Creek, at an elevation of 587-600 asl (altimeter: 1927-1970 feet). These kames are at the eastern edge of the glaciolacustrine plain delineated by Watana Creek, about 91 m lower in elevation on the east and a creek, locally known as No Name Creek, on the west. Three lakes occur within a 400 m radius of TLM 222: a ca. 2 ha lake ca. 250 m north-northwest of locus D, a ca. 4 ha lake 300 m southwest of locus A, and a ca. 7 ha lake approximately 300 m to the southeast. This latter lake is unique in that it maintains both an inlet and outlet stream. Two streams join to form the inlet stream and originate on the plain to the west. One of these streams follow an east-west course for about 100 m in an incised stream valley ca. 15 m south of locus A. The other stream follows a general north-south course ca. 300 m west of the site then bends east to join the first stream ca. 250 m south of the site, ultimately discharging into the ca. 7 ha lake. The outlet stream, on the other hand, discharges into Watana Creek ca. 600 m east of TLM 222. Both clear water streams are easily accessible from the site. At least ten other sites are within a 500 m radius of TLM 222. The closest site is TLM 216 which is ca. 100 m north of locus D. The farthest site is TLM 215 located approximately 500 m north of

locus D. Other sites within the radius include TLM 184, TLM 220, TLM 221, TLM 223, TLM 224, TLM 225, TLM 226, and TLM 228.

Locus D is the farthest north. Loci C, B, A, and E are dispersed from northwest-southeast, south of locus D. Locus C is ca. 10 m higher in elevation than the other loci which are at approximately the same elevation. Loci A and B are located on the same terrace, with locus A being ca. 36 m east of locus B. Locus C is situated on a high kame ca. 100 m northeast of locus B. Locus D, on a small knoll, is ca. 100 m further northeast of locus C. Locus E is located on the southern edge of an isolated terrace ca. 80 m southwest of locus A. The general site map, Figure D.286, depicts the spatial relationship of these loci.

Loci A and B: Loci A and B are situated on a terrace which measures approximately 80 (east-west) x 30 m (north-south). Locus A is at an elevation of 588 m asl (altimeter: 1930 feet) and locus B is at an elevation of 587 m asl (altimeter: 1927 feet). East of the terrace upon which both loci rest, the terrain descends to a narrow ridge approximately 3 m lower in elevation ca. 60 m east of locus B. From this ridge the slope drops to Watana Creek situated ca. 700 m east. A view of the opposite side of the valley of the small stream discharging into the ca. 7 ha lake is available to the south. The 50 cm wide clear water stream is not visible from locus A but can be heard. Downcutting has lowered the stream bed to ca. 7 m below locus A. The stream gradient is quite steep, illustrated by the fact that the two streams which join in this valley begin at the same elevation as locus A. Views, except to the northeast, are obstructed by the spruce forest. Locus C is much clearer in view from locus B than from locus A.

Locus C: Locus C is situated on an elongated "Y"-shaped kame approximately 30 x 10 m, oriented east-west with the fork of the "Y" pointing west. This locus is at an elevation of 600 m asl (altimeter: 1970 feet). The terrain to the north and northeast is ca. 3 m lower in elevation. To the south ca. 100 m, just beyond locus B, the terrain is ca. 15 m lower in elevation. The higher position of the locus C landform offers a good vantage point. The glaciolacustrine plain is

visible to the northwest and west. TLM 184 and TLM 215 are in clear view ca. 500 m north. The view south is obstructed by deciduous forest. The eastern rim of Watana Creek is visible to the east.

Locus D: Locus D is situated on a small knoll 10 m west of the break-in-slope toward Watana Creek. This locus is at an elevation of 598 m asl (altimeter: 1963 feet). With the exception of the 7-8 degree slope to Watana Creek, the greatest change in elevation is to the west, where the terrain is ca. 1 m lower, ca. 70 m away. Views are partially obstructed in all directions by the spruce forest, particularly to the east and west. Despite this, the knoll east of TLM 216 is in view ca. 150 m north. To the southeast the north-facing slopes, south of the ca. 7 ha lake are in view.

Locus E: Locus E is situated on a southern edge of an isolated terrace, at an elevation of 588 m asl (altimeter: 1930 feet). The ravine separating locus A from locus E terminates ca. 15 m lower in elevation ca. 15 m northeast of the terrace edge. Where the stream bends southeast along a lesser gradient. Locus A is seen to the northwest but views in other directions are obstructed by the spruce forest. The absence of the forest would open a view east across the ca. 7 ha lake basin.

Plant vegetation is similar at all loci except for minor differences. Generally, the plants present at all loci include lowbush cranberry, wild rose, fireweed, lichens, sphagnum moss, Labrador tea, dwarf dogwood, black spruce, paper birch, sparse willow, blueberry, and dwarf birch. Locus A has abundant grasses across a thick vegetation mat with numerous spruce trees. Locus C and E are dominated by lichens and a thinner sphagnum mat. The south-facing slope of locus C is characterized by abundant paper birch. Balsam poplar are abundant on an east and southeast-facing slope 50 m from locus D.

Testing:

Cultural material from loci A, B, and E was recovered typically from the organic silt unit, although some material was recovered from the organic mat, above, and from the contact of the organic mat and the Devil tephra, below. Cultural material from locus C was recovered from the contact between the Devil and Watana tephras, and the oxidized and unoxidized portions of the Watana tephra. Cultural material from locus D was recovered from the Devil and Watana tephras and the contact between these units, as well as the contact between the organic silt and the Devil tephra.

Well over 150 identified caribou (Rangifer tarandus) bone fragments were collected from loci A, B, and C (Table D.363). They include all skeletal components of the animal, i.e., skull (cranial bones, antler, teeth), axial, forelimb, hindlimb, and extremity. The identified elements are primarily unburned, with a few exhibiting evidence of butchering (cut marks) and carnivore gnawing. A minimum of two individuals, plus a fetal caribou are represented by these remains. The fetal caribou was probably close to term (Hans-Peter Uerpmann, personal communication), and thus may indicate a late spring occupation of the site (see chapter 4.8 of the report for data on caribou annual cycles). Burned and calcined bone fragments attributable to medium-large mammals were also found scattered across loci A, B, D, and D.

Locus A: This locus consists of a large, steep-walled rectangular depression (feature 1), which is 1.6 (north-south) x 2.1 m (east-west) and about 50 cm deep. Two spruce trees grow within the depression. A berm, ca. 30 cm wide, surrounds the depression. Locus A was intensively inspected for artifacts on the surface and in hardened sediment clinging to fallen tree root systems. One thermally altered rock was encountered in a game trail on the surface, immediately south of the depression. A grid shovel testing program was implemented to assist in the location of subsurface cultural remains and in determining the site size. Fifty-eight grid shovel tests were placed around feature 1. Nine of

these contained cultural material consisting of burned and unburned bone fragments and thermally altered rock.

Locus B: Four fallen trees containing artifacts in their upturned root systems and a circular depression (feature 2) were initially discovered at locus B. The depression is ca. 1 m in diameter and ca. 10 cm deep. Feature 2 is about 36 m east of feature 1 in locus A. The four trees are between 50 and 80 m east of feature 1, to the southeast and east of feature 2. These trees point south, and one of them (tree fall 2) has branches growing on the underside. Surface collecting from tree fall 1 yielded 28 unburned bone fragments and four thermally altered rocks. Tree fall 2 produced 17 unburned bone fragments, while tree fall 3 yielded one unburned bone fragment and 20 heavily burned bone fragments. All bone was from the vegetation mat. A small possible depression is located adjacent to tree fall 1. Tree fall 4, on the eastern edge of the locus, produced no surface artifacts but contained an anomalous gravel unit below the vegetation mat. A grid shovel testing program was implemented to assist in determining the site size. Two hundred six grid shovel tests were placed around the fallen trees and feature 2. Forty-eight of these were positive, revealing an extensive deposit of burned and unburned teeth, bone, and antler (1,318 pieces), thermally altered rock, and charcoal. One of the antler fragments (UA84-69-193) was modified and apparently represents a tool fragment. A single turquoise glass trade seed bead (UA84-69-156; Figure D.394a) was encountered in grid shovel test N146/E150, and a possible hearth feature was uncovered in grid shovel test N146/E142. All artifactual material from the grid shovel testing program was recovered from the finely sorted organic silt horizon below the present-day vegetation mat.

Locus C: Fourteen survey shovel tests were initially excavated; calcined bone (317 pieces) was recognized in shovel test 1. Shovel test 1 was expanded into a 40 x 40 cm test pit (test pit 1) and produced calcined bone fragments at the contact between the Devil and oxidized Watana tephras and within the Watana tephra. A grid shovel testing program was implemented to assist in determining site size. Sixteen

additional grid shovel tests placed around test pit 1 produced no other cultural material.

Locus D: The initial shovel test at locus D (shovel test 2) yielded 124 calcined bone fragments in a dark reddish brown silt which is above the Devil tephra and a piece of hammered copper of unknown provenience (UA84-69-46; Figure D.394b). A subsequent 40 x 40 cm test pit (test pit 2) superimposed over shovel test 2 produced 408 calcined bone fragments: 13 from the contact between the organic mat and the grayish brown silt, 86 from within the grayish brown silt, 74 from the contact between the grayish brown silt and the dark reddish brown silt, and 235 from within the dark reddish brown silt. A grid shovel testing program was implemented to assist in determining the site size. Thirty-six grid shovel tests were excavated around test pit 1, three of which were positive. A single chert flake was located in N248/E270, and very small decomposing calcined bone fragments were noted (but not collected) from N248/E266 and N244/E274.

Locus E: Locus E consists of a circular depression ca. 80 cm in diameter (feature 3). The rim of the depression was shovel tested revealing a truncation of the Devil tephra. An anomalous gravel layer was found between the present-day vegetation mat and Devil tephra in a shovel test immediately southwest of the depression rim. Three additional survey shovel tests proved sterile. A grid shovel testing program was implemented to assist in locating subsurface cultural remains and to assist in determining the site size. Sixteen shovel tests were excavated around feature 3 but all were sterile.

Observed size for locus A based on the distribution of artifacts is 87 square meters. Observed size for locus B based on the distribution of artifacts is 531 square meters. Observed size for locus C based on the distribution of artifacts is 4 square meters. Observed size for locus D based on the distribution of artifacts is 36 square meters. Observed size for locus E based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.363.

Artifact Summary, TLM 222

Provenience		Description
Lithic Material		
Surface:		
Locus A		
N150/E112	1	Thermally altered rock
Subsurface:		
Locus A	17	Thermally altered rocks (uncollected)
Locus B	26	Thermally altered rocks (uncollected)
	1	Cobble fragment (uncollected)
Locus D	1	Chert flake
Faunal Material		
Surface:		
Locus A	1	Probable rib fragment, unburned, caribou (Rangifer tarandus)
	1	Probable right femur fragment, unburned, caribou (Rangifer tarandus)

Table D.363. (Continued)

Provenience		Description
Locus B		
Tree fall 1	1	Lumbar vertebra fragment (centrum), unburned, caribou (Rangifer tarandus)
	2	Rib fragments, unburned, probable caribou (Rangifer tarandus)
	1	Probable proximal radius fragment, unburned, probable caribou (Rangifer tarandus)
	1	Right femoral head (epiphysis), unburned, caribou (Rangifer tarandus)
	1	Probable right femoral shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Patella fragment, unburned, caribou (Rangifer tarandus)
	1	Right distal calcaneus fragment, unburned, caribou (Rangifer tarandus)
	1	Right astragalus, unburned, caribou (Rangifer tarandus)
	1	Right naviculo-cuboid, unburned, caribou (Rangifer tarandus)
	2	Metapodial shaft fragments, unburned, caribou (Rangifer tarandus)
	15	Long bone and unidentifiable fragments, unburned, medium-large mammal
	1	Unidentifiable fragment, heavily burned, medium-large mammal

Table D.363. (Continued)

Provenience		Description
Tree fall 2	1	Right mandible fragment (occipital condyle), unburned, caribou (Rangifer tarandus)
	2	Rib fragments, unburned, probable caribou (Rangifer tarandus)
	1	Left radius/ulna shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Unciform, unburned, caribou (Rangifer tarandus)
	1	Metapodial (forelimb) shaft and proximal fragment, unburned, warped, caribou (Rangifer tarandus)
	1	Metapodial (hindlimb) shaft and distal fragment, unburned, weathered, caribou (Rangifer tarandus)
	1	Metapodial (hindlimb) shaft fragment, unburned, caribou (Rangifer tarandus)
	3	Rib fragments, unburned, medium-large mammal
	1	Vertebra fragment, unburned, medium-large mammal
	1	Phalanx fragment, unburned, medium-large mammal
	1	Possible long bone fragment, unburned, medium-large mammal
	2	Flat bone fragments, unburned, medium-large mammal
	1	Unidentifiable fragment, unburned, weathered, medium-large mammal

Table D.363. (Continued)

Provenience		Description
Tree fall 3	1	Femur shaft fragment, unburned, caribou (Rangifer tarandus)
	2	Left proximal radius fragments, heavily burned, caribou (Rangifer tarandus)
	1	Proximal fragment metapodial (forelimb), heavily burned, caribou (Rangifer tarandus)
	1	Thoracic vertebra fragment (spinous process), heavily burned, medium-large mammal
	16	Long bone and unidentifiable fragments, heavily burned, medium-large mammal
Subsurface:		
Locus A	1	Right mandibular fragment (condyle), unburned, caribou (Rangifer tarandus)
	1	Left mandibular third molar fragment, unburned, caribou (Rangifer tarandus)
	1	Left mandibular fragment (ascending ramus), unburned, caribou (Rangifer tarandus)
	1	Right femur shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Right distal tibia fragment, unburned, caribou (Rangifer tarandus)
	1	Distal metapodial (forelimb) fragment, unburned, caribou (Rangifer tarandus)

Table D.363. (Continued)

Provenience		Description
	1	Possible proximal metapodial (forelimb) fragment, unburned, caribou (Rangifer tarandus)
	4	Long bone fragments, unburned, medium-large mammal
	8	Flat bone fragments, unburned, medium-large mammal
	21	Unidentifiable fragments, burned and calcined, mammal
Locus B	1	Modified antler fragment, (UA84-69-193) calcined, probable caribou (Rangifer tarandus)
	5	Antler fragments, unburned, gnaw marks, caribou (Rangifer tarandus)
	1	Cranial fragment with pedicle, unburned, caribou (Rangifer tarandus)
	1	Right mandibular first or second molar, unburned, caribou (Rangifer tarandus)
	4	Premolar fragments, unburned, caribou (Rangifer tarandus)
	1	Left mandibular molar, unburned, probable caribou (Rangifer tarandus)
	3	Mandibular fragments, unburned, caribou (Rangifer tarandus)
	3	Atlas fragments, unburned, caribou (Rangifer tarandus)
	1	Axis fragment, unburned, caribou (Rangifer tarandus)

Table D.363. (Continued)

Provenience	Description
	4 Cervical vertebra fragments, unburned, caribou (Rangifer tarandus)
	2 Thoracic vertebra fragments, unburned, caribou (Rangifer tarandus)
	3 Thoracic vertebra fragments, unburned, gnaw marks, caribou (Rangifer tarandus)
	1 Thoracic vertebra (spinous process), unburned, caribou (Rangifer tarandus)
	1 Thoracic vertebra fragment (epiphysis), unburned, caribou (Rangifer tarandus)
	1 Sacral vertebra fragment, unburned caribou (Rangifer tarandus)
	2 Rib fragments, unburned, caribou (Rangifer tarandus)
	12 Rib fragments, unburned, probable caribou (Rangifer tarandus)
	1 Right scapula fragment, unburned, gnaw marks, probably caribou (Rangifer tarandus)
	5 Right scapula fragments, unburned, caribou (Rangifer tarandus)
	2 Scapula fragments, unburned, probable caribou (Rangifer tarandus)
	1 Right humerus shaft fragment, unburned, caribou (Rangifer tarandus)
	1 Left humerus shaft fragment, unburned, caribou (Rangifer tarandus)
	5 Right proximal radius fragments, burned, caribou (Rangifer tarandus)

Table D.363. (Continued)

Provenience		Description
	2	Right radius shaft fragments, unburned caribou (Rangifer tarandus)
	1	Right distal radius fragment, unburned, caribou (Rangifer tarandus)
	1	Right distal radius fragment, unburned, gnaw marks, caribou (Rangifer tarandus)
	1	Right distal radius fragment, unburned, immature, caribou (Rangifer tarandus)
	2	Right radius fragments (epiphyses), unburned, caribou (Rangifer tarandus)
	1	Left proximal radius fragment, unburned, caribou (Rangifer tarandus)
	1	Possible radius shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Right proximal ulna fragment, unburned, caribou (Rangifer tarandus)
	1	Right ulna fragment, unburned, caribou (Rangifer tarandus)
	1	Distal radius/ulna fragment, unburned, caribou (Rangifer tarandus)
	1	Right innominate fragment, unburned, caribou (Rangifer tarandus)
	1	Innominate fragment, unburned, gnaw marks and cut marks, caribou (Rangifer tarandus)
	1	Probable femur shaft, unburned, fetal caribou (Rangifer tarandus)
	1	Possible left proximal tibia fragment, unburned, probably caribou (Rangifer tarandus)

Table D.363. (Continued)

Provenience		Description
	2	Right tibia shaft fragments, unburned, caribou (Rangifer tarandus)
	6	Left tibia shaft fragments, unburned, caribou (Rangifer tarandus)
	1	Tibia shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Right distal tibia fragment, unburned, caribou (Rangifer tarandus)
	1	Scaphoid, unburned, caribou (Rangifer tarandus)
	2	Lunates, unburned, caribou (Rangifer tarandus)
	4	Cuneiforms, unburned, caribou (Rangifer tarandus)
	2	Cuneiform, burned, caribou (Rangifer tarandus)
	1	Magnum, unburned, caribou (Rangifer tarandus)
	2	Unciforms, unburned, caribou (Rangifer tarandus)
	1	Left calcaneus, unburned, caribou (Rangifer tarandus)
	1	Right astragalus, unburned, caribou (Rangifer tarandus)
	1	Left astragalus, unburned, caribou (Rangifer tarandus)
	1	Left naviculo-cuboid, unburned, caribou (Rangifer tarandus)

Table D.363. (Continued)

Provenience		Description
	1	Left naviculo-cuboid fragment, unburned, caribou (Rangifer tarandus)
	1	Proximal metapodial (forelimb) fragment, unburned, caribou (Rangifer tarandus)
	3	Distal metapodial (forelimb) fragments, unburned, 1 with gnaw marks, caribou (Rangifer tarandus)
	1	Proximal metapodial (hindlimb) fragment, unburned, caribou (Rangifer tarandus)
	2	Distal metapodial (hindlimb) fragments, unburned, caribou (Rangifer tarandus)
	5	Metapodial (hindlimb) fragments, unburned, fetal caribou (Rangifer tarandus)
	5	Metapodial (hindlimb) shaft fragments, unburned, caribou (Rangifer tarandus)
	1	Metapodial (hindlimb) shaft fragment, burned, caribou (Rangifer tarandus)
	5	Metapodial shaft fragments, unburned, caribou (Rangifer tarandus)
	1	Proximal metapodial fragment, unburned, caribou (Rangifer tarandus)
	1	Proximal metapodial fragment, unburned, gnaw mark, caribou (Rangifer tarandus)
	2	Distal metapodial fragments, unburned, caribou (Rangifer tarandus)
	6	Possible metapodial shaft fragments, unburned, caribou (Rangifer tarandus)
	4	Sesamoids, unburned, caribou (Rangifer tarandus)

Table D.363. (Continued)

Provenience		Description
	1	Proximal phalanx, unburned, gnaw marks, caribou (Rangifer tarandus)
	3	Proximal phalanges, unburned, caribou (Rangifer tarandus)
	1	Proximal phalanx fragment, unburned, caribou (Rangifer tarandus)
	1	Proximal phalanx, calcined, caribou (Rangifer tarandus)
	1	Proximal fragment proximal phalanx, unburned, caribou (Rangifer tarandus)
	3	Distal fragments proximal phalanx, unburned, caribou (Rangifer tarandus)
	1	Medial phalanx, unburned, gnaw marks, caribou (Rangifer tarandus)
	1	Medial phalanx, unburned, caribou (Rangifer tarandus)
	2	Proximal fragments medial phalanx, unburned, caribou (Rangifer tarandus)
	1	Possible medial phalanx fragment, unburned, possible caribou (Rangifer tarandus)
	1	Distal phalanx, unburned, probable caribou (Rangifer tarandus)
	1	Tooth (enamel) fragment, unburned, artiodactyl
	7	Probable mandibular fragment, unburned, large mammal
	86	Cranial fragments, unburned, medium-large mammal

Table D.363. (Continued)

Unit		Description
	1	Epiphysis fragments, burned, medium-large mammal
	1	Thoracic vertebra fragment (spinous process), unburned, probable cut mark, large mammal
	1	Vertebra fragment, unburned, gnaw marks, large mammal
	5	Rib fragments, unburned, medium-large mammal
	1	Probable rib fragment, unburned, medium-large mammal
	1	Long bone shaft fragment, unburned, gnaw marks, medium-large mammal
	17	Long bone shaft fragments, unburned, medium-large mammal
	3	Long bone and unidentifiable fragments, unburned, gnaw marks, medium-large mammal
	564	Long bone, flat bone, and unidentifiable fragments, unburned, medium-large mammal
	407	Long bone, flat bone, and unidentifiable fragments, burned and calcined, medium-large mammal
Locus C	1	Possible distal metapodial fragment, calcined, possible caribou (Rangifer tarandus)
	316	Long bone, flat bone, and unidentifiable fragments, calcined, medium-large mammal

Table D.363. (Continued)

Unit		Description
Locus D	532	Cranial, long bone, and unidentifiable fragments, calcined, medium-large mammal
Historic Remains		
Subsurface:		
Locus B	1	Glass trade bead (UA84-69-156)
Other		
Subsurface:		
Locus D	1	Native copper fragment (UA84-69-40)

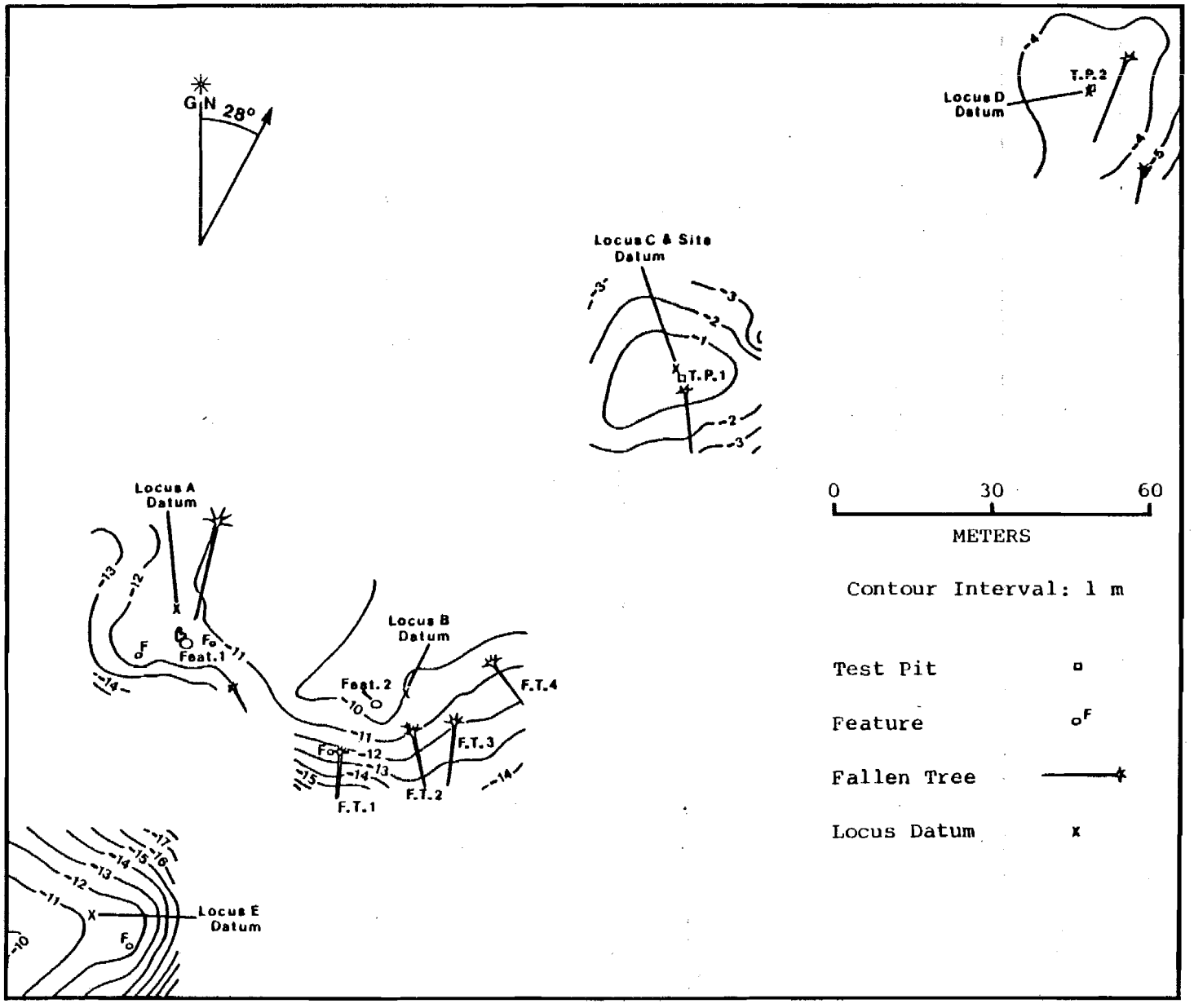


Figure D.286. Site Map, TLM 222

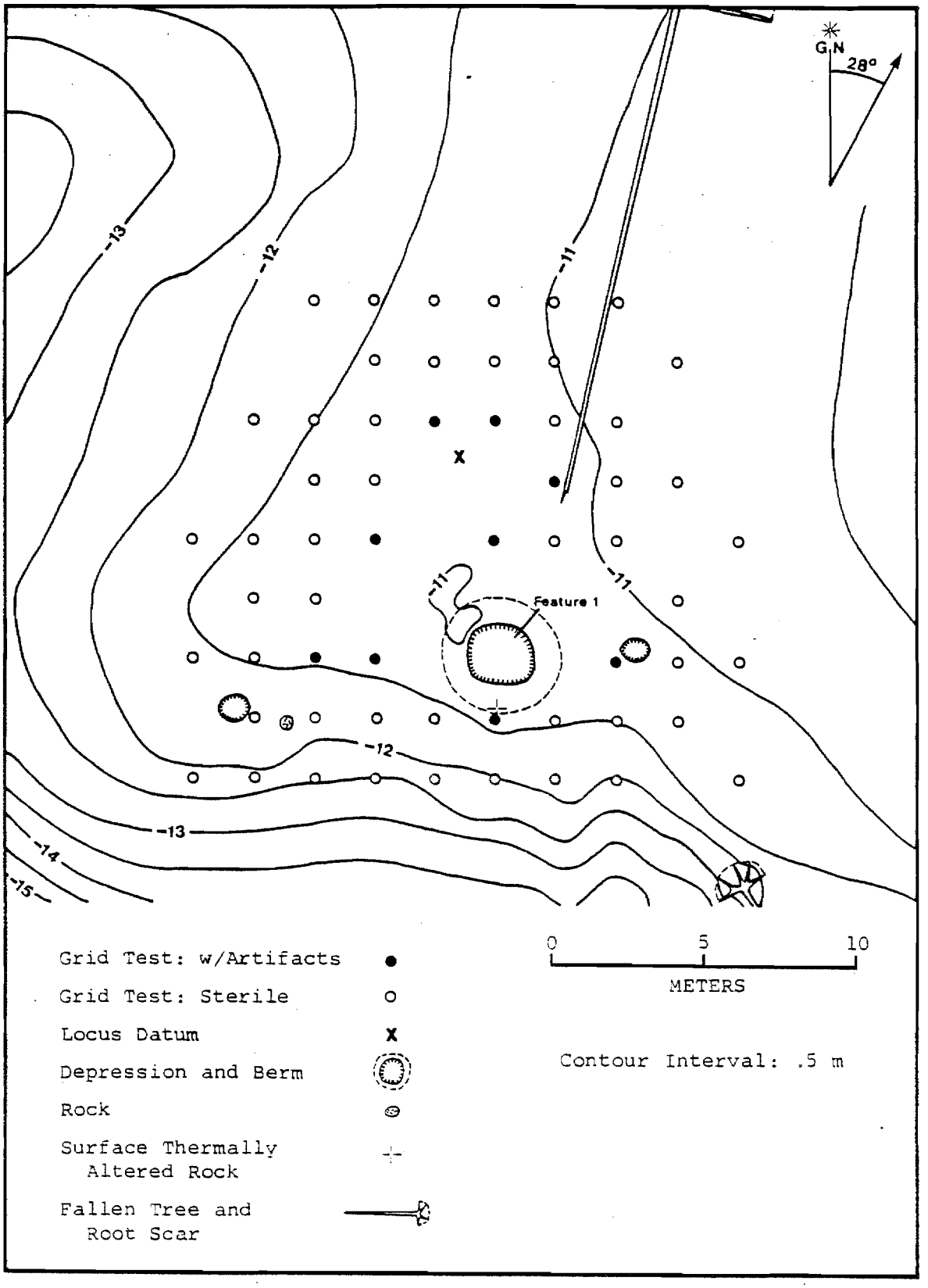


Figure D.287. Site Map, TLM 222 Locus A

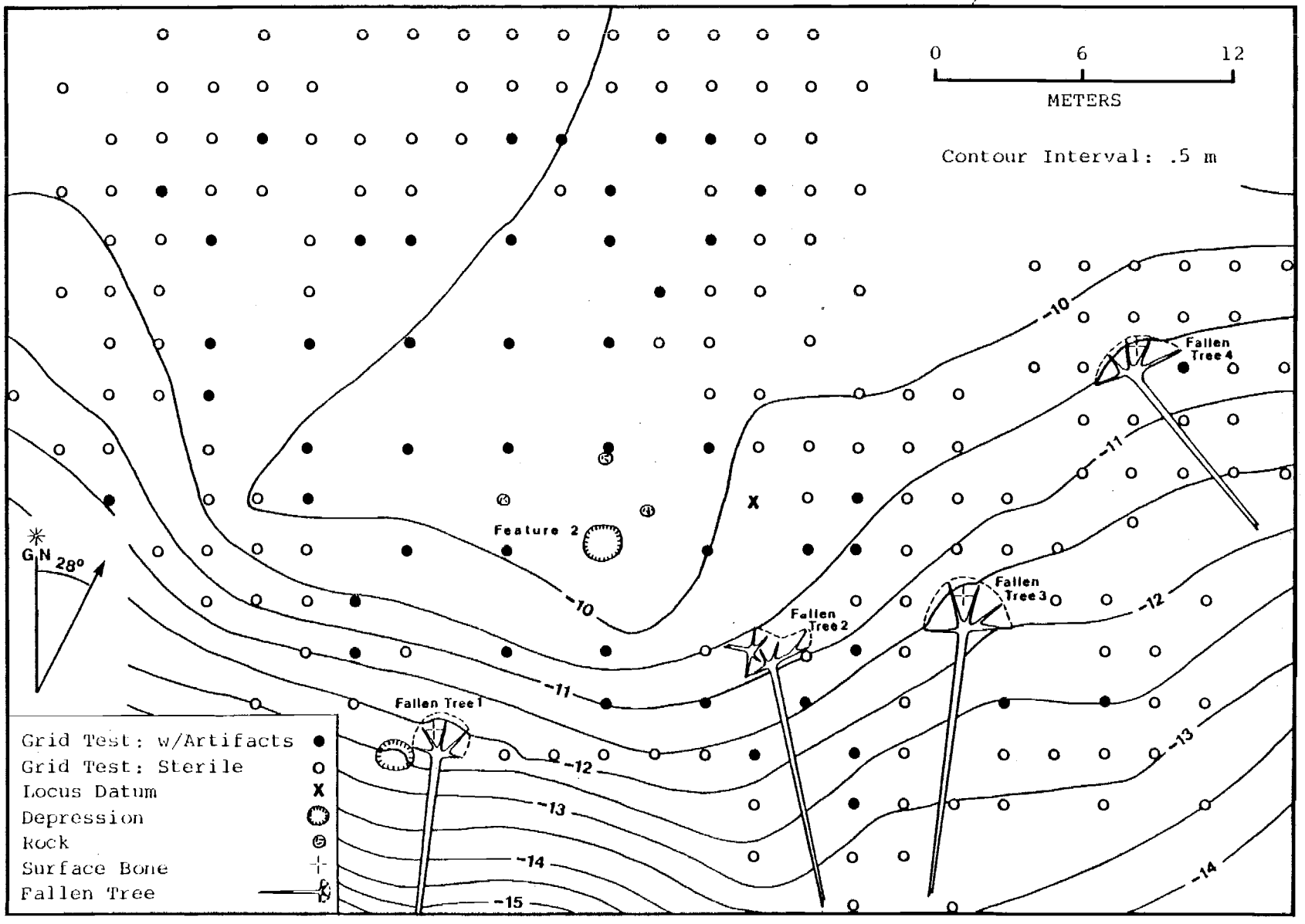


Figure D.288. Site Map, TLM 222 Locus B

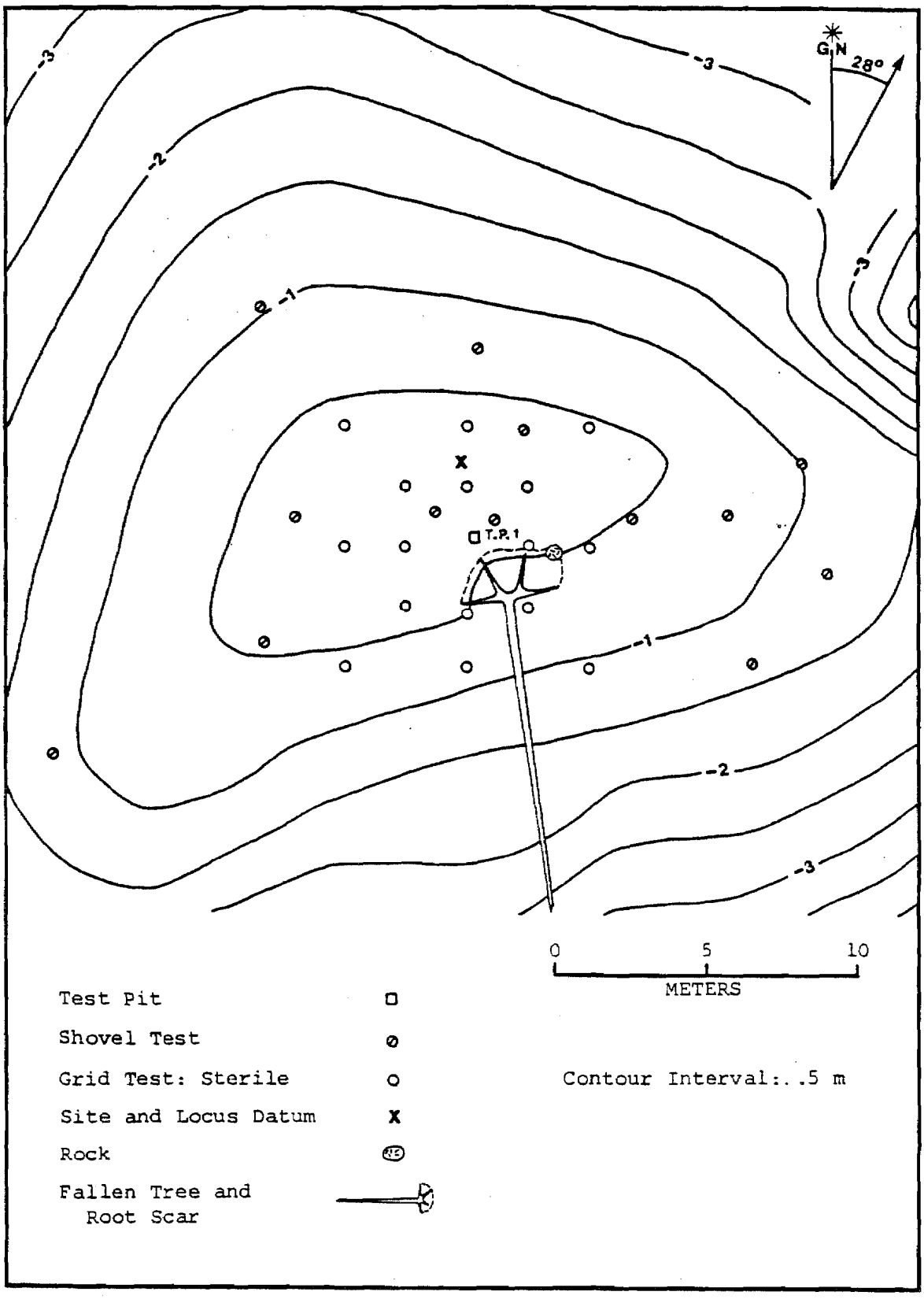


Figure D.289. Site Map, TLM 222 Locus C

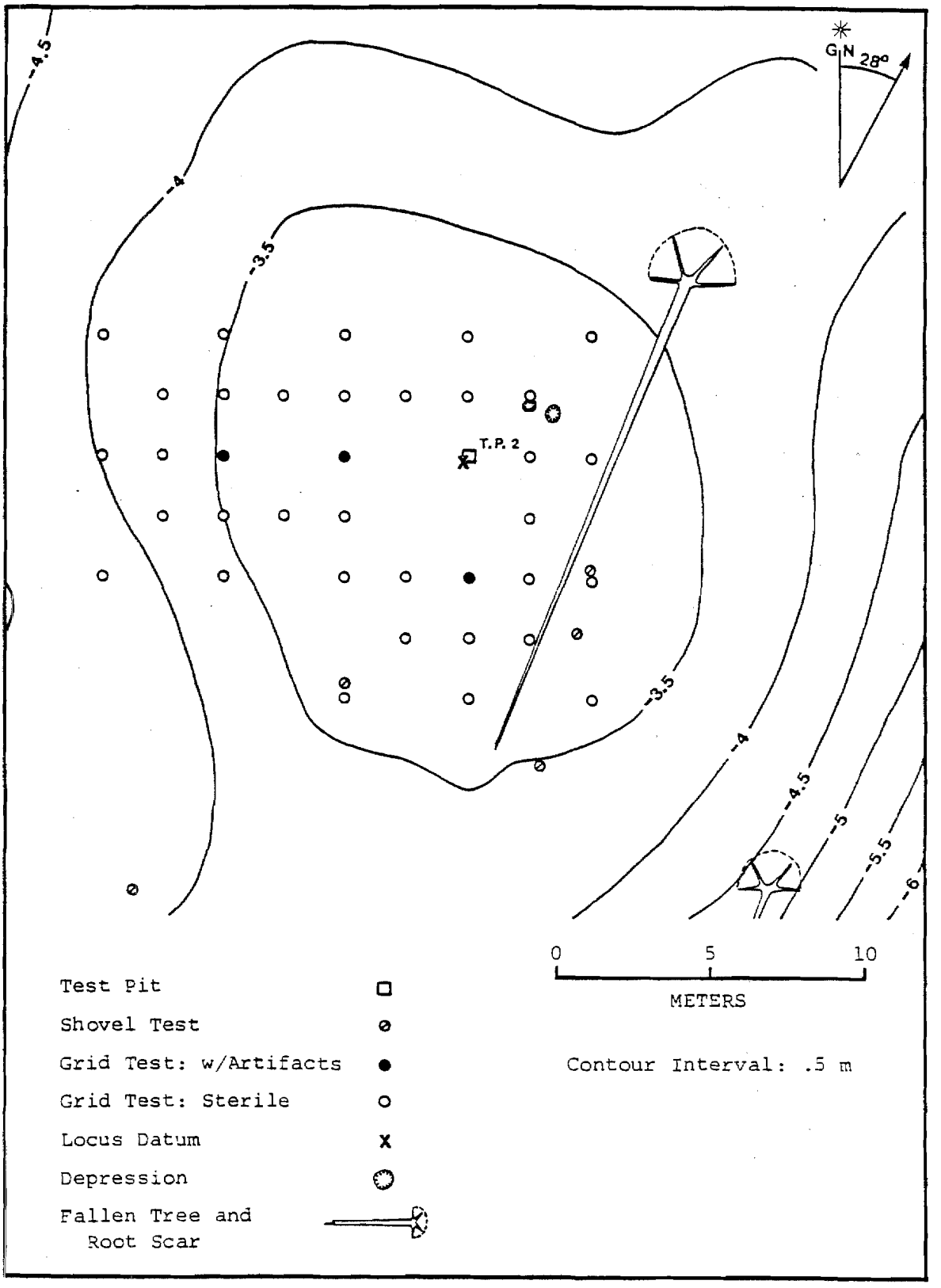


Figure D.290. Site Map, TLM 222 Locus D

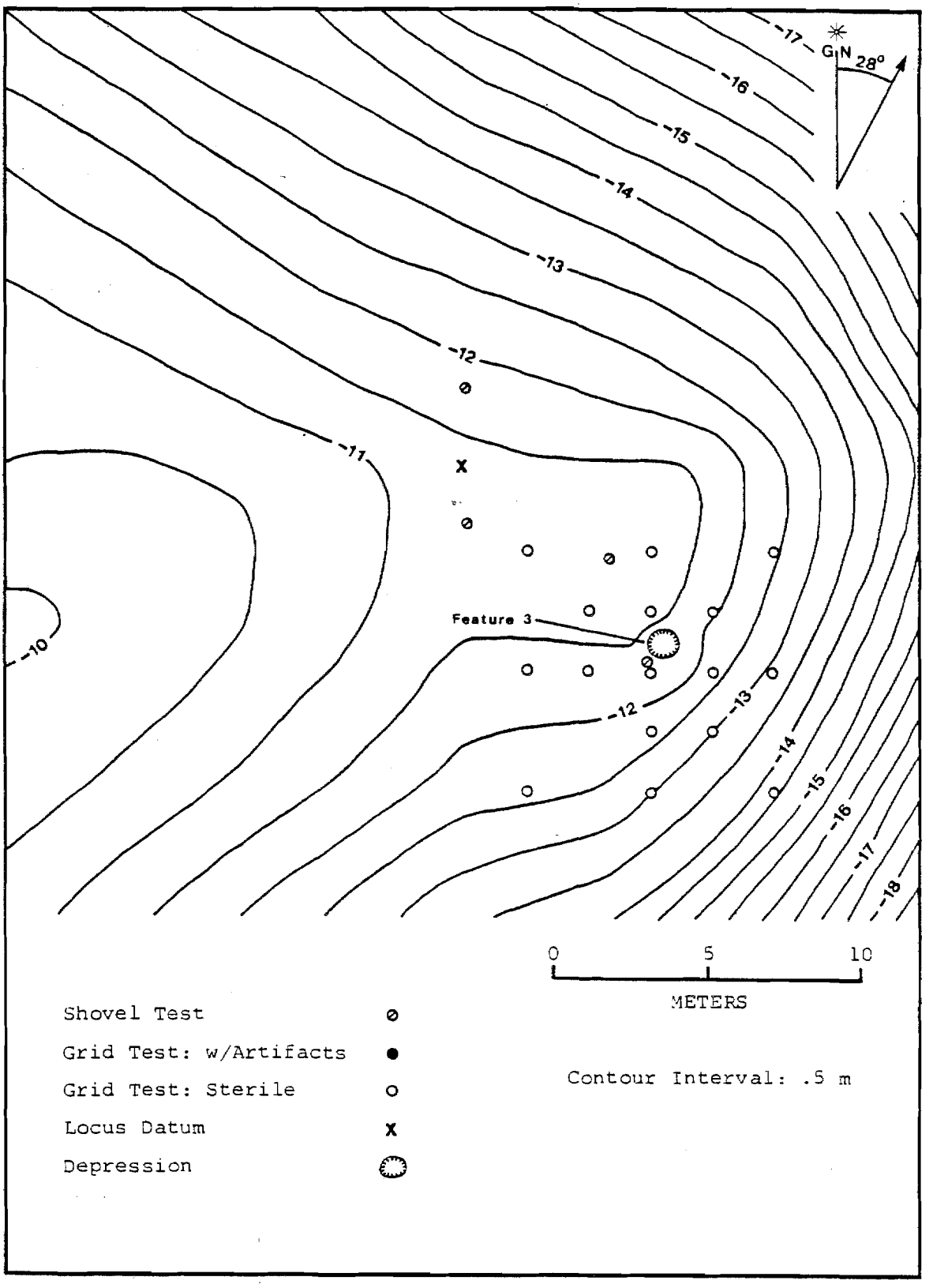


Figure D.291. Site Map, TLM 222 Locus E

AHRS Number TLM 223; Accession Number UA84-70

Area:	North of Watana Creek Mouth
Site Map:	Figure D.292
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 223 is situated on a discrete, relatively flat-topped, elongate knoll at an elevation of 593 m asl (altimeter: 1947 feet), approximately 2 m higher than the surrounding terrain. The northwest-southeast trending knoll is ca. 48 x 15 m. Two clear water streams are situated near the site. One of the streams is ca. 150 m to the east and the other stream is situated ca. 200 m to the west of the site, both originate on the glaciolacustrine plain to the north. Four distinct lakes occur within a ca. 700 m radius of TLM 223. The largest lake is a ca. 7 ha lake ca. 700 m east-southeast of the site, a ca. 4 ha lake is located ca. 400 m south-southeast of the site, a ca. 3 ha lake occurs about 700 m to the south-southeast, and the smallest lake, 2 ha, is situated ca. 500 m to the east-northeast. The prominent knoll where TLM 224 is located is in view ca. 150 m south-southeast of TLM 223. The low-lying area between these two sites is characterized by ca. 50 cm high tussocks and hummocks which are interspersed by frost heave scars. These two knolls offer high vantage points. The site has a view of the tussock drainage to the north and northwest but views in other directions are obstructed by spruce forest. Vegetation at the site consists of a cluster of black spruce with patches of sphagnum moss ca. 10-20 cm thick at their base, dwarf birch, willow, blueberry, lowbush cranberry, Labrador tea, and lichens. Surrounding vegetation is predominantly composed of black spruce with dwarfed spruce north and northwest of the site. Patches of tall grass are common in the surrounding boggy terrain. Wild rose and alpine azalea are present on the extreme southwestern end of the knoll.

Testing:

One rhyolite flake was recovered from the surface of a shovel test that was placed at the south end of a 70 x 30 cm rectangular depression. A 40 x 40 cm test pit (test pit 1) was placed over the northern end of the depression as there was a large boulder in the shovel test. Cultural material was collected from three stratigraphic positions: the contact between the finely sorted organic silt and the Devil tephra, the oxidized Watana tephra, and the Oshetna tephra. Calcined bone, chert flakes, and rhyolite flakes were recovered from both the oxidized Watana tephra and the Oshetna tephra (Table D.364). Abundant charcoal was collected in a mixed Devil tephra and a greasy organic-charcoal unit.

A grid shovel testing program was undertaken to assist in determining the site size and the distribution of cultural material. Forty-one grid shovel tests were excavated during this program. Five of these shovel tests produced 25 chert flakes, 1 chert biface fragment (UA84-70-14), and 71 calcined bone fragments. Two chert flakes were recovered from the Watana tephra, and the remaining material was found in the paleosol between the Watana and Oshetna tephras. Thirteen survey shovel tests placed on the site failed to produce additional cultural materials. Observed site size based on the distribution of artifacts is 40 square meters (Table D.2).

Table D.364.

Artifact Summary, TLM 223

Provenience		Description
Lithic Material		
Surface:	1	Rhyolite flake
Subsurface:		
Test pit 1	3	Chert flakes
	3	Rhyolite flakes
Shovel test 2 N94/E102	1	Chert flake
Shovel test 4	18	Chert flakes
N96/E100	1	Chert biface fragment (UA84-70-14)
Shovel test 5 N98/E98	3	Chert flakes
Shovel test 6 N98/E102	3	Chert flakes

Table D.364. (Continued)

Provenience		Description
Faunal Material		
Subsurface:		
Test pit 1	4	Unidentifiable fragments, calcined, medium-large mammal
	2	Unidentifiable fragments, calcined, mammal
Shovel test 2 N94/E102	6	Unidentifiable fragments, calcined, mammal
Shovel test 6 N98/E102	65	Unidentifiable fragments, calcined, medium-large mammal

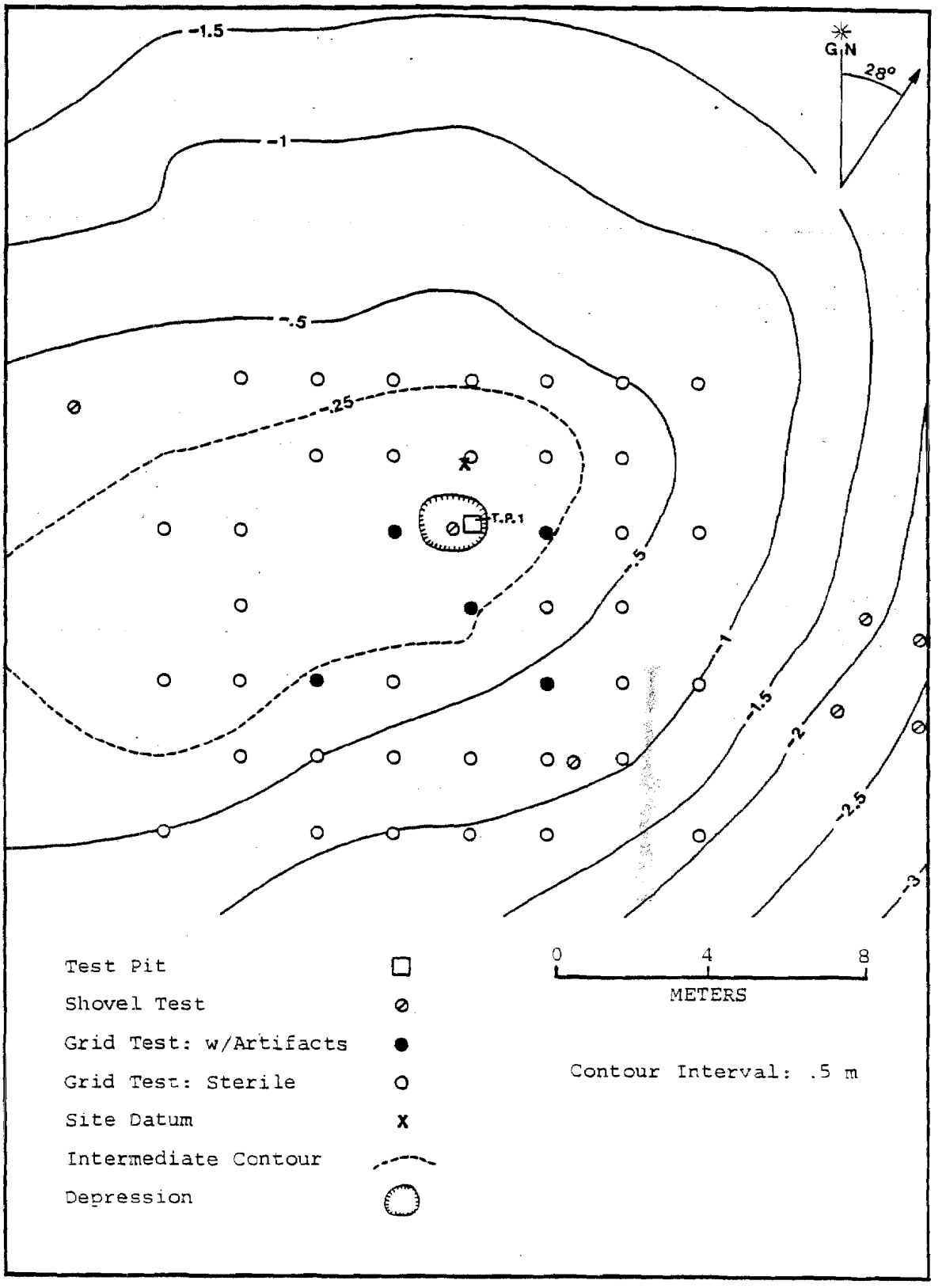


Figure D.292. Site Map, TLM 223

AHRS Number TLM 224; Accession Number UA84-71

Area:	North of Watana Creek Mouth
Site Map:	Figure D.293
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site is situated on the northeast end of an elongate flat-topped knoll at an elevation of 599 m asl (altimeter: 1966 feet). The discrete knoll measures 70 (northeast-southwest) x 20 m (northwest-southeast) and is ca. 9 m higher than the surrounding terrain. The northeast end of the knoll slopes gently ca. 2 degrees down to a lower terrace. The relative position of the site on the knoll is ca. 5 m southwest of the major slope-break of 15 degrees and 10 m northeast of the knoll crest. A ca. 50 m wide, gently undulating terrace lies ca. 6 m lower in elevation beyond the northeastern end of the knoll, as well as along the southeastern perimeter. This terrace provides easy access to a ca. 4 ha lake southeast of the site. An active stream runs toward the lake due east of the site, but diverts east discharging into the ca. 7 ha lake about 400 m east-southeast of the site, near TLM 228. Open views are provided to the west and northwest where a south-trending, boggy drainage is visible approximately 100-300 m distant. To the north-northeast TLM 223 is visible situated on another elongate knoll ca. 150 m away, oriented parallel to the knoll upon which TLM 224 is situated, 6 m lower in elevation. The view to the east consists of the lower terrace, the unnamed creek, and the valley of Watana Creek. Looking southeast through the deciduous forest the high ridges and knolls on the eastern and southern borders of the lake basins are visible 400-500 m distant. Due south the Susitna River valley rim is in clear view. Vegetation at the site includes lichens, lowbush cranberry, Labrador tea, crowberry, wild rose, dwarf birch, paper birch, white spruce, and sparse tufts of grasses. Also present is a low heath ground cover with ample blueberry

and sparse willow. The terrace below is relatively dry supporting paper birch stands and sphagnum moss understory with abundant dwarf birch. Paper birch are more numerous along the southeastern-facing slope of the large knoll.

Testing:

One rhyolite flake, stratigraphically placed within the vegetation mat was found in a shovel test. A 40 x 40 cm test pit (test pit 1) was superimposed over the positive shovel test. No additional artifacts were recovered. Thirteen additional survey shovel tests failed to produce any artifactual remains (Table D.365). Two small depressions were located. One is rectangular, ca. 80 x 30 cm, located ca. 44 m south-southwest of test pit 1, and the second round depression is located ca. 3.8 m southwest of test pit 1. Intensive inspection of both depressions did not reveal any convincing cultural association.

A grid shovel testing program was undertaken to assist in determining the site size and the distribution of cultural remains. Twenty-five grid shovel tests were placed around test pit 1. One chert flake was recovered from the Devil tephra of shovel test 2, northwest of test pit 1. Observed site size based on the distribution of artifacts is 16 square meters (Table D.2).

Table D.365.

Artifact Summary, TLM 224

Provenience		Description
Lithic Material		
Subsurface:		
Shovel test 1	1	Rhyolite flake
Shovel test 2	1	Chert flake

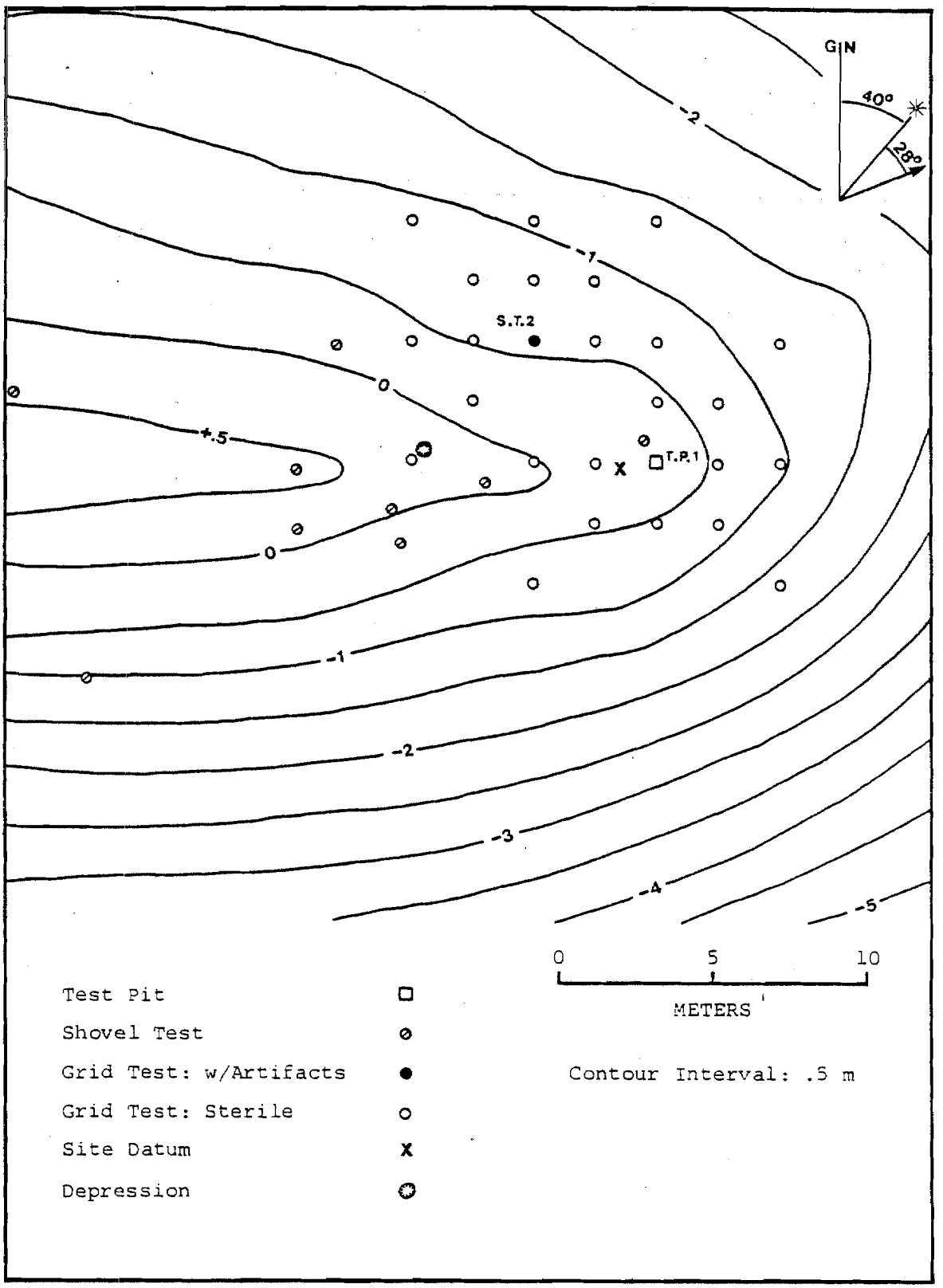


Figure D.293. Site Map, TLM 224

AHRS Number TLM 225; Accession Number UA84-67

Area:	North-northeast of Watana Creek Mouth
Site Map:	Figure D.294
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 225 is situated on an elongated kame on the west side of Watana Creek, at an elevation of 596 m asl (altimeter: 1956 feet). The north-south trending kame is ca. 75 x 30 m with the site located in the north-central portion. The top of the kame rises slightly (ca. 50 cm) 35 m to the south and descends approximately 1 m to the east and west. To the south, the kame intersects an east-west trending ridge. To the east, the terrain descends to Watana Creek, where a ca. 4 km stretch of the creek and its eastern valley wall can be seen. The lower boggy terrain to the north and west drains into Watana Creek. Trees obscure the views beyond the immediate vicinity of the site except to the east. Three lakes are located within a 500 m radius of the site: a ca. 4 ha lake and a ca. 7 ha lake to the south and a ca. 1 ha lake to the west-southwest. The entire kame is well drained, and the surface has a continuous vegetation cover consisting of sphagnum moss, reindeer moss, crowberry, lowbush cranberry, Labrador tea, dwarf birch, black spruce, paper birch, grasses, and blueberry. Vegetation surrounding the site is similar but has less birch and more spruce. A small pond situated ca. 75 m southwest of the site supports more blueberry and grass than other species. Several other sites are located within a 300 m radius of TLM 225. The closest sites are TLM 220, TLM 221, and TLM 222, located to the southwest, northwest, and south, respectively. TLM 226 is located immediately to the southwest on a ridge overlooking Watana Creek.

Testing:

Site TLM 225 was found during the survey testing when shovel tests revealed calcined bone and lithic artifacts in the upper stratigraphic units. Nine shovel tests were initially excavated at this site, three of which contained cultural remains. The first shovel test to yield cultural remains was expanded into a 40 x 40 cm test pit (test pit 1).

A grid shovel testing program was undertaken to provide more precise estimates of site boundaries and the distribution of cultural materials. Thirty-five shovel tests were excavated during this program, but only one contained cultural material. This test (shovel test 4, N104/E96) produced several lithic artifacts and large numbers of calcined bone fragments. On the basis of the grid shovel testing program, it was determined that the majority of cultural remains was distributed in the north-central portions of the site, as it had been previously defined by the initial nine survey shovel tests.

One 1 x 1 m systematic test square was excavated at N104/E96. The location of this test square was selected to more closely examine the context of artifacts in grid shovel test 4 and to increase the sample of cultural remains from the site.

Discussion:

Testing at TLM 225 included the excavation of 44 shovel tests, 1 test pit, and a 1 x 1 m systematic test square. The entire artifact assemblage included 1 basalt modified flake, 66 flakes of various material types, 2 pieces of ochre, and 766 calcined bone fragments (Table D.367). On the basis of faunal and lithic frequencies and stratigraphic placement of these cultural remains (Table D.368 and D.369), two components were defined. The only tool in the site assemblage was the basalt modified flake (UA84-72-2) of unknown stratigraphic provenience (survey testing) and therefore is not attributable to a component.

Nine soil/sediment stratigraphic units were identified at the site (Figure D.295; Table D.366). Cryoturbation has resulted in discontinuities and mixing of the stratigraphic units, but their vertical placement has not been obscured. All three tephra units (Devil, Watana, and Oshetna) are present, but show varying amounts of alteration. The Oshetna tephra, the lowest tephra unit, has undergone the most radical alteration and appears only as a mixed sandy silt lens. Artifacts from all levels of testing were recovered from five stratigraphic positions: 1) 02 horizon (unit 1b), 2) 02 horizon and Devil tephra contact (unit 1b/2), 3) Devil tephra (unit 2), 4) Devil and Watana tephra contact (unit 2/3), and 5) within the Watana tephra (units 3a, 3b, and 3c).

Component 1: Component 1 originates in the 02 horizon and the Devil tephra. The majority of the lithics found at the site can be attributed to this component, and includes 57 flakes of argillite (28%), chert (58%), and obsidian (14%). Seventy-four calcined bone fragments and two pieces of ochre were also present in this cultural horizon. No evidence of any cultural feature was encountered.

Component 2: Component 2, the lower component, originates between the Devil and Watana tephras, and is characterized by dense concentrations of calcined bone in association with flakes and charcoal flecks. Most of the bones recovered from the site were associated with this component (637 of the total 766 fragments), one small mammal, probable rib fragment and one possible, mammal cranial fragment were identified from the assemblage of fragmentary calcined medium-large mammal pieces. Frequencies of lithic artifacts were relatively low. All of the seven lithic artifacts were unmodified flakes. These consisted of 1 argillite flake, 1 basalt flake, 3 chert flakes, and 2 obsidian flakes. A possible cultural feature, which may represent a hearth or firepit, was indicated by the localized distribution and slightly depressed nature of stratigraphic unit 3c in the systematic test square. This unit (possible feature), interpreted as being culturally altered Watana tephra, contained 109 calcined bone fragments, 1 obsidian flake, and charcoal.

Evaluation:

TLM 225 is located on an elongated kame near the confluence of Watana Creek with the Susitna River. Stratigraphic evidence suggests the presence of two cultural components at the site, one between the Watana and Devil tephras and one above the Devil tephra. Site TLM 225 appears to be a temporary seasonal camp/work site involving the manufacture and maintenance of chipped stone tools and the cooking/processing of large mammals. A hearth or firepit may be present in the lower component at the site. Observed site size based on the distribution of artifacts is 31 square meters (Table D.2).

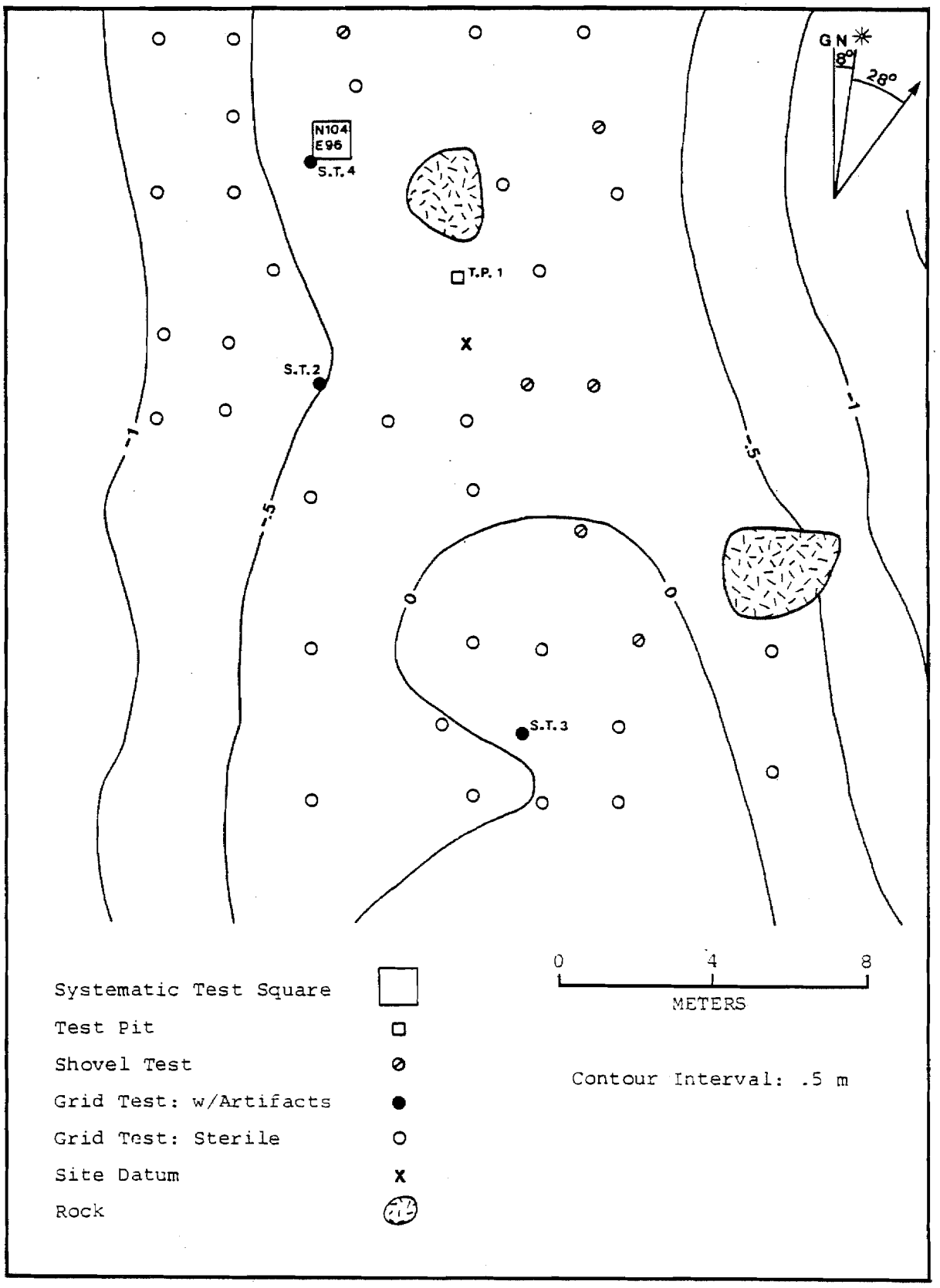


Figure D.294. Site Map, TLM 225

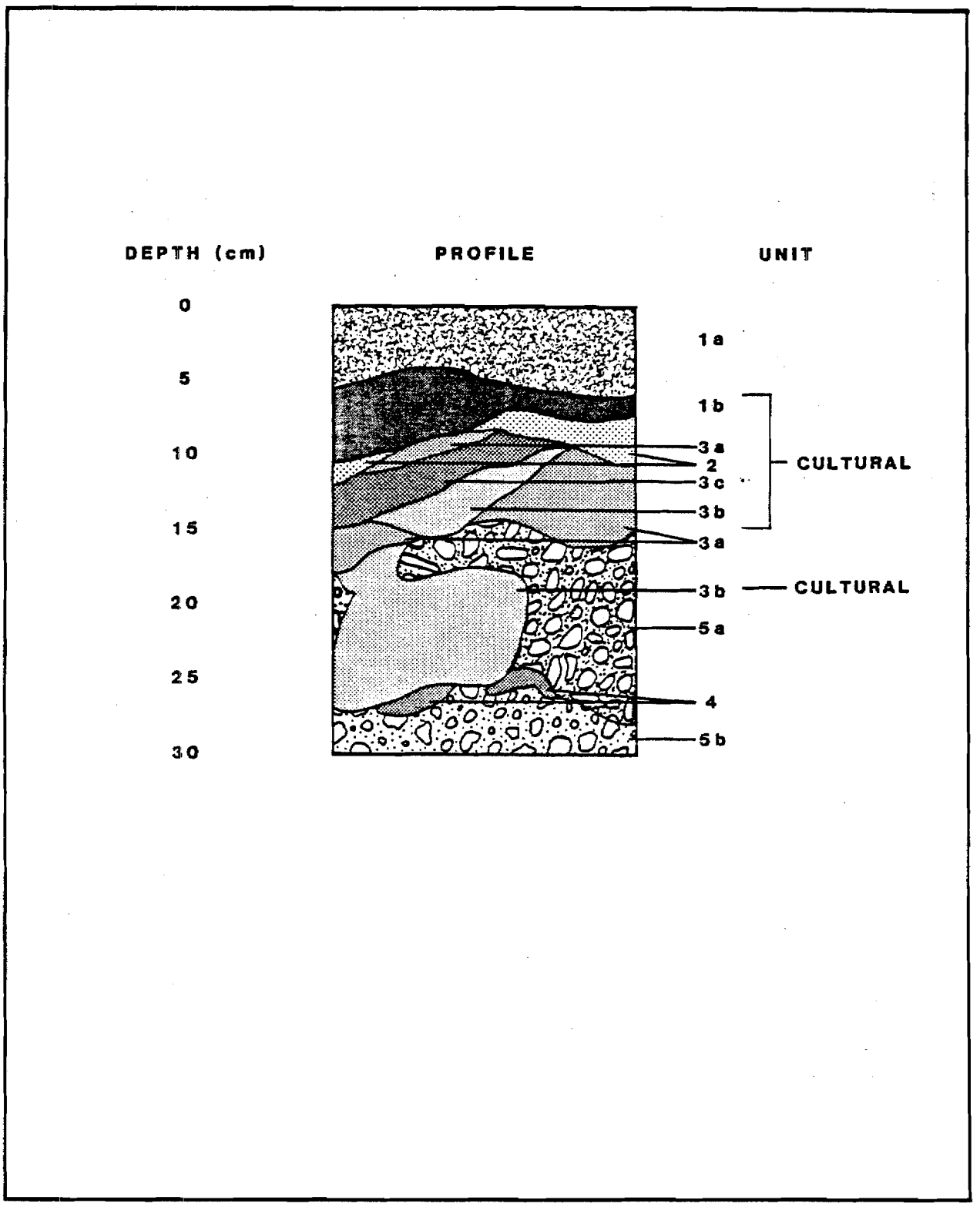


Figure D.295. Composite Profile, TLM 225

Table D.366.

Soil/Sediment Description for Composite Profile, TLM 225

Unit	Description
1a	Organic root mat: Labrador tea, blueberry, sphagnum moss, reindeer moss, dwarf dogwood, lowbush cranberry, and dwarf birch. Very loosely compacted and contains decomposed organic materials and sandy silt toward the base. Dark reddish brown (2.5YR 3/4) to dark brown (7.5YR 3/4). Varies between ca. 2.5 cm and 10 cm in thickness. Bone fragments were recovered at 1b contact.
1b	O2 horizon; black (10YR 2/1). Light to moderately compacted decomposed cultural organics, sand, silt, and charcoal. Heavy carbon staining throughout. Varies between ca. 1 and 8 cm in thickness. Distinct contacts with adjacent stratigraphic units. Cultural unit.
2	Fine grain sediment with some charcoal and pebbles; grayish brown (10YR 5/2) to dark grayish brown (10YR 4/2) Devil tephra. Moderately compacted, discontinuous, and variable in thickness from ca. 0.5-6 cm. Contacts are clear-cut by texture but mottling of colors is diffuse and gradual. Artifacts found within unit and at contacts.

Table D.366. (Continued)

Unit	Description
3a	Heavy to lightly oxidized Watana tephra; strong brown (7.5YR 4/6). Moderately compacted. Unit very discontinuous and ranges from ca. 1-8 cm in thickness. Upper contact distinct but lower contact diffuse and frequently ambiguous. Cultural unit.
3b	Unoxidized Watana tephra; yellowish brown (10YR 5/4). Moderately compacted and ranges from ca. 1-7 cm in thickness. Generally discontinuous. Found in deep pockets between and under upwellings of drift. Upper contact diffuse but lower contacts more distinct.
3d	Sandy silt sediment mixed with tephra, bone fragments, and charcoal; dark gray (10YR 4/1) to very dark gray (10YR 3/1). Moderately to loosely compacted; varies from ca. 5-9 cm in thickness and is restricted in distribution. Found only in southwest quad of test square. Contacts vary from distinct to diffuse. Interpreted as culturally altered Watana tephra.
4	Sandy silt sediment mixed with Oshetna tephra; light gray (10YR 6/1) to gray (10YR 5/1). Moderately compact in texture and distributed discontinuously; varies from ca. 6-15 cm. Upper contact typically distinct; lower contacts with units 5a and 5b also distinct. Contains pebbles and some charcoal flecks.

Table D.366. (Continued)

Unit	Description
5a	Sandy silt mixed with pebbles, cobbles and boulders. Oxidized drift; reddish brown (5YR 3/4). Moderately compacted and fairly continuous. Contacts distinct, although 5b contact is often diffuse.
5b	Sandy silt with pebbles, cobbles, and boulders. Unoxidized drift. Dark grayish brown (2.5YR 4/2) to olive brown (2.5YR 4/4). Very loosely to moderately compacted and continuous. Often welled up through higher stratigraphic units.

Table D.367.

Artifact Summary, TLM 225

Tools	
1	Modified flake
	1 Basalt (UA84-72-2)
Lithic Material	
17	Argillite flakes
1	Basalt flake
38	Chert flakes
10	Obsidian flakes
66	
Faunal Material	
766	Calcined bone fragments
Other	
2	Ochre pieces

Table D.368.

Faunal Material by Stratigraphic Unit, TLM 225

Unit		Description
1b 02 horizon	17	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
1b/2 Contact between 02 horizon and Devil tephra	14	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
1a/3a Contact between organic mat and oxidized Watana tephra	41	Unidentifiable bone fragments, calcined, mammal
2 Devil tephra	2	Unidentifiable bone fragments, calcined, medium-large mammal
2/3a Contact between Devil tephra and oxidized Watana tephra	1	Unidentifiable bone fragment, calcined, medium-large mammal

Table D.368. (Continued)

Unit		Description
3a	1	Probable rib fragment, calcined, small mammal
Oxidized Watana tephra	394	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
3c	1	Possible cranial fragment, calcined, mammal
Sandy silt and Watana tephra with charcoal	144	Long bone and unidentifiable bone fragments, calcined medium-large mammal
	97	Long bone and unidentifiable bone fragments, calcined, medium-small mammal
Subsurface unknown	54	Long bone and unidentifiable bone fragments, calcined, mammal

Table D.369.

Artifact Summary by Stratigraphic Unit, TLM 225

Unit		Description
1b	6	Argillite flakes
O2 horizon	8	Chert flakes
	2	Obsidian flakes
	2	Ochre pieces
1b/2	2	Argillite flakes
Contact between	5	Chert flakes
O2 horizon and		
Devil tephra		
2	8	Argillite flakes
Devil tephra	20	Chert flakes
	6	Obsidian flakes
2/3a	1	Chert flake
Contact between		
Devil and		
oxidized Watana		
tephras		
3a	1	Basalt flake
Oxidized Watana	3	Chert flakes
tephra	1	Obsidian flake

Table D.369. (Continued)

Unit		Description
3b Unoxidized Watana tephra	1	Argillite flake
3c Sandy silt and Watana tephra with charcoal	1	Obsidian flake
Unknown	1	Basalt modified flake (UA84-72-2)
	1	Chert flake

AHRS Number TLM 226; Accession Number UA84-73

Area:	Northeast of Watana Creek Mouth
Site Map:	Figure D.296
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3; Figure E.3
Site Location:	Appendix F

Setting:

The site consists of six loci along the edge of a large, prominent, crescent-shaped kame located on the western wall of the Watana Creek valley. The kame trends generally east-west at an elevation of 602 m asl (altimeter: 1974 feet). Eastward the valley wall descends ca. 60 m to Watana Creek. To the south the terrain descends ca. 30 m into a basin with a ca. 7 ha lake. To the north and northwest, the terrain drops into a drainage channel of the glaciolacustrine plain to the west. Watana Creek passes within ca. 250 m of the site in a southeastly direction. A small receding lake ca. 2 ha in size occurs approximately 450 m west of locus A and 300 m west of locus E. A small seasonally filled pond, ca. 75 m in diameter, is situated in a small sink approximately 75 m northwest of locus E and ca. 200 m west of locus A. Two larger bodies of water, of ca. 7 and 4 ha, occur ca. 500 and 1000 m from locus A to the south-southwest and southwest, respectively. Only the larger lake supports an outlet stream which discharges into Watana Creek approximately 400 m south of TLM 226.

Locus A is the easternmost locus. Situated on the rim of the creek valley, this locus is approximately 1 m lower in elevation than the summit of the kame, approximately 25 m to the southwest. The northwest slope drops at a 10-degree gradient to lower terrain, beginning 10 m from test pit 1. The high promontory affords a view of the Watana Creek valley spanning ca. 3 km, from northeast to southeast. Views to the south, southwest, and west are obstructed by the slight rise in the kame crest and the hardwood forest. The views to the northwest and west are clear from the open terrace edge overlooking the low, rolling topography

ca. 300-400 m distant. Locus B is situated ca. 70 m southwest of locus A. This locus also occurs along the valley rim ca. 10 m north of the rim itself. The view south is obstructed by forest but views in other directions are open. Locus A as well as locus C are in view. The terrain west of this locus gradually levels out ca. 55 m west, near locus C. Loci C, D, and E are all at the edge of the kame and are at a similar elevation with not more than a meter difference between them. South of these three loci the ground follows a 10-12 degree slope down to the outlet stream of a ca. 7 ha lake. Locus B is ca. 17 m west of locus A and locus C is ca. 23 m west of locus B. Views from these loci are obstructed by the forest to the south and west. However, each of the loci can be seen from any other. The view north overlooks the gradually sloping, boggy terrain that meets the channel which drains the plain to the west. Locus F is situated along the 10-12 degree slope ca. 30 m south of locus E and is approximately 4-5 m lower in elevation. Locus D is 17 m west of locus C and locus E is 23 m west of locus D.

Other sites in the area include TLM 184, TLM 215, TLM 216, TLM 220, TLM 221, TLM 222, TLM 225, TLM 231 and TLM 234. The closest sites are TLM 220 and TLM 225, being ca. 100 m to the west and north, respectively. TLM 184 and TLM 215 located ca. 400 m to the northwest are visible as well as TLM 225 from locus E. TLM 234 is located on terraces along the valley wall to the southeast.

Site vegetation includes Labrador tea, caribou lichen, mosses, lowbush cranberry, equisetum, dwarf birch, paper birch, black spruce, blueberry, wild rose, and a few grasses. Black spruce is predominant north of the site and paper birch covers the south-facing slopes below the loci. Large glacial erratics are common across the surface of the site. North of the kame the surface morphology shifts to tussock terrain.

Testing:

Locus A: Locus A was recognized in a shovel test when six argillite flakes were recovered. Five of the argillite flakes came from the contact of the organic mat and a reddish brown mottled sandy silt/tephra unit. The other argillite flake was not stratigraphically provenienced. A 40 x 40 cm test pit (test pit 1) was placed over shovel test 1. The excavation of test pit 1 revealed two components. The upper component includes three basalt flakes recovered from the organic mat. The lower component is stratigraphically located in a reddish brown sandy silt/tephra unit where 4 basalt flakes, 1 chert modified flake (UA84-73-6), 2 argillite flakes, and 5 unidentifiable, calcined bone fragments of medium-large mammals were recovered. An additional shovel test produced one amorphous basalt flake from an unknown stratigraphic position.

Locus B: Locus B was also recognized in a shovel test when calcined bone was located in an anomalous grayish brown mixed sand, silt, tephra, and pea gravel unit (cultural fill) above the Devil tephra. Excavation of this shovel test yielded 1 white, cylindrical, glass trade bead (UA84-73-9; Figure D.394c), 1 argillite flake, and unburned and calcined bone fragments from the cultural fill unit. A 40 x 40 cm test pit (test pit 2) was superimposed over the shovel test and produced a tci tho or quartzite modified boulder spall (UA84-73-13; Figure D.394d) and additional bone fragments also from the cultural-fill unit.

Locus C: Twenty-three calcined bone fragments were collected from the Watana tephra within a fallen tree root system. Additional calcined bone was observed but not collected in the cultural unit.

Locus D: An unburned large mammal bone fragment was collected from the organic mat of a fallen tree root system. No additional bone was observed.

Locus E: Unburned large mammal bone fragments and calcined bone fragments were collected from the organic mat surface of a fallen tree root system. No additional bone fragments were recognized.

Locus F: A fourth fallen tree produced an amorphous argillite flake from the surface of an unconsolidated silt. None of the tephras could be attributed to the unconsolidated silt.

The portion of the kame containing TLM 226 was surveyed and staked amd grid shovel testing was conducted to define site extent and illuminate relationships between the six loci. One hundred seventy-one grid shovel tests were excavated during this testing program, three of which produced cultural remains. The loci and test areas are illustrated in Figure D.296. Grid shovel testing began at the eastern portion of the site and progressed west. Tests were initiated at the southernmost extent of the grid line and followed along the line to the north. Cultural material was encountered in the tests on the slope below and east of locus A. This material consisted of small, thermally spalled pebbles and calcined bone too fragile for recovery. Grid shovel test N168/E208 (locus B) located a layer of cultural fill and six bone fragments (five calcined and one unburned) in a depression at locus B. One other grid shovel test N216/E112 (locus E) produced 19 bone fragments. Grid shovel test N192/E256 (locus A) yielded two calcined bone fragments from the Watana tephra.

Systematic testing at TLM 226 consisted of the excavation of three 1 x 1 m test squares. Placement of the squares was selected to address questions formulated during the survey and grid shovel testing phases. Test square N199/E243 was placed 1.5 m west of test pit 1 at locus A to investigate the appearance of lithic materials in the lower tephra units. The stratigraphic profile of the test pit suggested that the depositional units may have undergone severe disturbance by cryoturbation and that a larger area needed to be exposed to confirm the possible lower cultural component. Test square N164/E201

was placed at locus B. This locality produced a white trade bead in a shovel test in the organic mat. Test square N164/E201 was chosen for excavation because it included a large rock within its boundaries. Rocks in similar placement at TLM 215 and TLM 220 were found to be associated with hearths and probably functioned as anvils for the breaking of bones during marrow extraction activities. The confirmation of this activity at TLM 226 would add to the formation of a generalized subsistence profile for the lower Watana Creek area during the protohistoric to early historic period. The third test square, N191/E145, was selected to represent the activities taking place at the western portion of the site at locus C, as evidenced by the large amounts of calcined bone in the Watana tephra of a fallen tree root system. A grid shovel test, N192/E144, placed 3 m west of the fallen tree, appeared to have a charcoal-stained zone within the Watana tephra suggesting the existence of a cultural component beneath the Devil tephra. Test square N191/E145 was placed between the upturned tree and the shovel test to and confirm the existence of the lower cultural component. The other loci were not tested due to the similarity of their artifact assemblages to those of nearby sites, and the apparent lack of time depth evident at this end of the site.

Discussion:

Testing at TLM 226 consisted of the excavation of one shovel test at locus A, two test pits (one at locus A and one at locus B), and the surface survey of loci C, D, E, and F; as well as the excavation of 171 grid shovel tests and three test squares (one each at loci A, B, and C). The cultural remains recovered from this site included 1 chert modified flake (UA84-73-6), 1 tci tho (UA84-73-13), 13 argillite flakes, 8 basalt flakes, and 198 unburned and calcined bone fragments. The inventory of artifacts is summarized on Tables D.371, D.372, D.373, D.374, D.375, and D.376, and the distribution of lithic material by stratigraphic unit is summmarized on Tables D.382, D.383, and D.384. The distribution of faunal material by stratigraphic unit is summmarized on Tables D.377, D.378, D.379, D.380, and D.381.

Eight soil/sediment units were identified during the systematic testing phase at TLM 226 (Figure D.297; Table D.370). The lowest units are glacial in origin. A coarse, primarily sand matrix containing both silts and gravels (unit 6) forms the lowest unit of test squares N164/E201 and N191/E145. The lowest unit in test square N199/E243 is a very fine, apparently eolian silty sand (unit 8) and appears to be restricted in areal extent to the northeast portion of the kame. This fine-grained material restricts percolation of water and may account for the extreme degree of cryoturbation noted in this area. Above the glacial drift material are three episodes of volcanic tephra deposition identified as the Oshetna (unit 5), the Watana (unit 4), and the Devil (unit 3). Associated with the lowest tephra fall, the Oshetna (unit 5), is a discontinuous paleosol appearing as a charcoal stain at the contact between the Oshetna and Watana tephras. Some evidence exists to suggest that the paleosol may be separated from the Oshetna tephra by a thin lens of a light brown eolian silt; however, insufficent stratigraphic definition existed to warrant a separate unit designation. Both the paleosol and the discontinuous silt are included in the Oshetna tephra unit designation (unit 5).

The tephra sequence in test square N199/E201 contained all the aforementioned units (units 3, 4, 5) but was cryoturbated to the point that individual strata could not be defined. This layer of mixed tephra, organic material, and drift sand is given a separate designation as unit 7. Due to the saturation of unit 7 any attempt at troweling or screening produced a homogenous, gelatinous mass that obscured stratigraphic boundaries. Hence, the artifacts recovered from this unit are considered to be of unknown provenience

The depositional units at the site are overlain by two organic units. The first is a layer of decomposed organics containing silts and displaced tephra (unit 2) that varies in thickness from 1-15 cm across the site. This unit is the zone of root activity and present site vegetation cover (unit 1). Although two separate cultural fills were encountered in tests at locus A, they were not dealt with extensively

enough during systematic testing to be included in the major soil/sediment discussion.

Systematic testing at locus A, test square N199/E243, produced two argillite flakes of uncertain provenience. Locus B systematic test square, N164/E201, produced fragments of green-split bone and contained a hearth feature with a thick organic unit (unit 2). Systematic testing at locus C, test square N191/E145, yielded a single argillite flake in a pre-Devil tephra context but of unknown provenience.

Upper Component: The upper component at TLM 226 is broadly defined as a series of post-Devil tephra events extending into the early historic period. Nearly all the cultural material recovered from this period originates in the peaty, decomposed organic level (unit 2) that underlies the vegetational cover at the site. Cultural material found at the organic unit and Devil tephra contact is associated with of disturbance in the form of cultural fill or excavation activity and may be assumed to be contemporaneous with the material found within the organic layer. With the exception of a single, white trade bead (UA84-73-9) recovered in a shovel test (shovel test 3) in locus B, the remaining artifact assemblage suggests caribou procurement and processing activity as the focus of the site. Lithic material is comprised of small biface reduction flakes and two large modified secondary flakes usually associated with tool modification and meat processing.

The remaining assemblage is comprised of unburned and calcined faunal material. Identifiable skeletal elements, all attributable to caribou (Rangifer tarandus), were present at loci B, D, and E. Locus B contained the largest number of bone fragments, with caribou represented by the cranial, hindlimb, and extremity components. Locus E contained fragmentary elements of the axial, forelimb, hindlimb, and extremity components. Locus D yielded one skeletal element, a left naviculo-cuboid.

The presence of features associated with the upper component is indicated by of cultural fill noted at locus B in test pit 2 and shovel tests. Fill layers of this nature at TLM 215 and TLM 220 were found to be spoil from cache pit excavations. A large rectangular depression measuring 3.75 x 4.10 m is also located at locus B. This depression has a berm along the northern-most wall. The cultural-fill levels observed at this locus probably result from the construction of this depression feature. A hearth contained within the decomposed organic layer (unit 2) and associated with a large rock based in the same layer was discovered during the excavation of test square N164/E201. This hearth feature was similar to the hearth and associated single large rock features found at TLM 215, TLM 220, and TLM 225. This feature, like those from the other sites, contained thermally altered cobbles averaging 10 cm in diameter arranged in an apparently random pattern. These late Athapaskan period features may represent a marrow grease extraction activity utilizing the large rocks as anvils for the breaking and extraction of marrow and the rendering of this marrow using heated cobbles to boil water (Nelson et al. 1982).

Lower Component: The presence of a lower component, similar to the upper component but containing less bone, is indicated at loci A and C by the presence of lithic material below the Devil tephra. Calcined bone, observed at locus C in the Watana tephra, and the apparently associated charcoal-stained lens visible in grid shovel test N192/E144, suggest the possibility of an earlier component. However, the association of lithic material with any pre-Devil tephra period at locus A must be held extremely suspect due to extreme cryoturbation and biological disturbance. Similarly, the bone observed at locus C is in highly suspect placement beneath the roots of a tree. The findings of the test square excavation suggest the observed charcoal-staining is simply the paleosol associated with the Oshetna tephra (unit 5) displaced upward through cryoturbation. The single argillite flake tentatively assigned to this lower component is also suspect. Locus B did not produce any sub-Devil tephra material during systematic excavation.

Evaluation:

TLM 226 is located on the eastern portion of an elongated kame that borders a glacial lake bed to the west and the Watana Creek valley to the east in an area of kettle and kame terrain. Other sites similar in assemblage and likely occupation period are located on other kames and well-drained features the lower Watana Creek area. The relatively good preservation of bones and their placement in the organic units (units 1 and 2), in association with Euro-American trade goods, suggests a late Athapaskan period occupation for the upper component. It is likely that the occupation is protohistoric, as Euro-American goods were entering the area prior to actual contact. The type of bead represented suggests a time period following the establishment of the Russian American Company trading post at Nutchek in Prince William Sound (Ketz 1983). The focus of the upper component seems to have been oriented toward the procurement and processing of caribou.

The case for the existence of a lower component as suggested by survey and grid shovel testing was not borne out by the systematic testing. Rather, stratigraphic evidence in the larger test squares suggests that the material may be displaced downward from the upper component. If a lower component does exist, the assignment of the material to any particular stratigraphic unit will be extremely difficult because of the high degree of unit mixing due to cryoturbation at locus A. The possibility of a lower component cannot be ruled out entirely as lower components exist at TLM 184, TLM 220, and TLM 216 on similar terrain and less than 300 m distant.

The importance of TLM 226 lies primarily with the upper component. The confirmation of caribou subsistence activities at a period approaching the early historic period in the Middle Susitna River area is of particular interest to researchers working on contemporary land use issues. Archeological interest in this site is especially warranted due to the intensity of land use represented in the recent component.

Observed sizes of the individual loci based on the distribution of artifacts are as follows: locus A, 58 square meters; locus B, 32 square meters; locus C, 16 square meters; locus D, 16 square meters; locus E, 32 square meters; and locus F, 16 square meters (Table D.2.).

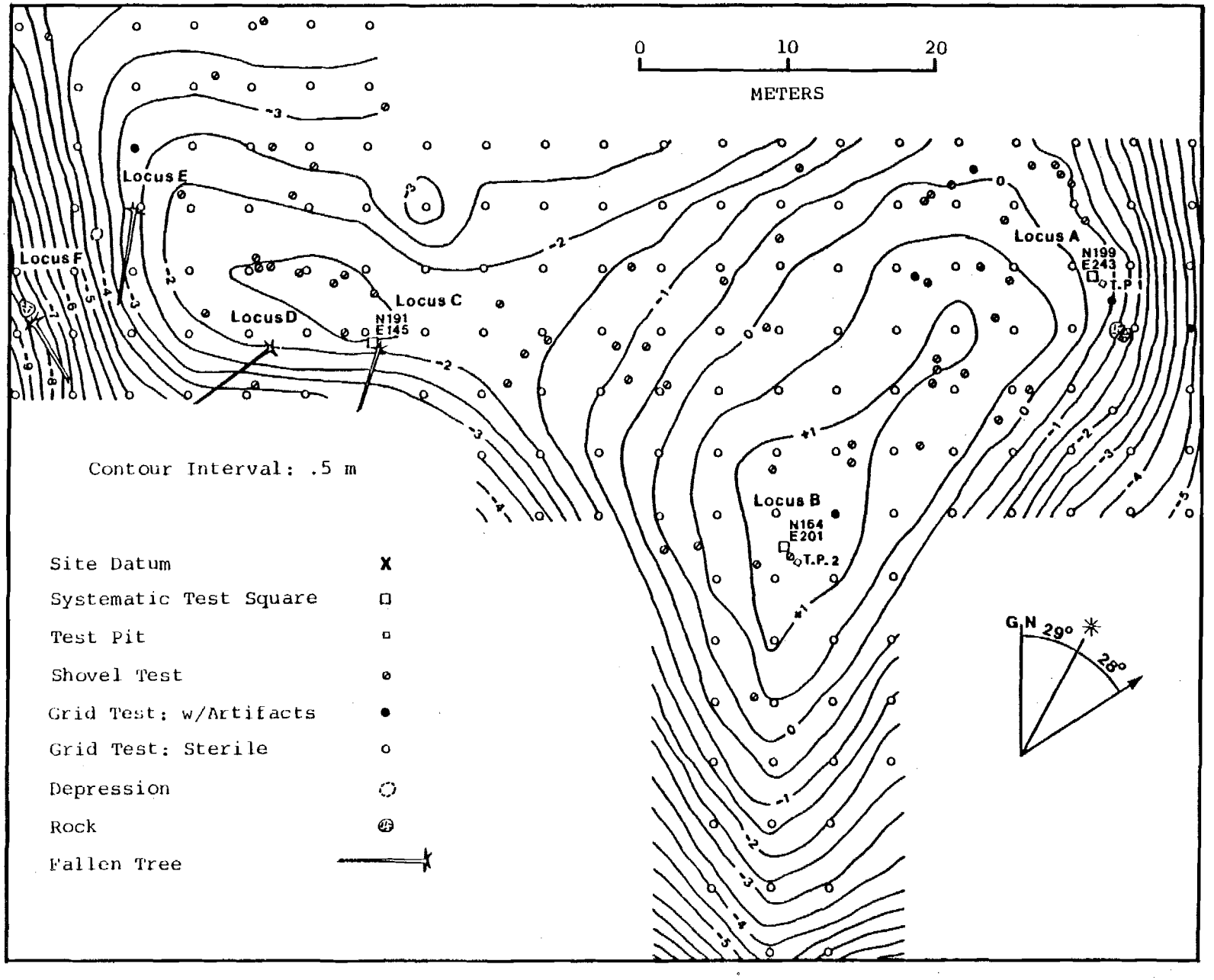


Figure D.296. Site Map, TLM 226

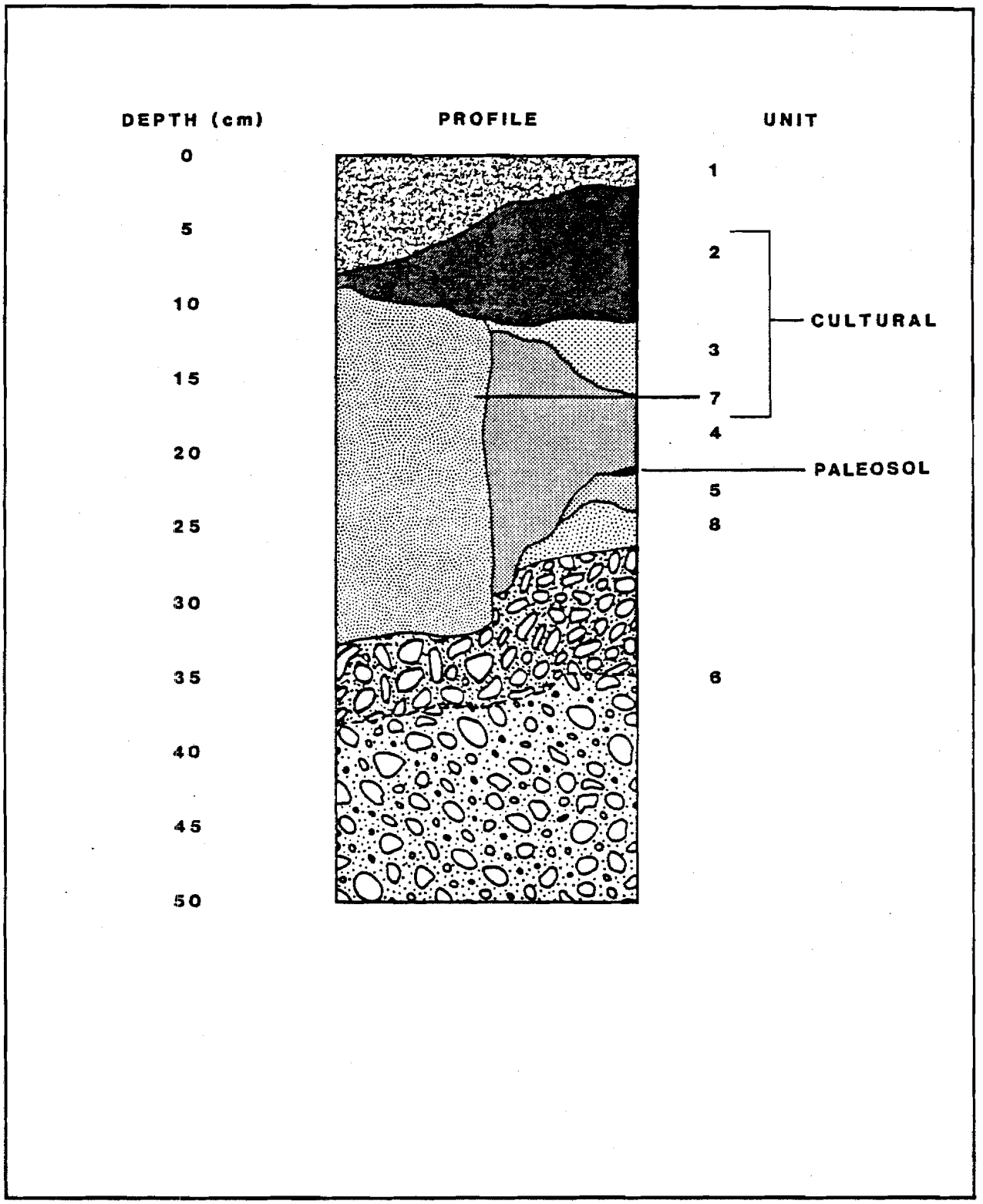


Figure D.297. Composite Profile, TLM 226

Table D.370.

Soil/Sediment Description for Composite Profile, TLM 226

Unit	Description
1	Surface organic root mat: densely intertwined roots and decomposing roots; dark brown (5YR 3/3). Thickness varies between 1-9 cm. Continuous, regular to wavy contact with unit below (A2 horizon). Interlaces easily, separated by density of roots.
2	Sand and silt organic unit with, at times intense charcoal and carbon-staining; dark brown (7.5YR 3/2) to black (10YR 2/1). Thickness varies between 0.5-6 cm. Continuous contacts. Contacts above usually regular to wavy; interlace below wavy to undulating (unit 3, 7). Some pebble inclusions approximately 0.5-2 cm and intense root penetration . Thermally altered rock included along with unusually intensive charcoal content. Bone fragments were present in test square N164/E201.
3	Very fine grain silt; very pale brown (10YR 7/3). Varies in thickness from 0.5-6 cm. Devil tephra. Wavy to undulating contacts. Discontinuous, at times dense or distinct pockets, other times a discrete level. Cryoturbation is present in test square N199/E243, with the unit disturbed by intrusions from below. Some pebble intrusions and continued root penetration. One flake found at interface with unit 4.

Table D.370. (Continued)

Unit	Description
4	Varying from fine grain silt to sandy silt; strong brown (7.5YR 5/8) to light yellowish brown (10YR 6/4). Watana tephra. Varies in thickness from 5-20 cm. Wavy to undulating contacts. Discontinuous, at times truncated by glacial drift from below; test square N199/E243 disturbed and intermixed with units above and below. Decreasing root penetration and increasing pebble intrusions. Small layer of charcoal flecks found within contact matrix with discoloration test square N164/E201.
5	Very fine grain silt; gray (10YR 5/1) to light gray (N 7/). Undulating contacts with adjacent units, at times distinct to indistinct. Tephra (Oshetna). Ranging in thickness from 0.5-4 cm. Discontinuous generally appearing in small lens, where present. Small lens of organic material (0.5-1.0 cm) occasionally appears atop the unit. Disturbed and intermixed in test square N199/E243.
6	Sand mixed with pebbles, cobbles, and boulders; poorly sorted; strong brown (7.5YR 5/8 oxidized) to grayish brown (2.5Y 5/2). Continuous contact regular to undulating. Varying contacts, generally underlain units 4 and/or 5, but also at times truncates all tephras and is present at contact with 02 horizon. Glacial drift.

Table D.370. (Continued)

Unit	Description
7	Varying from fine silt to coarse sand. Mottled in color; dark brown (10YR 4/3), strong brown (7.5YR 4/6) to olive brown (2.5Y 4/4). Continuous wavy contact within test square N199/E243. Ranging in depth from 20-35 cm. Disturbed matrix composed of tephras, organics and glacial drift. Tephras and drift appear discrete at times as a lens or stringer yet generally appear as a poorly sorted mixed unit. Lower contact with well-defined glacial drift indistinct. Two flakes present, with unknown provenience. Water content increasing as unit descends, appearing gelatinous at times. Lower limit of unit was frozen.
8	Fine silty sand without pebbles; strong brown (7.5YR 4/6). Oxidized. Found only in south half of N199/E243 where lower limit was frozen

Table D.371.

Artifact Summary, TLM 226 Locus A

Lithic Material	
11	Argillite flakes
8	Basalt flakes
1	Chert flake
20	
Faunal Material	
5	Calcined bone fragments

Table D.372.

Artifact Summary, TLM 226 Locus B

Tools	
1	Tci tho 1 Quartzite (UA84-73-13)
Lithic Material	
1	Argillite flake
Faunal Material	
132	Bone fragments

Table D.372. (Continued)

Historic Remains	
1	Trade bead

Table D.373.

Artifact Summary, TLM 226 Locus C

Faunal Material	
23	Calcined bone fragments

Table D.374.

Artifact Summary, TLM 226 Locus D

Faunal Material	
1	Unburned bone fragment

Table D.375.

Artifact Summary, TLM 226 Locus E

Faunal Material	
33	Bone fragments

Table D.376.

Artifact Summary, TLM 226 Locus F

Lithic Material	
1	Argillite flake

Table D.377.

Faunal Material by Stratigraphic Unit, TLM 226 Locus A

Unit		Description
4 Watana tephra	5	Unidentifiable bone fragments, calcined, medium-large mammal

Table D.378.

Faunal Material by Stratigraphic Unit, TLM 226 Locus B

Unit		Description
2 Cultural fill	1	Cranial fragment with antler pedicle, unburned, caribou (Rangifer tarandus)
	1	Left metapodial shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Proximal fragment proximal phalanx, unburned, caribou (Rangifer tarandus)
	1	Proximal fragment distal phalanx, unburned, caribou (Rangifer tarandus)
	6	Long bone and unidentifiable bone fragments, unburned, medium-large mammal
	108	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
	8	Unidentifiable bone fragments, heavily burned, medium-large mammal
2/3 Contact between cultural fill and Devil tephra	1	Left mandibular second premolar, unburned, caribou (Rangifer tarandus)
	1	Left mandibular third premolar, unburned, caribou (Rangifer tarandus)
	1	Probable left mandibular first molar, unburned, caribou (Rangifer tarandus)
	1	Probable right tibia shaft fragment, unburned, caribou (Rangifer tarandus)
	2	Long bone and unidentifiable bone fragments, unburned, medium-large mammal

Table D.379.

Faunal Material by Stratigraphic Unit, TLM 226 Locus C

Unit		Description
4 Watana tephra	23	Unidentifiable bone fragments, calcined, medium-large mammal

Table D.380.

Faunal Material by Stratigraphic Unit, TLM 226 Locus D

Unit		Description
1 Organic mat	1	Left naviculo-cuboid, unburned, caribou (Rangifer tarandus)

Table D.381.

Faunal Material by Stratigraphic Unit, TLM 226 Locus E

Unit		Description
1 Organic mat	1	Dorsal rib shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Right medial scapula fragment, unburned, caribou (Rangifer tarandus)
	1	Right distal radius fragment, unburned, caribou (Rangifer tarandus)
	1	Left distal radius shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Left radius shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Right medial innominate fragment, unburned, caribou (Rangifer tarandus)
	1	Distal metapodial fragment, unburned, gnaw marks, caribou (Rangifer tarandus)
	1	Long bone shaft fragment, unburned, medium-large mammal
	2	Flat bone fragments, unburned, medium-large mammal
	9	Unidentifiable bone fragments, unburned, medium-large mammal

Table D.381. (Continued)

Unit		Description
Subsurface unknown	1	Left distal radius fragment, unburned, weathered, caribou (Rangifer tarandus)
	1	Possible proximal fragment medial phalanx, calcined caribou (Rangifer tarandus)
	1	Long bone shaft fragment, unburned, medium-large mammal
	9	Unidentifiable bone fragments, calcined, medium-large mammal
	2	Unidentifiable fragments, heavily burned, medium-large mammal

Table D.382.

Artifact Summary by Stratigraphic Unit, TLM 226 Locus A

Unit		Description
1	5	Argillite flakes
Organic mat	3	Basalt flakes
3/4	1	Argillite flake
Contact between Devil and Watana tephras		
7	4	Argillite flakes
Mixed tephras	4	Basalt flakes
and drift	1	Chert flake
Subsurface	1	Argillite flake
unknown	1	Basalt flake

Table D.383.

Artifact Summary by Stratigraphic Unit, TLM 226 Locus B

Unit		Description
1/2	1	Trade bead (UA84-73-9)
Contact between organic mat and cultural fill		
2	1	Argillite flake
Cultural fill	1	Quartzite tci tho (UA84-73-13)

Table D.384.

Artifact Summary by Stratigraphic Unit, TLM 226 Locus F

Unit		Description
Subsurface unknown	1	Argillite flake

AHRS Number TLM 227; Accession Number UA84-74

Area:	West of Watana Creek
Site Map:	Figure D.298
Survey Locale 138:	Figure E.222
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 227 is situated on a knoll, at 604 m asl (altimeter: 1981 feet), east of an unnamed tributary of the Susitna River (locally known as No Name Creek) and west of Watana Creek. The site is at the southeastern end of the large knoll which is approximately 200 (north-northwest) x 100 m (south-southeast). The top of the knoll is characterized by a 1-2 degree slope from the highest point which is about 60 m northeast of the site. To the east, northeast, and southeast the knoll descends to a broad, gradually sloping glaciolacustrine plain, 2-3 m lower in elevation. TLM 227 lies near the southeastern end of this knoll on a relatively flat area that extends ca. 15 m to the south and 40 m to the southwest before dropping 4-5 m in elevation approximately 20-30 m beyond the plateau edge. The principle view from the site overlooks the glaciolacustrine plain to the northeast and east. A lower terrace is discernible ca. 100 m to the southwest along the valley rim of the Susitna River. The view to the west is limited by a rise in the terrain ca. 20-30 m distant. The view to the northwest is also limited by the slightly rising slope of the knoll. To the northwest are seven small lakes or ponds, one lake (3 ha in size) is 1 km away. The remaining are 1 ha or less in size and appear to be receding as evidenced by their grassy shores.

Vegetation at the site consists of black spruce, dwarf birch, scattered grasses, sparse willow, blueberry, bunchberry, lowbush cranberry, fireweed, Labrador tea, heath, sphagnum moss, and lichens. The surrounding terrain has similar vegetation except that dwarf birch and

black spruce becomes more numerous on the undulating glaciolacustrine plain.

Testing:

A survey shovel test (shovel test 1) produced 42 calcined bone fragments. This test was subsequently expanded into a 40 x 40 cm test pit (test pit 1) which revealed a subsurface bone scatter of 194 calcined bone fragments found in the finely sorted organics, in the Devil tephra, and at the contact between the Devil and oxidized Watana tephras. Identifiable skeletal elements consist of caribou (Rangifer tarandus) extremity bones (Table D.385). One possible thermally altered rock was also found which may be associated with a ca. 100 x 40 cm rectangular concavity situated about 50 cm southwest of the southwestern corner of test pit 1. Six additional survey shovel tests failed to produce cultural material.

A grid shovel testing program was undertaken to assist in determining the site size and the distribution of cultural remains. Sixteen grid shovel tests were excavated but all proved to be sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.385.

Artifact Summary, TLM 227

Provenience		Description
Faunal Material		
Subsurface:		
Test pit 1	1	Metapodial shaft fragment, calcined, probable caribou (Rangifer tarandus)
	1	Sesamoid fragment, calcined, probable caribou (Rangifer tarandus)
	1	Proximal fragment proximal phalanx, calcined, caribou (Rangifer tarandus)
	151	Long bone and unidentifiable fragments, calcined medium-large mammal
	40	Unidentifiable fragments, calcined, medium-large mammal
	42	Unidentifiable fragments, calcined, mammal

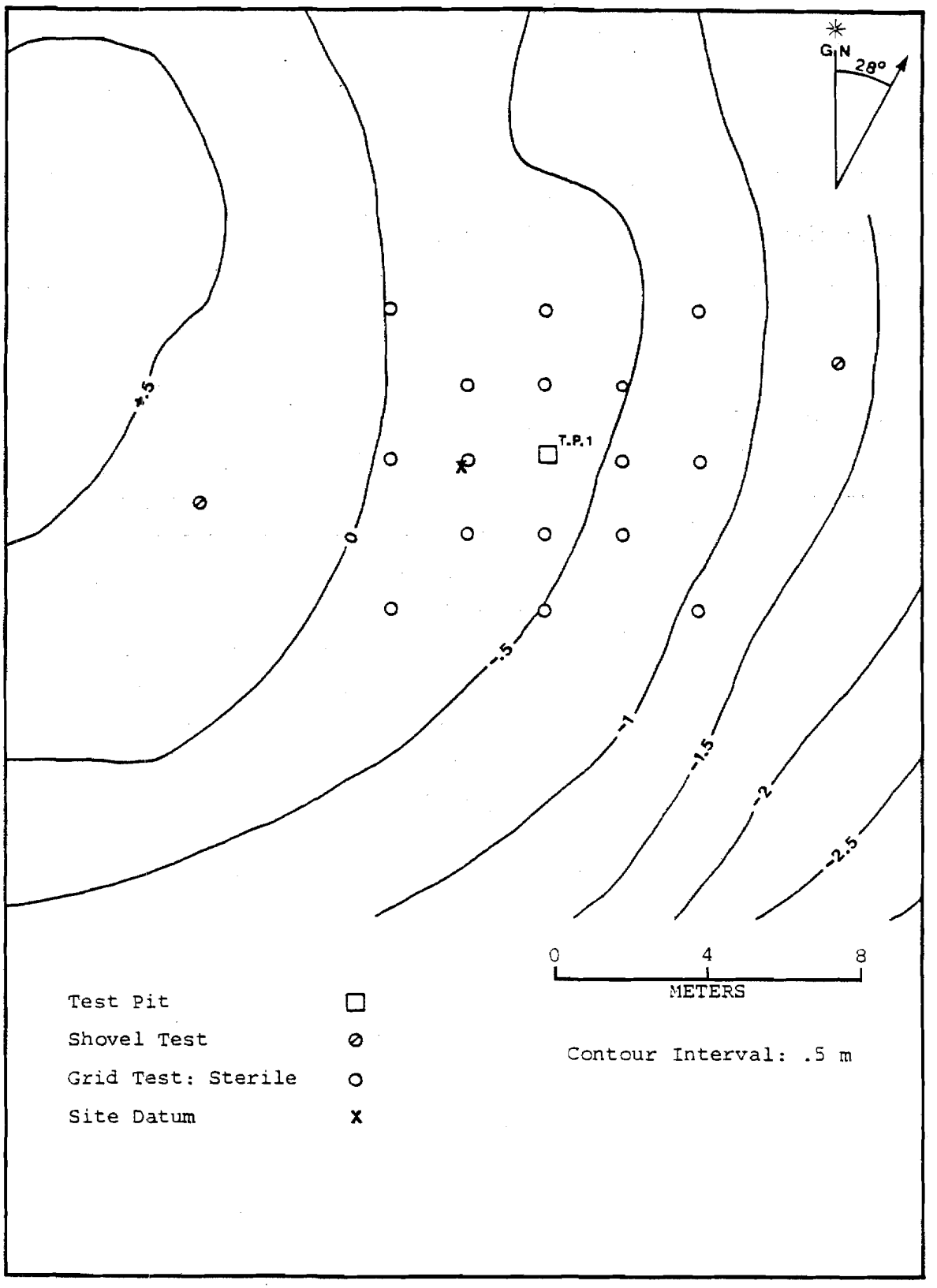


Figure D.298. Site Map, TLM 227

AHRS Number TLM 228; Accession Number UA84-64

Area:	North of Watana Creek Mouth
Site Map:	Figure D.299
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site is situated on the western end of a low, east-west trending knoll, 25 x 15 m in size, at an elevation of 557 m asl (altimeter: 1826 feet). The immediate vicinity of the site is characterized by a north-south oriented, flat bench ca. 15 x 4 m near the west central end of the larger knoll. Thirty meters west of the site is the eastern shoreline of a ca. 3 ha grass-covered lake ca. 2.5 m lower in elevation than the site. A creek which trends south toward the lake basin turns east ca. 25 m north of the site to feed the larger ca. 7 ha lake ca. 400 m east-northeast of the site. Views to the north and northeast are obstructed by black spruce forest. Views east and southeast are limited to ca. 50 m by eskerlike knolls. The grass-mantled lake to the west of the site provides the most open view. The far shore of this ca. 3 ha lake is visible to the northwest and west with spruce forest beyond while to the southwest and south, two large knolls limit the view to within ca. 125 m. Vegetation at the site consists of low lichens, mosses, Labrador tea, blueberry, lowbush cranberry, heath, and occasional tufts of grasses. Dwarf birch, isolated paper birch, and black spruce are also present. The surrounding terrain is lower and wetter with flowering herbaceous plants including wild rose, willow, and more grasses. Dense dwarf birch with thick sphagnum moss also characterizes the lower surrounding terrain.

Testing:

The site consists of subsurface lithic artifacts. Three survey shovel tests were excavated, one of which produced cultural material. Shovel test 1 yielded an argillite flake at the contact between the Devil tephra and the oxidized Watana tephra (Table D.386). Test pit 1 was superimposed over shovel test 1 and produced 2 basalt flakes. One basalt flake was stratigraphically positioned at the contact between the oxidized Watana tephra and the gray silty matrix. The second basalt flake was stratigraphically placed between the pale yellowish brown silty matrix and the lower gray silty matrix.

A grid shovel testing program was undertaken at the site to determine the site size and the distribution of cultural material. Sixteen grid shovel tests were excavated; none of which produced additional cultural material. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.386.

Artifact Summary, TLM 228

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	1	Argillite flake
	2	Basalt flakes

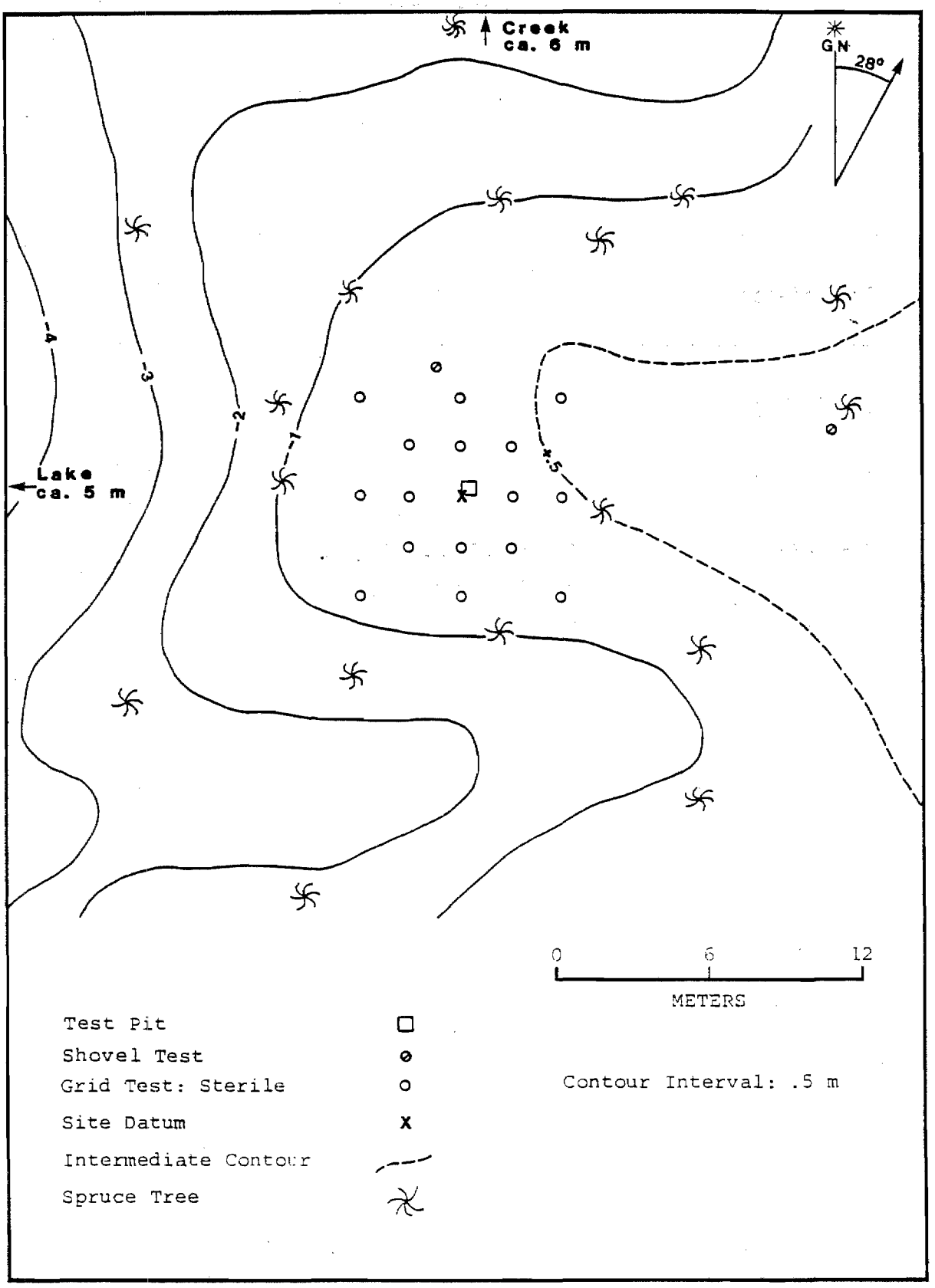


Figure D.299. Site Map, TLM 228

AHRS Number TLM 229; Accession Number UA84-75

Area:	North of Watana Creek Mouth
Site Map:	Figure D.300
Survey Locale 22:	Figure E.99
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 229 is located on a relatively flat, elongated kame north of the confluence of Watana Creek with the Susitna River. The kame, approximately 45 x 15 m, has a northeast-southwest alignment at an elevation of 562 m asl (altimeter: 1843 feet). The site occupies the crest of a slightly depressed saddle in the center of the kame and adjacent southeast-facing slope. The region surrounding TLM 229 is characterized by similar kames and intervening drainages and kettle basins. A small (2 ha) ephemeral lake is located ca. 100 m north of the site. The kame slopes rather steeply in a stepped fashion to the southeast and south, forming part of a long sinous ridge running ca. 300 m to the south and southwest onto a relatively flat, open terrace above the present Susitna River flood plain. The kame slopes abruptly to the east as well, dropping ca. 10 m in elevation to a small circular kettle.

The site and surrounding region are covered with upland spruce-hardwood forests, which restrict visibility in all directions to about 200 m. Spruce-hardwood forests are denser on slopes and in well-drained areas surrounding the site. The site is sparsely covered with white spruce and paper birch, with an understory of dwarf birch, Labrador tea, lowbush cranberry, blueberry, grasses, crowberry, timberberry, lichens, and sphagnum moss.

Testing:

Initial testing at TLM 229 produced a single basalt flake in a shovel test, as well as 13 basalt flakes, 41 pieces of calcined bone, and 1 unburned bone fragment from the 40 x 40 cm test pit (test pit 1) expanded around the initial shovel test. Sixteen calcined bone fragments and nine basalt flakes were recovered from the Devil tephra (unit 2). The oxidized Watana tephra (unit 3a) yielded 25 calcined bone fragments, 1 unburned bone fragment, and 1 basalt flake. The remaining four basalt flakes were obtained from the contact between these units. Two additional shovel tests in the site area failed to reveal cultural material.

Systematic testing was implemented to assess the content and stratigraphic positions(s) of artifacts present. To assist determining site size, a program of grid shovel testing involving the placement of 41 grid shovel tests was conducted, resulting in three grid shovel tests with cultural remains. A 1 x 1 m test square, N98/E99, was excavated adjacent to test pit 1 to assess the stratigraphic location and content of cultural materials. The location of subsurface testing conducted at TLM 229 is shown in Figure D.300.

Discussion:

Testing at TLM 229 involved the excavation of 2 survey shovel tests, 41 grid shovel tests, 1 test pit, and 1 test square. Survey testing yielded 13 basalt flakes, 41 calcined bone fragments, and 1 unburned bone fragment. Six basalt flakes, 16 argillite flakes, and 7 calcined bone fragments were recovered during grid shovel testing. In addition, 84 basalt flakes, 3541 calcined bone fragments, 4 unburned bone fragments, and a possible artifactual cobble fragment were obtained from test square N98/E99. Together with the material recovered during survey, TLM 229 has yielded 127 lithic artifacts and 3593 fragments of bone. Table D.388 lists the artifacts recovered from TLM 229, and Table D.390 gives the distribution of these artifacts stratigraphically.

Artifacts were recovered from a wide stratigraphic distribution, occurring in six of 10 soil/sediment units defined for the site, based on the exposures in test square N98/E99. Figure D.301 illustrates the stratigraphic sequence at TLM 229, and the units are described in Table D.387. The upper stratigraphic unit consists of a densely rooted well-developed surface organic mat (unit 1a) which overlies a layer of silt and finely divided organic matter (unit 1b). Below this dark humic layer is a continuous horizon of Devil tephra (unit 2). This unit is stratigraphically above a highly mottled and oxidized very fine silt, the oxidized Watana unit (unit 3a). Unit 3a is discontinuous, mixed with and gradational to the underlying units 3b (unoxidized Watana tephra) and 3c, a mottled grayish silt containing Watana tephra, abundant charcoal and calcined bone, and possibly wood ash. Unit 3c often occurs above unit 3b and sometimes as pockets within it. These pockets always connect with unit 3a, however, and probably indicate cultural or geological mixing of artifacts and sediments in the stratigraphic column. Most likely unit 3c is a culturally disturbed portion of unit 3b. The oxidation of unit 3a (as well as 3b and 3c, although in much less quantity) is presumably the result of postdepositional accumulation of iron oxides in the Watana tephra, a function of spodic horizon development. Underlying the Watana tephra units is a charcoal-rich but fairly thin paleosol (unit 4) located on the Oshetna tephra surface (unit 5). Some cryoturbation is evident in the wavy and pocketed nature of the Oshetna tephra (unit 5), but it is fairly continuous and not irregular. Beneath this tephra is a layer of reddish yellow eolian sandy silt (unit 6) lacking drift pebbles. This unit overlies a coarse sandy weathered glacial drift (unit 7) with numerous rounded pebbles and cobbles. Unit 6 often fills interstices between cobbles lying on top of the drift.

Artifacts were recovered in all units from the contact of the fine organic silt and Devil tephra (unit 1b/2 contact) down to the top of the reddish sandy silt (unit 5/6 contact). Units 3a and 3c, the oxidized Watana and the grayish mixed Watana unit, contained the majority of artifacts. Because the materials in the test square and test pit are identical throughout the strata, and as there is good evidence of

mixture of sediments in this area, all materials in this portion of the site are referable to a single occupational component. A second component may occur where the argillite flakes are located, since no argillite has been noted elsewhere at the site. However, the stratigraphic position of these argillite flakes is identical with the other component, at the upper Watana tephra. Preliminary systematic excavation could not determine whether these flakes constitute a separate occupational episode.

Of the two types of lithic raw materials represented at the site, basalt is the most abundant. All chipped stone artifacts are unmodified flakes indicative of byproducts of stone tool manufacture. All of the argillite flakes occur at the western end of the site, in a single shovel test. Basalt flakes occur in all other artifact-bearing exposures. Lithic material from this component, as noted above, consists of scattered pieces of unmodified debitage, representing secondary and final stages of basalt tool manufacture. Flakes were absent in areas of greatest bone concentration, but there were no areas of high flake density.

A single unmodified drift cobble was located within the Watana tephra, with its base in unit 3b and its top extending to the contact between the Devil and the Watana tephras (unit 2/3a contact). While the cobble appears to be unmodified, its position is stratigraphically unique, and may indicate that it was culturally deposited as part of the component.

The majority of faunal material consists of fragmentary cranial, tooth, long bone, or unidentifiable specimens typically attributable to medium-large mammals. Identifiable skeletal elements consist of two small mammal bone fragments, and 11 fragments identified as caribou (Rangifer tarandus). Ten of the identified caribou bones are extremity elements, and one is a vertebral fragment. Calcined bone is heavily crushed, and was especially dense in the southwest corner of test square N98/E99. Parts of this area were literally covered with crushed calcined bone and the silt matrix has taken on a sandy texture from the

abundance of bone meal. Unit 3c was best developed in this corner, and the stratigraphy showed the most evidence of disturbance as well.

Evaluation:

TLM 229 is a small site with a relatively dense concentration of artifacts, containing one and possibly two components, both of which are located on the top of the Watana tephra. This occupation on the surface of the Watana tephra (units 3a and 3c), in conjunction with substantial mixing of materials indicated in the upper part of this tephra, is characteristic of cultural fill or midden. Occurrence of basalt flakes and calcined bone is probably the result of postdepositional vertical mixing of artifacts and sediments. The major occupation consists of a dense concentration of calcined bone and a few fragments of unburned bone, including the remains of caribou. Unmodified basalt flakes occur scattered through this component as well, indicating secondary and final stages of stone tool manufacture. An additional component, or a spatially discrete part of the same occupational component, is represented by the argillite flakes on the southwest edge of the site.

The nature of the artifacts present indicates a relatively short-term camp involving the cooking and consumption of game (caribou) and the manufacture or repair of stone tools. Similar sites with components in the same stratigraphic position are located nearby (e.g., TLM 216 and TLM 217) and may represent brief camps during hunting expeditions. Further excavation at TLM 229 and these other sites may clarify this occupational pattern in the Watana Creek region. Observed site size based on the distribution of artifacts is 24 square meters (Table D.2).

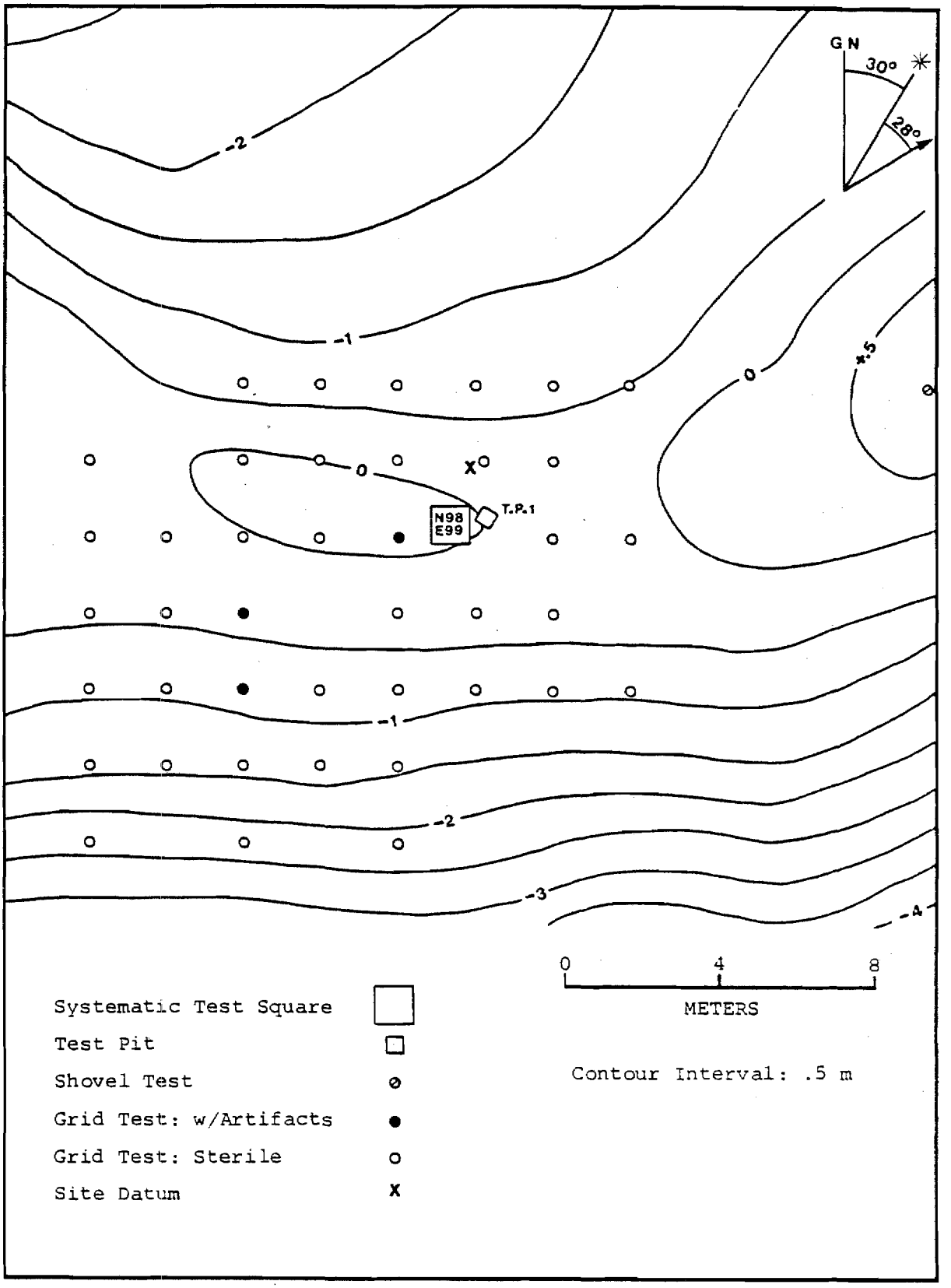


Figure D.300. Site Map, TLM 229

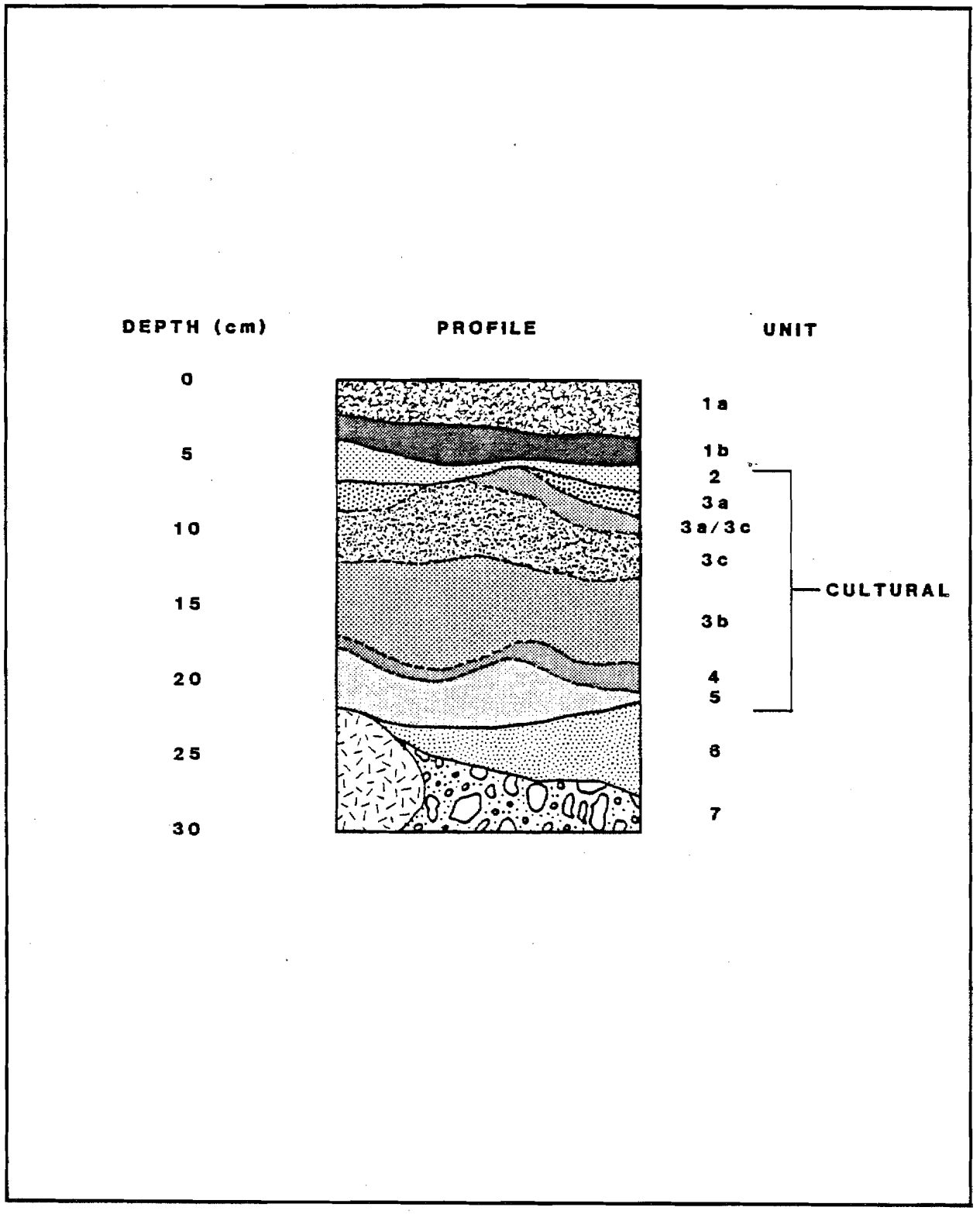


Figure D.301. Composite Profile, TLM 229

Table D.387.

Soil/Sediment Description for Composite Profile, TLM 229

Unit	Description
1a	Dense surficial organic mat with abundant roots, decomposing organic matter, and a small amount of silt; dark reddish brown (5YR 3/3). Varies from 2-13 cm thick. Abrupt fairly level contact with underlying fine organic silt unit (unit 1b). Contains abundant charcoal from old burns.
1b	Well-sorted fine silt with occasional pockets of sand, permeated with finely divided organic matter and organics; black (10YR 2/1). Varies from 1-4 cm thick, usually 2-3 cm. Far fewer roots than in unit 1a with much more silt. Wavy fairly abrupt contact with Devil tephra (unit 2), though it stains and sometimes mixes with the top of this unit. Contains artifacts at the contact with unit 2.
2	Continuous, well-sorted tephra unit; varying in color from grayish brown to pale brown generally light brownish gray (10YR 6/2). Devil tephra. Thickness varies from less than 1-5 cm, thinnest area occurring in SW corner where this unit is partially mixed with unit 1b. Contact with unit 3a is abrupt. Unit contains a small amount of charcoal and a few artifacts. Abundant artifacts are found at lower contact.

Table D.387. (Continued)

Unit	Description
3a	Oxidized, extremely fine well-sorted silt with iron oxide coating; reddish brown (2.5YR 3/4 to 5Y 3/3). Oxidized Watana tephra. Discontinuous, and varies in color, texture and thickness throughout square. Usually occurs above units 3b or 3c, but may occur as isolated patches in upper part of these units. Thickness varies between 0 and 3 cm. Contact with unit 3c unclear. Contact with unit 3b gradual and irregular. Contains abundant artifacts and some charcoal.
3b	Extremely fine, well-sorted silt; pale brown (2.5Y 6/4) to dark yellowish brown (10YR 4/6). Unoxidized Watana tephra. Thickness varies from less than 3 cm to about 12 cm, but generally 8-10 cm. Lower contact diffuse but clear. Contact with unit 6 abrupt. Contact with units 3a or 3c gradual or mixed. Generally sterile.
3c	Extremely fine silt with charcoal, wood ash, and abundant burned bone; grayish brown (10YR 5/3) mottled unit. Unit is probably a mixture of unit 3b and cultural debris mixed with grayish Watana. Distribution throughout square; patchy, predominantly in SW corner. Thickness varies from 0-8 cm. Contacts gradual to diffuse, often mixing with these units 3a, 3b, and 4, probably through cultural disturbance. Artifactual material present.

Table D.387. (Continued)

Unit	Description
4	Unit consists of a thin discontinuous layer of silt, sand and charcoal; grayish brown (2.5Y 4/2) to black (N 2/). Oshetna paleosol. Thickness varies from 0-2 cm, with a mode of 1 cm. Contains abundant charcoal in NE corners. In SW corner, missing or mixed with 3b and 3c. Lower contact diffuse and wavy. Some artifacts present at upper contact with 3b/3c.
5	Fine sandy silt; varies from grayish brown (3.5Y 5/2) to dark gray (5Y 4/1). Discontinuous, best development in northern half. Thickness ranges from 0-6 cm thick, generally 3-4 cm. Oshetna tephra. Contact with unit 6 abrupt. A few bone fragments are present at contact. Also contains pebbles from underlying drift.
6	Very fine eolian silt with reddish tint draped around pebbles and cobbles on drift unit 7 below; dark yellowish brown (10YR 4/4). Thickness varies form 2-10 cm. Continuous. Lower contact abrupt to diffuse.
7	Poorly sorted coarse to medium sand with a reddish tint and contains abundant cobbles and pebbles; dark yellowish brown (10YR 4/6). Glacial drift marks base of excavation.

Table D.388.

Artifact Summary, TLM 229

Lithic Material

16	Argillite flakes
104	Basalt flakes
6	Flakes less than 1/8" mesh
1	Cobble fragment
127	

Faunal Material

3,593	Bones and bone fragments

Table D.389.

Faunal Material by Stratigraphic Unit, TLM 229

Unit		Description
1b/2 Contact between finely divided organics and Devil tephra	1	Distal fragment proximal phalanx, calcined, caribou (Rangifer tarandus)
	17	Unidentifiable fragments, calcined, medium-large mammal
2 Within Devil tephra	8	Unidentifiable fragments, calcined, medium-large mammal
2/3a Contact between Devil and oxidized Watana tephra	1	Probable magnum fragment, calcined, caribou (Rangifer tarandus)
	2	Possible metapodial fragments, calcined, possible caribou (Rangifer tarandus)
	1	Distal fragment proximal phalanx, calcined, caribou (Rangifer tarandus)
	1	Long bone fragment, unburned, weathered, medium-large mammal
	1	Flat bone fragment, calcined, medium-large mammal
	808	Long bone and unidentifiable fragments, calcined, medium-large mammal

Table D.389. (Continued)

Unit		Description
3a	1	Sesamoid, calcined, caribou (Rangifer tarandus)
Within oxidized		
Watana tephra	1	Long bone fragment, unburned, medium-large mammal
	1,219	Cranial, long bone, tooth, and unidentifiable fragments, calcined, medium-large mammal
3a, 3c	1	Tooth fragment (enamel), calcined, medium-large mammal
Within oxidized		
Watana tephra and	1	Scapula fragment (glenoid fossa), calcined, small mammal
grayish cultural		
unit in Watana	1	Possible vertebra fragment, calcined, small mammal
tephra		
	1,026	Cranial, long bone, and unidentifiable fragments, calcined, medium-large mammal
3b	1	Sesamoid, calcined, caribou (Rangifer tarandus)
Within buff		
Watana tephra	1	Rib or vertebra process fragment, calcined, medium-large mammal
	401	Cranial, long bone, and unidentifiable fragments, calcined, medium-large mammal
	17	Unidentifiable fragments, calcined, mammal

Table D.389. (Continued)

Unit		Description
3c Within grayish cultural unit in Watana tephra	1	Vertebra fragment, calcined, probable caribou (Rangifer tarandus)
	1	Possible proximal radius or metapodial fragment, unburned, possible caribou (Rangifer tarandus)
	1	Distal fragment proximal phalanx, calcined, possible caribou (Rangifer tarandus)
	1	Proximal fragment medial phalanx, calcined, possible caribou (Rangifer tarandus)
	1	Possible phalanx fragment, calcined, medium-large mammal
	1	Long bone shaft fragment, unburned, medium-large mammal
	1	Unidentifiable fragment, unburned, medium-large mammal
	59	Long bone and unidentifiable fragments, calcined, medium-large mammal
3/5 Contact between Watana tephra and Oshetna tephra	6	Long bone and unidentifiable fragments, calcined, medium-large mammal
	2	Unidentifiable fragments, calcined, mammal

Table D.389. (Continued)

Unit		Description
5 Within Oshetna tephra	5	Unidentifiable fragments, calcined, mammal
5/6 Contact between Oshetna tephra and glacial drift	4	Unidentifiable fragments, calcined, mammal

Table D.390.

Artifact Summary by Stratigraphic Unit, TLM 229

Unit		Description
1b/2 Contact between organic silt and Devil tephra	5	Basalt flakes
2 Devil tephra	23	Basalt flakes
2/3 Contact between Devil and Watana tephras	3 3	Argillite flakes Basalt flake
2/3a Contact between Devil and oxidized Watana tephras	37 6	Basalt flakes Flakes less than 1/8" mesh
3 Watana tephra	13	Argillite flakes
3a Oxidized Watana tephra	14	Basalt flakes

Table D.390. (Continued)

Unit		Description
3b	2	Basalt flakes
Unoxidized Watana tephra	1	Cobble fragment (UA84-75-55)
3c	19	Basalt flakes
Grayish cultural unit in Watana tephra		
4	1	Basalt flake
Oshetna Paleosol		

AHRS Number TLM 230; Accession Number UA84-79

Area:	North of Watana Creek Mouth
Site Map:	Figure D.302
	Excavation Plan View, Figure D.303
Survey Locale 22:	Figure E.99
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 230 is located north of the confluence of Watana Creek with the Susitna River at the southeast corner of a terrace above the creek at 506 m asl (altimeter: 1659 feet). The terrace runs south to the site location paralleling the west side of Watana Creek, then turns 90 degrees and extends west paralleling the north side of the Susitna River. To the north, northwest, and west of the site, the terrain gently slopes up onto the relatively level top of the terrace. To the south, southeast, and east of the site, the terrain slopes steeply down to the densely forested flood plain of the Susitna River. The view from the site to the south and east is restricted by dense stands of spruce, aspen, and birch. Views to the north, northwest, and west include the terrace which has scattered spruce and thick, dense understory vegetation. Watana Creek to the east is not visible except for small portions through the trees. If the trees were not present, there would be a sweeping view to the south and east encompassing the steep canyon walls on the south side of the Susitna River and the east side of Watana Creek. These valley slopes are partially visible through the trees. Directly west of the site is a high prominent kame, visible through the trees which is the location of TLM 200. The ecosystem of the site area is characterized by an upland spruce-hardwood forest, composed of a varied mixture of white spruce, black spruce, aspen, and paper birch. The understory species include birch saplings, willow, Labrador tea, blueberry, lowbush cranberry, timberberry, soapberry, dwarf dogwood, wild rose, fireweed, lichen, grasses, heath, and sphagnum moss.

Testing:

TLM 230 was initially located during survey with the discovery of five chert flakes in the oxidized Watana tephra. A 40 x 40 cm test pit (test pit 1) was placed directly to the west of the productive shovel test. During the excavation of test pit 1, one chert flake was found in the Devil tephra and 23 chert flakes were found in the oxidized Watana tephra. One chert flake was found on the contact between the unoxidized Watana tephra and the Oshetna tephra. One additional shovel test placed in the immediate site area revealed no artifacts.

Systematic testing at TLM 230 consisted of the excavation of one 1 x 1 m (N97/E99) test square and a portion of four additional 1 x 1 m test squares. The goals of systematic testing at TLM 230 were designed to determine site extent, stratigraphic position, and content of the occupation reported during survey testing. A grid shovel testing expansion program was implemented to assist in determining site size and the number and placement of test squares. Seventy-three grid shovel tests were placed on the site. Ten of these shovel tests produced cultural material from the Watana tephra and its upper contact with the Devil tephra. The initial 1 x 1 m test square (N97/E99) was placed to the northwest of test pit 1. During the excavation of this test square, the corner of a wooden box was found in a cultural pit (feature 1) exposed in the profile of the north wall. Portions of four additional 1 x 1 m test squares (NE¼ of N97/E98, N98/E98, N98/E99, S½ of N99/E98) were placed north and west of the initial test square in order to expose the entire perimeter of feature 1. Excavation of these four test squares was limited due to the discovery of a burial within the pit (feature 1).

Discussion:

Survey testing, grid shovel testing, and systematic testing yielded 100 lithic specimens (of which 14 were tools or tool fragments), 13 metal artifacts, and 2 wooden items. A prehistoric lithic component and a more recent burial component were identified. The total artifact

summary is listed in Table D.392, and the distribution of these artifacts by stratigraphic unit is presented in Table D.393.

Seven soil/sediment units are identified at TLM 230. Figure D.304 illustrates the vertical superposition of these units. Table D.391 describes the various unit characteristics. The stratigraphic history is best illustrated as a series of cultural and natural events. The vertical placement of the soil/sediment units is fairly consistent throughout the areas of excavation. A general stratigraphic section consists of a glacial drift (unit 7) overlain by a series of eolian sands (6c, 6b, 6a). Above the eolian sands is a series of volcanic ash falls consisting of the Oshetna tephra (unit 5), Watana tephra (unit 4), and Devil tephra (unit 3). At some time after the Devil tephra was deposited, a pit was excavated through the tephras and into the drift. The excavated sediment was deposited around the perimeter of the pit. The wooden box containing the burial was placed in the pit which was then backfilled. Glacial drift mixed with tephras (unit 2) comprises the matrix of the backfill material. A series of wooden planks nailed together were placed over the pit. Only one area showed the planks still nailed together; elsewhere, nails were isolated, apparently no longer attached to anything. An organic paleosol (unit 1 c) had formed between the pit backfill and the overlying wooden planks. A thick contemporary organic mat caps the stratigraphic sequence. This organic mat contains plant debris, roots, and rootlets.

Five of the seven soil/sediment units (and the contacts between these units) have associated and displaced cultural material; however, only two cultural components are identified at TLM 230. It is possible that all of the lithic material found at TLM 230 can be correlated to the first occupation of the site. Eighty-eight percent of this lithic material was found in the Devil and Watana tephras and at the contact between these two units. The remainder of the lithic material occurred above and below this cultural unit. Three basalt flakes and four chert flakes were found in the pit backfill and at its upper contact; these flakes were probably displaced during the second cultural event at the site. One granite hammerstone/abrader (UA84-79-41) was found resting on

the contact between the organic paleosol (unit 1 c) and pit backfill (unit 2) beneath the wooden planks. Cryoturbation and bioturbation, may have resulted in movements of cultural material between units.

Upper Component: The partial excavation of the four 1 x 1 m test squares and the complete excavation of one test square provided adequate stratigraphic exposure to determine the extent of the wooden remains on the surface, the perimeter of the pit, and the wooden box containing the burial. A series of flat wooden planks and rounded wooden poles were found directly under the organic mat overlying the pit containing the burial. These wooden planks and poles were extremely deteriorated, but appeared to be rough hewn or split. Some of them have been connected together with square nails. The wooden planks appear to have a standard width measurement of 20 cm (8") but vary in length from 80-150 cm (2' 7.5"-4'11"). The planks are oriented northwest-southeast, similar to the orientation of the box below (Figure D.303). There were three rounded poles (10 cm in diameter) that were oriented east-west. The function of these wood remains is difficult to discern, but it is possible that they were placed over the backfilled area to mark the location and/or to keep animals out. These wooden remains may also represent a collapsed superstructure.

The perimeter of the pit measures 180 x 50 cm (5'11" x 1'7.5") and is oriented northwest-southeast on the long axis. The depth of the pit is 85 cm. Only 40 cm of the southern end of the box was exposed during the excavation. Along the center of the southern end of the box is an upright birch pole that is forked at the top and supports a horizontal ridge pole (2 cm in diameter) that extends parallel to the length, 17 cm above the top of the box. This upright birch pole is leaning against the end of the box, and does not appear to be attached in any way. There is probably another upright pole at the northern end. In removing the matrix from around the horizontal ridge pole, there was a cavity exposing the inside of the box. The lid of the box had apparently rotted and fallen in along the sides. It is possible that the horizontal pole was used to support a pitched bark cover laid from the horizontal pole down to the sides of the box to form a "spirit house"

(Paul Theodore, personal communication 1984). Portions of a possible decomposed wood lining adhered to the human remains within the box. Some backfill had fallen into the box, covering parts of the skeletal remains.

The presence of the cavity above the burial provided a means of determining the measurements of the box. The interior dimensions of the box are 145 x 20 x 20 cm (4'9" x 8" x 8.7"). The box is 2.5 cm (1") thick, and appears to be constructed with 20 cm (8") wooden planks. Only two square nails were observed near the midpoint on the southeast end of the box connecting the end to the two sides. Two other square nails were observed on each side of the top of the box where the lid was once attached. Joints were simple lap joints. A possible interior, upright corner support was observed in the southwest corner of the box. One nail may have attached the support to the end of the box, but the nail on the eastern side was observed to be unattached.

The human remains, exposed during the excavation, consisted of portions of the left and right tibia of an articulated skeleton (Figure D.303). Portions of the calcaneus and talus were exposed, but most of the bones were covered with a thin layer of wood and backfill material. Eleven tubular glass beads (10 x 3 mm) were observed in situ around the tibia and calcaneus of the skeleton. Six of these beads were red and five were blue. A brown fibrous material (possibly leather) was observed along the left tibia. No other artifacts were observed in association with the burial. No contents of the grave were removed.

Metal artifacts on the site are represented by 12 square nails. These nails were found in association with wooden planks located directly under the vegetation mat covering the burial pit (feature 1). A badly rusted metal fragment was recovered from a square nail that was nailed to the southern end of the wooden box containing the burial. Wood artifacts collected from the site included a sample of the wooden planks covering the burial and a worked wood fragment (UA84-79-40) found in association. There were four scored aspen trees encircling the head of the burial. The scoring of the aspen trees could be associated with the

burial on the site. De Laguna and McCellan (1981:659) stated that plank-lined graves were introduced by the Russians in the midnineteenth century. Irving (1953:12) noted the presence of burials at site 6C near Tyone Lake. These burials were in small, hand-hewn plank boxes, which were held together by a few square nails and supported by stakes driven into the ground. One burial had a structure built over it. The grave encountered at TLM 230, while different from those found by Irving during his 1953 survey, showed some similarities in that the remains were buried in a small box of presumably hand-hewn planks and surrounded by a structure.

Lower Component: The lower component at TLM 230 can be correlated to the Devil and Watana tephras and the contact between these two units. In the Devil tephra (unit 3), there were 9 basalt flakes, three of which were modified; 14 chert flakes, one of which was modified; and 1 modified argillite flake. At the contact between the Devil and Watana tephras (unit 3/4) there were 1 basalt flake, 5 chert flakes (three of which were modified), 1 modified quartzite flake, and 1 quartzite notched pebble. In the Watana tephra (unit 4) there were six basalt flakes (one of which was modified), 48 chert flakes, and one chert rejuvenation flake. In the Oshetna tephra (unit 5) there were one chert flake and one granite cobble fragment. At the lower contact of the Oshetna tephra with eolian sand (5/6) there were one quartzite flake and one chert core fragment.

Five classes of lithic raw material are identified in the lithic assemblage. The lithic raw material types include argillite, basalt, chert, granite, and quartzite. Chert is the most abundant type, represented by 72 flakes, of which three are modified (UA84-79-23, 24, 25). A chert rejuvenation flake (UA84-79-29; Figure D.394e) and a small core fragment (UA84-79-34; Figure D.394f) are also represented. Basalt is represented by 19 flakes, of which four are modified (UA84-71-1, 14, 15, 16). There are three quartzite flakes, of which one is modified (UA84-79-26). A quartzite notched pebble with battering (UA84-79-27; Figure D.394g) is also represented. Argillite is represented by only

one modified flake (UA84-79-13). A granite, battered hammerstone/abrader (UA84-70-41; Figure D.394h) and a granite cobble fragment are also present. Due to the site location and the stratigraphic provenience of these artifact types, it is possible that the lithic component on the site may represent more than one short-term occupation.

Evaluation:

TLM 230 is located north of the confluence of Watana Creek with the Susitna River, at the southeast corner of a high terrace above the flood plain. The views to the east and south are obscured by dense stands of spruce, aspen, and birch. Views to the west and north overlook the terrace, which is vegetated by scattered spruce and dense understory growth.

Testing at TLM 230 identified two cultural components, including a prehistoric lithic component and a later burial component. The presence of modified flakes, a rejuvenation flake, a flake core, a hammerstone/abrader, and a notched pebble, as well as the variety in raw material types, indicates various cultural activities in operation. Several stages of lithic reduction for tool manufacture are represented. It is possible that this prehistoric lithic component represents several short-term occupations.

The burial component at TLM 230 is presumably affiliated with the late Athapaskan tradition of Interior Alaska. The presence of associated square nails, split wood, and trade beads suggest a postcontact occupation. The structure of the grave may indicate that a "spirit house" was constructed over the burial. The site is unique in the Middle Susitna River area. Observed site size based on the distribution of artifacts is 66 square meters (Table D.2).

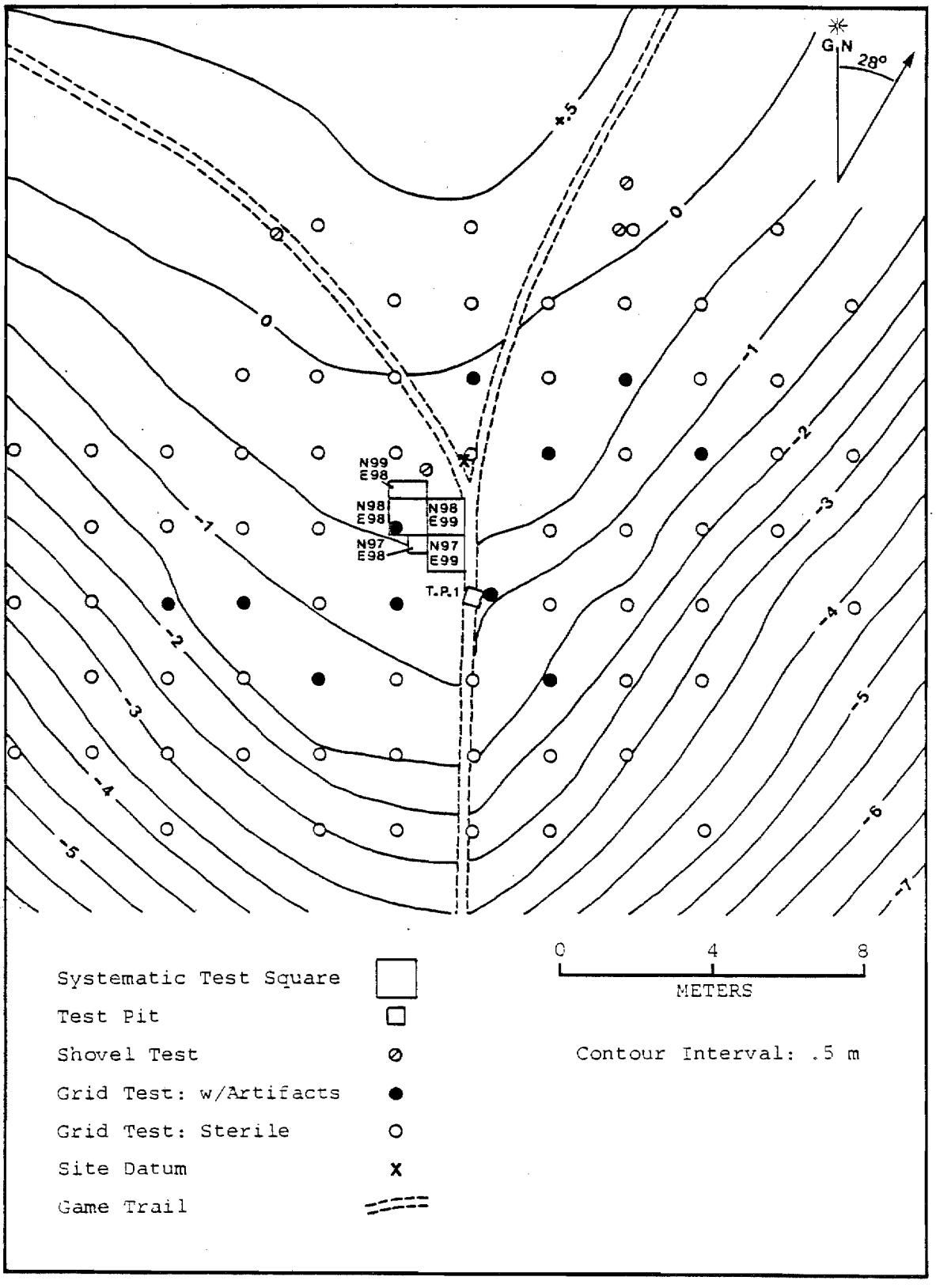


Figure D.302. Site Map, TLM 230

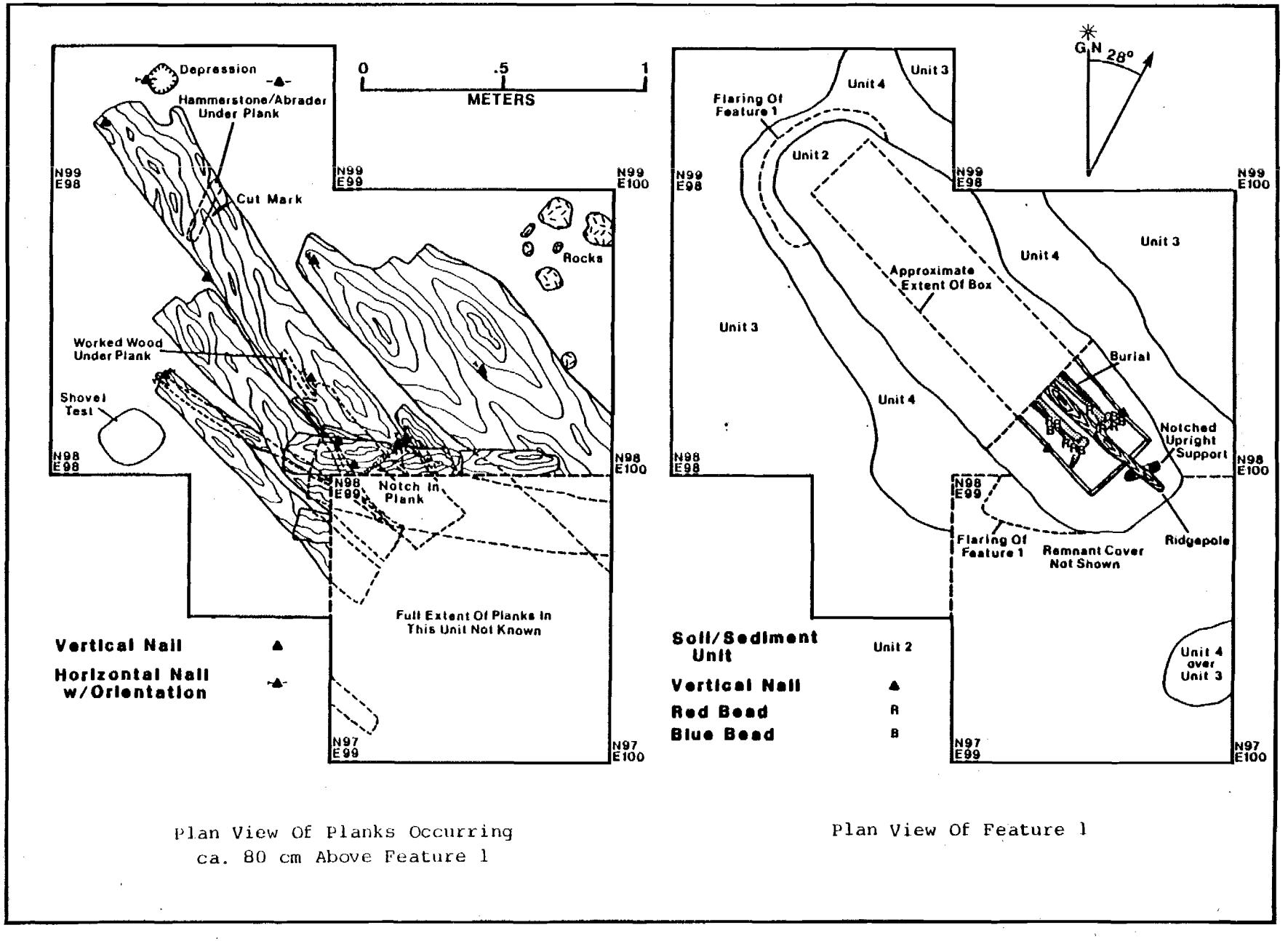


Figure D.303. Excavation Plan View, TLM 230

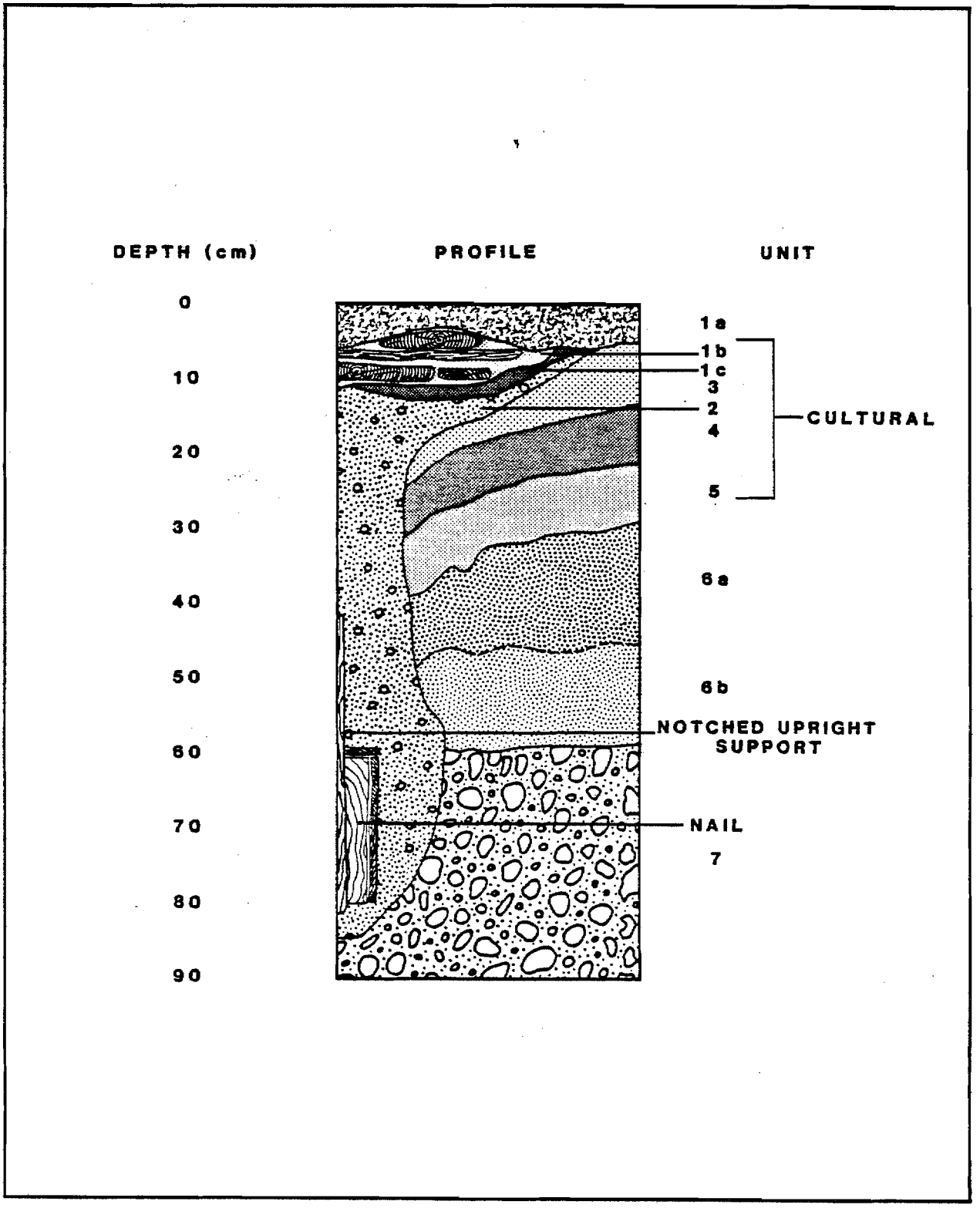


Figure D.304. Composite Profile, TLM 230

Table D.391.

Soil/Sediment Description for Composite Profile, TLM 230

Unit	Description
1a	Surface organic layer; roots and plant material from Labrador tea, lowbush cranberry, dwarf dogwood, lichen, grasses, heath, and sphagnum moss from the surface. Varies in thickness from 4-13 cm, but generally 6 cm. Lower boundary clear and wavy. O1 horizon. Continuous.
1b	Unit in profile represents wooden planks.
1c	Fine silt with partially decomposed plant fragments and finely divided organic material; very dark grayish brown (10YR 3/2). Varies in thickness from 1-2 cm. Lower boundary diffuse and irregular. Discontinuous. O2 or humus horizon.
2	Sand with pebbles, mixed tephra; dark yellowish brown (10YR 4/4). Fill material from original excavation of pit (feature 1). Thickness is 90 cm. Lower boundary smooth.
3	Fine-grained silt size particles; grayish brown (10YR 5/2) to dark gray (5YR 4/1). Ranges in thickness from 1-6 cm, but generally 4 cm. Abrupt, wavy, and clear contact with unit 4. Tephra (Devil); eluvial A horizon. Discontinuous. Dries quickly to a fine powder. Rootlet penetration. Cultural material present.

Table D.391. (Continued)

Unit	Description
4	Fine-grained silt size particles; dark reddish brown (5YR 3/4 to 2.5 Y 5/4) to dark yellowish brown (10YR 4/4). Varies in thickness from 2-19 cm but generally 6 cm. Lower boundary wavy to diffuse. Tephra (Watana); illuvial B2 horizon. Continuous. Oxidized at the upper contact with unit 3. Cultural material present.
5	Fine-grained silt size particles; gray (10YR 5/1). Varies in thickness from 1-6 cm but generally 3 cm. Lower boundary clear and wavy. Tephra (Oshetna); buried eluvial A horizon. Discontinuous. Cultural material present.
6a	Fine sandy silt size particles; dark yellowish brown (10YR 4/4) to olive brown (2.5Y 4/4). Varies in thickness from 3-12 cm but generally 8 cm. Eolian sand, oxidized at upper contact with unit 5. Finely sorted.
6b	Fine silty sand size particles; olive gray (5Y 4/2) to olive (5Y 4/3). Varies in thickness from 10-28 cm but generally 20 cm. Eolian sand. Finely sorted.
7	Sand and some silt mixed with pebbles and cobbles; dark grayish brown (10YR 4/2). Glacial drift. Poorly sorted. Cobbles are usually 18-34 cm in diameter. Extent of excavation.

Table D.392.

Artifact Summary, TLM 230

Tools	
10	Modified flakes
	1 Argillite (UA84-79-13)
	4 Basalt (UA84-79-1, 14, 15, 16)
	4 Chert (UA84-79-23, 24, 25, 44)
	1 Quartzite (UA84-79-26)
1	Rejuvenation flake
	1 Chert (UA84-79-29)
1	Flake core fragment
	1 Chert (UA84-79-34)
1	Hammerstone/abrader
	1 Granite (UA84-79-41)
1	Notched pebble
	1 Quartzite (UA84-79-27)
14	
Lithic Material	
15	Basalt flakes
68	Chert flakes
2	Quartzite flakes
1	Granite cobble fragment
86	

Table D.392. (Continued)

Historic Remains

12	Square nails
1	Rusted nail fragment
1	Worked wood fragment (UA84-79-40)
1	Wooden plank sample
1	Red fibrous material sample
16	

Table D.393.

Artifact Summary by Stratigraphic Unit, TLM 230

Unit		Description
1b/2	1	Granite hammerstone/abrader (UA84-79-41)
Contact between	1	Rusted nail fragment
wooden planks and	12	Square nails
pit backfill	1	Worked wood fragment (UA84-79-40)
	1	Wooden plank sample (UA84-79-68)
	1	Red fibrous material sample
2	3	Basalt flakes
Pit backfill	4	Chert flakes
3	6	Basalt flakes
Devil tephra	13	Chert flakes
	1	Modified argillite flake (UA84-79-13)
	3	Modified basalt flakes (UA84-79-14, 15, 16)
	1	Modified chert flake (UA84-79-44)
3/4	1	Basalt flake
Contact between	1	Chert flake
Devil tephra and	3	Modified chert flakes (UA84-79-23, 24, 25)
Watana tephra	1	Modified quartzite flake (UA84-79-26)
	1	Notched quartzite pebble (UA84-79-27)
3 and 4	1	Chert flake
Devil tephra and		
Watana tephra		

Table D.393. (Continued)

Unit		Description
4	5	Basalt flakes
Watana tephra	48	Chert flakes
	1	Quartzite flake
	1	Modified basalt flake (UA84-79-1)
	1	Chert rejuvenation flake (UA84-79-29)
5	1	Chert flake
Oshetna tephra	1	Granite cobble fragment
5/6	1	Quartzite flake
Contact between Oshetna tephra and eolian sand	1	Chert core fragment (UA84-79-34)

AHRS Number TLM 231; Accession Number UA84-80

Area:	West of Watana Creek
Site Map:	Figure D.305
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site is situated, at 607 m asl (altimeter: 1990 feet), on the northeastern point of a discrete ridge oriented north-northeast by south-southwest, which is ca. 100 x 35 m. The site area is relatively flat for about 100 square meters. The terrain to the northwest descends into a tussock bog, ca. 1 m lower than the site, approximately 100 m away. To the northeast and east the terrain descends along a 7-9 degree slope to a small stream drainage. A ca. 50 cm wide stream, ca. 50 m to the north flows east-southeast for approximately 300 m where it is ca. 7 m lower in elevation and changes course to a northwest-southeast orientation, joining Watana Creek ca. 400 m to the southeast. A larger stream ca. 1 m wide, is situated approximately 400 m north of the site and is characterized by a ca. 20 ha alluvial fan located about 600 m east of TLM 231. The site location is unique due to the fact that it offers an open view of lower knolls, east of the site and a ca. 2-3 km stretch of the Watana Creek valley, beginning northwest and terminating to the east. Watana Creek is in clear view ca. 1 km distant to the northeast. To the southeast the outlet stream valley from a lake, locally known as Duck Embryo Lake or Sally Lake, is discernible through the forest. The views west and southwest are limited to ca. 40 m due to the spruce forest. The site surface is densely covered with a lichen mat. Additional plants present at the ridge point include Labrador tea, blueberry, lowbush cranberry, sphagnum moss, and dwarf birch. Beyond the immediate vicinity of the site sphagnum moss is thicker, dwarf birch and black spruce are more numerous.

Testing:

A survey shovel test exposed 171 burned and calcined bone fragments, 2 unburned bone fragments, and thermally altered rocks (Table D.394). A 40 x 40 cm test pit (test pit 1) was superimposed over the shovel test. This test pit yielded 1 chert flake, 16 unburned bone fragments, 168 calcined bone fragments, and 1 cobble fragment.

Thirty-four grid shovel tests were excavated to estimate site extent and assist in the determination of stratigraphic origin of cultural material. Two shovel tests (N98/E100 and N104/E104) produced 2,743 unburned bone fragments in the organic unit (Table D.394). The faunal remains recovered from this site included a distal phalanx and an astragalus of caribou (Rangifer tarandus). Test N96/E98 contained a mixed tephra and drift overburden unit above the Devil tephra, similar to that observed in test pit 1. A possible source of the overburden unit may be an indistinct depression beneath a large poplar shrub ca. 2.5 m east of test pit 1. This depression could not be defined during survey testing. Twenty-three sterile shovel tests were also excavated at this site. Observed site size based on the distribution of artifacts is 19 square meters (Table D.2).

Table D.394.

Artifact Summary, TLM 231

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	1	Chert flake
	1	Cobble fragment
Faunal Material		
Subsurface		
Test pit 1	1	Distal phalanx, unburned, caribou (Rangifer tarndus)
	17	Long bone and unidentifiable fragments, unburned, medium-large mammal
	339	Long bone and unidentifiable fragments, burned and calcined, medium-large mammal
Shovel test N98/E100	1	Astragalus, unburned, caribou (Rangifer tarandus)
	2	Long bone fragments, unburned, medium-large mammal
Shovel test N104/E104	2,740	Long bone and unidentifiable fragments, unburned, medium-large mammal

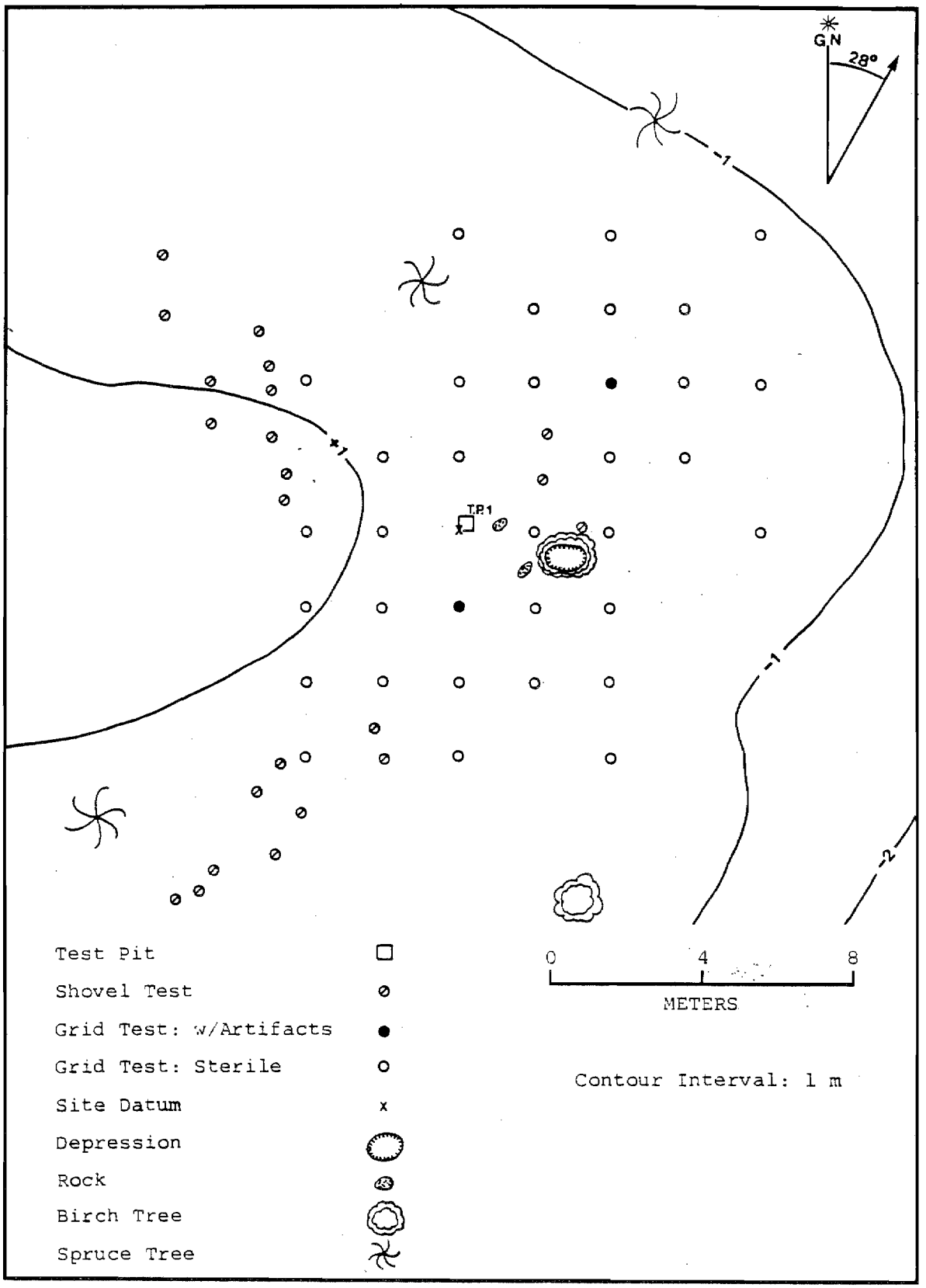


Figure D.305. Site Map, TLM 231

AHRS Number TLM 232; Accession Number UA84-84

Area:	Southeast of Jay Creek
Site Map:	Figure D.306
Survey Locale 33:	Figure E.110
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 232, composed of two loci (A and B), is located along a ca. 12 m high river terrace fronting a slough formed by a relief channel of the Susitna River. The site, at an elevation of 539 m asl (altimeter: 1768 feet), is located on the highest, best-drained area of the terrace, which is oriented southeast-northwest paralleling the river. The site extends eastward at the northern end of the terrace above a ca. 1.5 m high terrace of Jay Creek. Locus A parallels the Susitna River terrace from a point ca. 25 m behind the upper edge to the toe of the slope. Locus B is located ca. 60 m north on the terrace facing Jay Creek. Two ca. 1.5 x 60 m creek terraces lie between the site and Jay Creek. Low hills along the valley wall providing access to the Jay Creek uplands begin ca. 200 m east of the site. The low-lying alluvial areas forming the Jay Creek delta are ca. 527 m asl (1730 feet). The Susitna River and flood plain, a slough and seasonal channel, a spruce-covered gravel bar, and the mountains above the south wall of the river valley are visible from the site but are partially obscured by the surrounding mature spruce-hardwood forest. A thick layer of mosses, fireweed, dogwood, Labrador tea, and shrubs form the forest understory. Permafrost occurs in areas with moss cover exceeding 25 cm in depth. Black spruce and lichen mat appear ca. 25 m behind the terrace edge in the lower, moister areas.

Testing:

TLM 232 was located when several depressions and two large rocks were observed on an old river terrace edge. Two survey shovel tests were

placed in the vicinity of the rocks and a third shovel test was positioned midway along the terrace edge. All of these tests proved positive, producing fractured caribou long bone fragments and thermally altered rocks (Table D.395). The two terrace edges facing the Susitna River and Jay Creek were traversed and all probable cultural features noted and flagged. Two depressions were noted in a small stand of spruce near the northern extent of the terrace facing Jay Creek. A fourth survey shovel test placed in close proximity to the spruce stand produced abundant charcoal and calcined bone. Additional bone and lithic material was observed along the Susitna River terrace face extending from the upper edge to the toe of the slope. All cultural material appeared to be contained in the root mat and 02 horizon.

TLM 232 was surveyed and staked prior to grid shovel testing. The grid shovel testing program was undertaken to assist in determining the site size and the distribution of cultural materials. Survey tests that yielded cultural material were plotted and used as origins for expansion testing. The terrace face and slope base were surface investigated and artifact locations were mapped. Slope areas lacking observable surface artifacts were shovel tested using site grid coordinates. A base line parallel to the Susitna River terrace slope was shovel tested along the flood plain to confirm the site terminus. Points in the wet areas behind the site were also tested.

A total of 252 grid shovel tests were placed on and adjacent to the site. Fifty tests produced cultural material. The discrete concentration of artifacts found during the grid shovel testing program provided the basis for the definition of two loci at this site. No positive tests were recorded from grid coordinates between the loci; however, this may reflect adverse localized preservation conditions. All material was restricted stratigraphically to the organic mat and 02 horizon. Cultural ash, extensive charcoal, and thermally altered cobbles were observed inside the root mat across the site. Bone, both calcined and unburned, appeared to be associated with hearths near the large rocks.

Locus A: A tci tho (UA84-84-5; Figure D.395b) was recovered from the slope face ca. 2 m northwest of feature 1 (a depression) and ca. 8 m upslope (to the north) of a ca. 27 (east-west) x 7 m (north-south) area with a dense scatter of surface bone and thermally altered rocks. A hammerstone (UA84-84-50; Figure D.395a) was collected from the same slope ca. 33 m southeast of feature 1. A modified cobble (UA84-84-17; Figure D.395c) was located in the organic mat of the grid shovel test. A second tci tho (UA84-84-68) was recovered from the organic mat of grid shovel test N90/E102. All subsurface artifactual and faunal remains were recovered from the organic mat and O2 horizon. Three other depressions were also present at this locus, but were all north of feature one. Two fragments of a leather moccasin (UA84-84-73) were located on the surface north of feature 1 and may be intrusive from a recent cabin ca. 300 m west. Tests placed around this point proved sterile.

The faunal assemblage from locus A is largely comprised of unburned skeletal fragments of caribou (Rangifer tarandus) and, to a lesser extent, moose (Alces alces). Caribou skeletal components include the skull, axial skeleton, forelimb, hindlimb, and extremites. Moose skeletal components include the axial skeleton, forelimb, and extremites. There appears to be only a single individual for each species represented by the fragmentary remains. Three bone fragments, two unburned and one calcined, exhibit cultural modification. Two articulating unburned long bone shaft fragments (UA84-84-32, 33; Figure D.396a) form an awl. The calcined piece (UA84-84-16) is a thick amorphous long bone shaft fragment that is well rounded across its width. Gnaw marks are present on four bone fragments: a rib fragment, a right tibia shaft fragment, a right proximal metapodial fragment, and a left innominate fragment. The innominate fragment also has cut marks.

Locus B: This locus, which lies between N156/E96 and N154/E96, has a shallow (ca. 15-20 cm deep) depression (feature 2). Five grid shovel tests excavated to the north of this feature contained cultural material. Grid shovel tests N154/E96 and N156/E94 contained a fill deposit overlying the Devil tephra. A modified flake or cobble

(UA84-84-65) was recovered from the organic mat in shovel test N156/E100, ash and burned earth were also noted in this grid shovel test. Calcined bone and charcoal were found in grid shovel tests N156/E96 but were not collected. Thermally altered rocks were noted in grid shovel test N158/E94. Observed site size based on the distribution of artifacts is 439 square meters (Table D.2).

Table D.395.

Artifact Summary, TLM 232

Provenience		Description
Lithic Material		
Surface:		
Locus A	1	Tci tho (UA84-84-5)
	1	Hammerstone (UA84-84-50)
Subsurface:		
Locus B	3	Basalt flakes
	3	Chert flakes
	1	Quartz flake
	2	Tci thos (UA84-84-65, 68)
	1	Modified cobble (UA84-84-17)
Faunal Material		
Locus A		
Surface:	1	Rib fragment, unburned, gnaw marks, probably moose (Alces alces)
	1	Right distal radius fragment, unburned, moose (Alces alces)
	1	Distal metapodial fragment, unburned, moose (Alces alces)
	1	Long bone shaft fragment, unburned, possibly moose (Alces alces)

Table D.395. (Continued)

Provenience		Description
	1	Left mandibular second or third molar, unburned, caribou (Rangifer tarandus)
	1	Mandibular first of second molar, unburned, weathered, caribou (Rangifer tarandus)
	1	Thoracic vertebra fragment, unburned, caribou (Rangifer tarandus)
	1	Left distal humerus fragment, unburned, caribou (Rangifer tarandus)
	1	Ulna shaft fragment, unburned, probably caribou (Rangifer tarandus)
	1	Right radius fragment, unburned, split longitudinally, caribou (Rangifer tarandus)
	1	Left innominate fragment, unburned, weathered, cut marks and gnaw marks, caribou (Rangifer tarandus)
	1	Left distal femur shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Right proximal tibia shaft fragment, unburned, gnaw marks, caribou (Rangifer tarandus)
	1	Left distal tibia fragment, unburned, caribou (Rangifer tarandus)
	1	Right astragalus, unburned, weathered, caribou (Rangifer tarandus)
	1	Right calcaneus, unburned, caribou (Rangifer tarandus)

Table D.395. (Continued)

Provenience		Description
	1	Right proximal metapodial (hindlimb) fragment, unburned, gnaw marks, caribou (Rangifer tarandus)
	2	Rib fragments, unburned, artiodactyl
	8	Long bone and unidentifiable bone fragments, unburned, medium-large mammal
Subsurface:		
	2	Awl fragments, long bone shaft fragment, unburned, medium-large mammal (UA84-84-32 articulates with 33)
	1	Modified long bone fragment, calcined, medium-large mammal (UA84-84-16)
	1	Ulna shaft fragment, unburned, moose (Alces alces)
	1	Right distal humerus shaft fragment, unburned, moose (Alces alces)
	1	Antler tine fragment, unburned, caribou (Rangifer tarandus)
	1	Atlas, unburned, caribou (Rangifer tarandus)
	1	Lumbar vertebra fragment, unburned, caribou (Rangifer tarandus)
	1	Vertebra fragment, unburned, probably caribou (Rangifer tarandus)
	2	Rib medial fragments, unburned, probably caribou (Rangifer tarandus)
	1	Right distal humerus fragment, unburned, caribou (Rangifer tarandus)

Table D.395. (Continued)

Provenience		Description
	3	Left distal radius fragments, articulating, unburned, caribou (Rangifer tarandus)
	1	Probable radius distal fragment, unburned, caribou (Rangifer tarandus)
	1	Proximal radius shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Left distal femur shaft fragment, unburned, caribou (Rangifer tarandus)
	2	Right tibia shaft fragments, unburned, caribou (Rangifer tarandus)
	1	Proximal tibia fragment, unburned, caribou (Rangifer tarandus)
	1	Possible tibia shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Unciform, unburned, caribou (Rangifer tarandus)
	1	Right calcaneus fragment, unburned, caribou (Rangifer tarandus)
	1	Lunar, unburned, caribou (Rangifer tarandus)
	1	Scaphoid, unburned, caribou (Rangifer tarandus)
	1	Distal metapodial (forelimb) fragment, unburned, caribou (Rangifer tarandus)
	1	Proximal metapodial fragment, unburned, caribou (Rangifer tarandus)
	1	Possible metapodial shaft fragment, burned, probably caribou (Rangifer tarandus)

Table D.395. (Continued)

Provenience		Description
	1	Proximal phalanx, unburned, caribou (Rangifer tarandus)
	2	Proximal fragments proximal phalanx, unburned, caribou (Rangifer tarandus)
	1	Basi-cranial fragment, unburned, large mammal
	1	Rib fragment, unburned, medium-large mammal
	38	Long bone and unidentifiable bone fragments, unburned, medium-large mammal
	20	Long bone and unidentifiable bone fragments, burned and calcined, medium-large mammal
Historic Remains		
Surface:		
Locus A	2	Leather moccasin fragments (UA84-84-74)

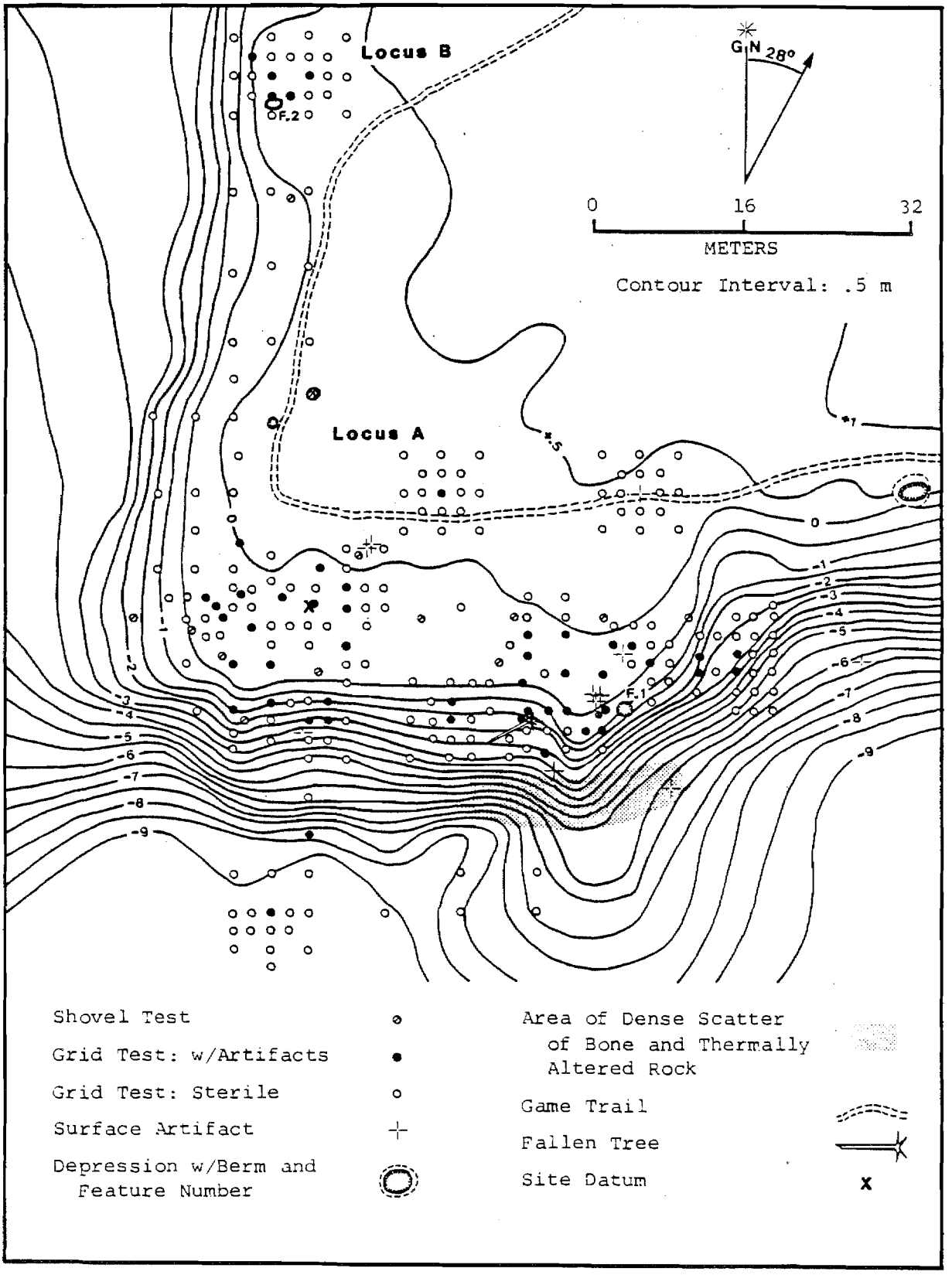


Figure D.306. Site Map, TLM 232

AHRS Number TLM 233

Area:	West-northwest of Watana Creek Mouth
Site Map:	Figure D.307
Survey Locale 21:	Figure E.98
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 233 is located on one of a series of terraces along the east side of a creek, locally known as No Name Creek, and west-northwest of the mouth of Watana Creek. The site is located at an elevation of 506 m asl (altimeter: 1660 feet), on the western projection formed by a bend in the terrace overlooking the creek ca. 20 m below. The creek drainage is steep and deeply incised, and bedrock outcrops are apparent on both sides of the creek. TLM 058 is located on a similar terrace ca. 100 m to the northwest. The view from the site is restricted by the high hills to the north and the surrounding vegetation. The view to the east and northeast is blocked by higher portions of the terrace. No Name Creek is easily accessible via a gentle slope to a knoll below, where a game trail is situated. Vegetation at the site is comprised of an open spruce-hardwood forest with a lichen and moss ground cover with Labrador tea, blueberry, and birch trees. The creek valley below the site has birch, spruce, poplar, aspen, willow, and alder trees, as well as blueberry, fireweed, dwarf birch, and crowberry.

Testing:

TLM 233 was initially defined by the presence of a 1.10 m diameter depression located on a projection of a raised terrace of a creek locally known as No Name Creek. The depression is bowl-shaped in cross section, 45 cm deep, with a slight circular berm. An initial shovel test, later expanded to test pit 1, placed on the edge of the depression revealed the presence of a fill level above the Devil tephra. Sixteen grid shovel tests were placed around test pit 1 to assist in determining site extent and the distribution of cultural material. No artifacts were recovered. Grid shovel test N98/E98 placed adjacent to a large rock protruding from the lichen mat determined that the rock was resting upon the surface of the Devil tephra and thus is assumed to be the result of human activity. Similar depressions occur to the south along the same terrace edge. These were tested during survey but could not be determined to be of cultural origin. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

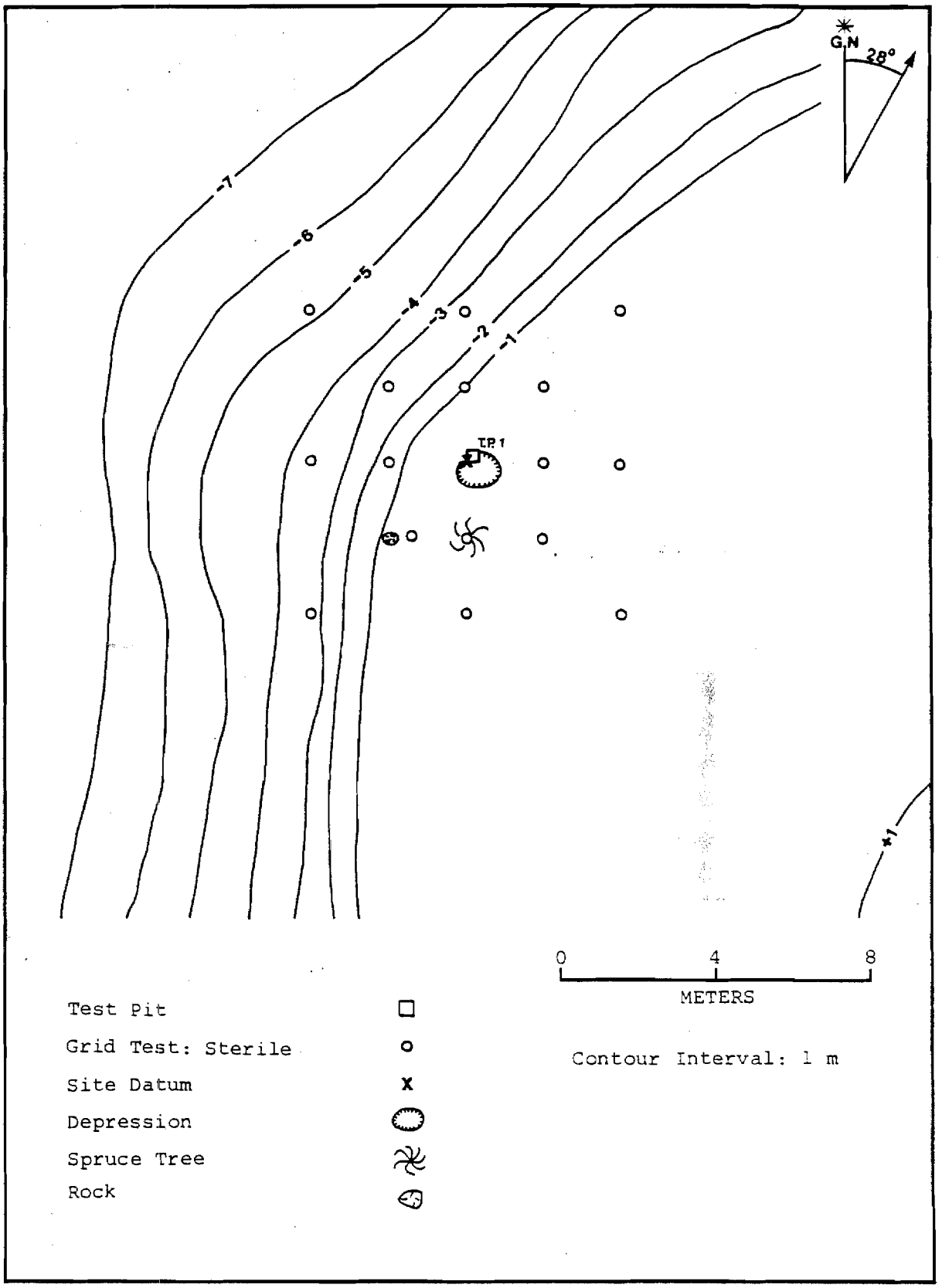


Figure D.307. Site Map, TLM 233

AHRS Number TLM 234; Accession Number UA84-89

Area:	West of Watana Creek
Site Map:	Locus A, Figure D.308
	Locus B, Figure D.309
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site, consisting of two loci (A and B), is located west of Watana Creek. Both loci are on discrete, relatively flat benches along a descending ridge on the valley wall generally oriented northwest-southeast. This ridge runs from a high point at TLM 226 locus B, ca. 200 m northwest of TLM 234 locus A to a ravine formed by the outlet stream of a ca. 7 ha lake to the southwest. The terrain east of both benches steeply descends to Watana Creek, ca. 50 m southeast of locus B, where it follows a bending course. Two streams and two lakes occur near the site. The outlet stream of a lake, locally known as Duck Embryo Lake or Sally Lake, is situated ca. 300 m northeast of the site across the Watana Creek valley and the outlet stream from the ca. 7 ha lake meets Watana Creek ca. 125 m southeast of locus B. This ca. 7 ha lake is positioned ca. 400 m southwest of locus B and a ca. 2 ha lake is positioned west-southwest of locus A.

Locus A: Locus A is situated on a ca. 20 x 20 m bench at an elevation of 582 m asl (altimeter: 1908 feet). With the exception of the ridge which rises to the northwest, the surrounding terrain is lower in relief. By far the most prominent change in elevation is along a landslide scar at the southeast edge of the bench. This forms a sheer cliff of ca. 60-70 degree slope a talus slope ca. 15 m lower in elevation which merges into Watana Creek ca. 50 m to the east. To the south, southwest, and west the ridge slopes down to the outlet stream ravine, which is approximately 6-7 m lower in elevation and ca. 70 m away. The slope becomes steeper as it drops to the outlet stream and the

ca. 7 ha lake. The most open views are to the northeast, east, and southeast, where Watana Creek and the east wall of its valley are visible. The outlet stream of Duck Embryo Lake is in clear view to the northeast. The visibility to the north and northwest is restricted to ca. 100 m by the vegetation. The forest cover in the outlet drainage ravine obstructs the view to the south and southwest.

Locus B: Locus B is situated on a similar bench, ca. 100 m south and 17 m lower in elevation than locus A. The bench trends northwest-southeast and measures approximately 24 x 40 m at an elevation of 565 m asl (altimeter: 1855 feet). The terrain to the northwest ascends toward locus A. To the northeast, east, and southeast, the valley wall slopes ca. 20-25, degrees meeting Watana Creek ca. 50 m to the east. The terrain to the southwest descends toward the outlet stream of the ca. 7 ha lake, ca. 150 m distant. This lake basin is presently obscured from view by the vegetation. Watana Creek is in view to the northeast, where a large bend is clearly visible. The eastern rim of the Watana Creek valley is also in clear view. Forested slopes surrounding the site obstruct visibility in other directions. With the absence of the forest cover the ca. 7 ha lake basin would be in view from this locus.

Testing:

Both loci produced unburned large mammal bone fragments (Table D.396). Grid shovel testing programs were implemented at each locus to assist in determining the site size. Several grid shovel tests at each locus contained cultural material.

Locus A: This locus was discovered when radius and radius/ulna fragments of caribou (Rangifer tarandus) and four white, cylindrical glass beads (UA84-89-83) were recovered from finely sorted organics mixed with brown silt just beneath the organic mat in a shovel test. A 40 x 40 cm test pit (test pit 1), superimposed over shovel test 1, which yielded five additional glass beads (UA84-89-90, 92, 93) and four unburned bone fragments from the same stratigraphic provenience as the remains recovered from shovel test 1. Two other shovel tests yielded

large mammal bone fragments. Sixty-nine grid shovel tests were excavated, 12 of which produced additional unburned bone fragments. The faunal remains recovered from locus A include identifiable elements of caribou (Rangifer tarandus), arctic ground squirrel (Spermophilus parryi), and a possible moose (Alces alces) rib fragment. All the skeletal elements of caribou are represented (cranial, axial, limbs, and extremities) suggesting that at least one caribou was dismembered at this locus.

Locus B: Two depressions were recognized at locus B. One depression is situated approximately 2 m west of the edge of the bench facing Watana Creek (feature 1) and measures 90 (north-south) x 80 cm (east-west) and ca. 15 cm deep at the center. The second depression (feature 2) is situated approximately 16 m west of feature 1 where the relatively flat bench meets the ascending slope north of the bench. Feature 2 is approximately 1 m in diameter and ca. 30 cm deep near the center. Sixty-three grid shovel tests were excavated at this locus. Eight grid shovel tests (south of the two features) yielded 87 unburned bone fragments. Forty-one of the recovered bones are attributable to caribou (Rangifer tarandus). All skeletal elements are represented, but there is a higher frequency of long bone fragments at this locus than at locus A. Despite this complementary bias, the presence of a left mandibular fourth premolar at this locus indicates the presence of a separate individual. Two identifiable long bone fragments of either dog (Canis familiaris) or coyote (Canis latrans) were also recovered.

Observed size for locus A based on the distribution of artifacts is 104 square meters. Observed size for locus B based on the distribution of artifacts is 56 square meters (Table D.2).

Table D.396.

Artifact Summary, TLM 234

Provenience		Description
Lithic Material		
Locus A		
Grid shovel test	1	Thermally altered rock
Locus B		
Grid shovel test	10	Thermally altered rocks
Faunal Material		
Subsurface:		
Locus A		
Shovel test 2	1	Left mandibular fragment with second and third premolars, unburned, caribou (Rangifer tarandus)
	1	Left mandibular fourth premolar, unburned, caribou (Rangifer tarandus)
	1	Left mandibular molar, unburned, caribou (Rangifer tarandus)
	1	Sesamoid, unburned, caribou (Rangifer tarandus)
	1	Basi-cranial fragment, unburned, medium-large mammal

Table D.396. (Continued)

Provenience		Description
	10	Long bone and unidentifiable fragments, unburned, medium-large mammal
Shovel test 3	1	Rib fragment, unburned, possible moose (Alces alces)
Test pit 1	2	Thoracic vertebra fragments, unburned, caribou (Rangifer tarandus)
	1	Left proximal radius fragment, unburned, caribou (Rangifer tarandus)
	1	Left radius/ulna fragment, unburned, caribou (Rangifer tarandus)
	1	Possible ulna fragment, unburned, probable caribou (Rangifer tarandus)
	1	Unidentifiable fragment, unburned, medium-large mammal
Grid shovel tests	6	Antler fragments, unburned, caribou (Rangifer tarandus)
	1	Cranial fragment with attached antler fragment, unburned, caribou (Rangifer tarandus)
	1	Cranial fragment, unburned, caribou (Rangifer tarandus)
	1	Left maxillary second premolar, unburned, caribou (Rangifer tarandus)
	1	Left scapula fragment, unburned, probable caribou (Rangifer tarandus)

Table D.396. (Continued)

Provenience		Description
	2	Cervical vertebra fragments, unburned, caribou (Rangifer tarandus)
	1	Dorsal rib fragment, unburned, caribou (Rangifer tarandus)
	1	Left radius distal end, unburned, caribou (Rangifer tarandus)
	1	Calcaneus fragment (possibly immature), unburned, possible caribou (Rangifer tarandus)
	2	Proximal left metapodial fragments, unburned caribou (Rangifer tarandus)
	1	Metapodial (hindlimb) shaft fragment, unburned, caribou (Rangifer tarandus)
	2	Metapodial shaft fragments, unburned, caribou (Rangifer tarandus)
	1	Proximal fragment proximal phalanx, unburned, caribou (Rangifer tarandus)
	1	Distal fragment proximal phalanx, unburned, caribou (Rangifer tarandus)
	1	Cranial fragment with incisors, unburned, ground squirrel (Spermophilus parryi)
	1	Left mandibular, unburned, ground squirrel (Spermophilus parryi)
	1	Left scapula, unburned, ground squirrel (Citellus parryi)
	3	Cranial fragments, unburned, medium-large mammal
	1	1 Vertebra fragment, unburned, medium-large mammal

Table D.396. (Continued)

Provenience		Description
	1	Medial rib fragment, unburned, carnivore
	1	Sternum fragment, unburned, medium-large mammal
	2	Scapula fragments, unburned, medium-large mammal
	7	Long bone shaft fragments, unburned, medium-large mammal
	30	Long bone and unidentifiable fragments, unburned, medium-large mammal
	7	Unidentifiable fragments, calcined, medium-large mammal
	2	Cranial fragments, unburned, small mammal
Locus B		
Grid shovel tests	1	Left mandibular fourth premolar, unburned, caribou (Rangifer tarandus)
	1	Left mandibular fragment, unburned, caribou (Rangifer tarandus)
	1	Mandibular fragment (coronoid process), unburned, caribou (Rangifer tarandus)
	3	Rib fragments, unburned, caribou (Rangifer tarandus)
	1	Rib fragment, unburned, probable caribou (Rangifer tarandus)
	1	Scapula, unburned, caribou (Rangifer tarandus)
	1	Right humerus fragment, unburned, caribou (Rangifer tarandus)

Table D.396. (Continued)

Provenience		Description
	1	Right distal radius shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Radius/ulna fragment, unburned, probable caribou (Rangifer tarandus)
	1	Probable radius shaft fragment, unburned, caribou (Rangifer tarandus)
	2	Right innominate fragments, unburned, caribou (Rangifer tarandus)
	1	Right tibia fragment, unburned, caribou (Rangifer tarandus)
	1	Left distal tibia fragment, unburned, caribou (Rangifer tarandus)
	1	Proximal tibia shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Distal tibia fragment, unburned, caribou (Rangifer tarandus)
	1	Probable proximal tibia shaft fragment, unburned, caribou (Rangifer tarandus)
	2	Probable medial tibia shaft fragments, unburned, caribou (Rangifer tarandus)
	1	Right medial calcaneous fragment, unburned, caribou (Rangifer tarandus)
	5	Metapodial shaft fragments, unburned, caribou (Rangifer tarandus)
	1	Metapodial or ulna shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Possible metapodial shaft fragment, unburned, caribou (Rangifer tarandus)

Table D.396. (Continued)

Provenience		Description
	1	Distal metapodial fragment, unburned, caribou (Rangifer tarandus)
	2	Sesamoids, unburned, caribou (Rangifer tarandus)
	4	Proximal fragments proximal phalanx, unburned, caribou (Rangifer tarandus)
	2	Proximal fragments proximal phalanx, unburned, probable caribou (Rangifer tarandus)
	1	Proximal fragment medial phalanx, unburned, caribou (Rangifer tarandus)
	1	Radius fragment, unburned, dog (Canis familiaris) or coyote (Canis latrans)
	1	Tibia fragment, unburned, dog (Canis familiaris) or coyote (Canis latrans)
	2	Rib fragments, unburned, medium-large mammal
	10	Long bone shaft fragments, unburned, medium-large mammal
	33	Long bone and unidentifiable fragments, unburned, medium-large mammal
Historic Remains		
Subsurface:		
Locus A		
Test pit 1	9	Glass trade beads

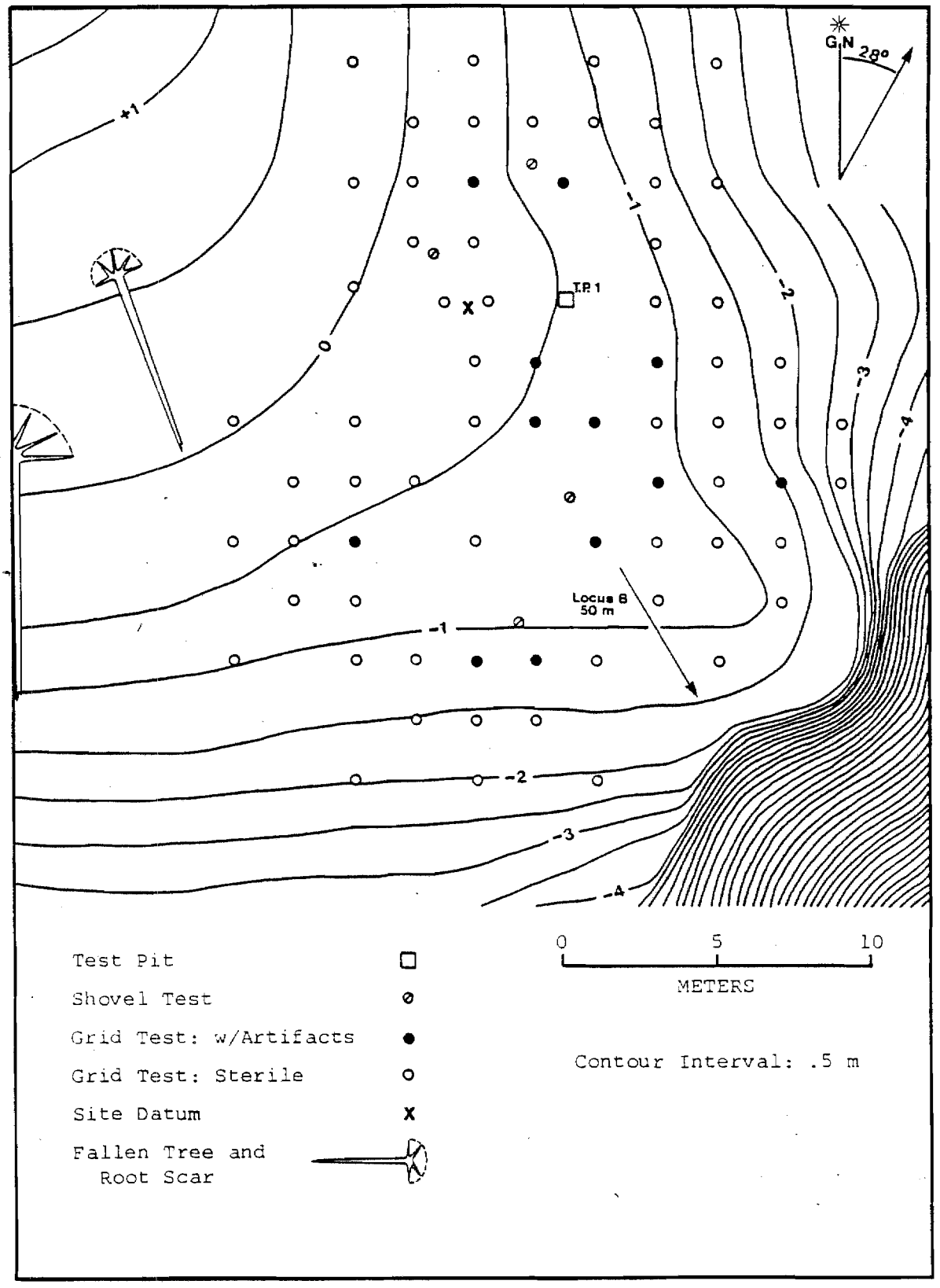


Figure D.308. Site Map, TLM 234 Locus A

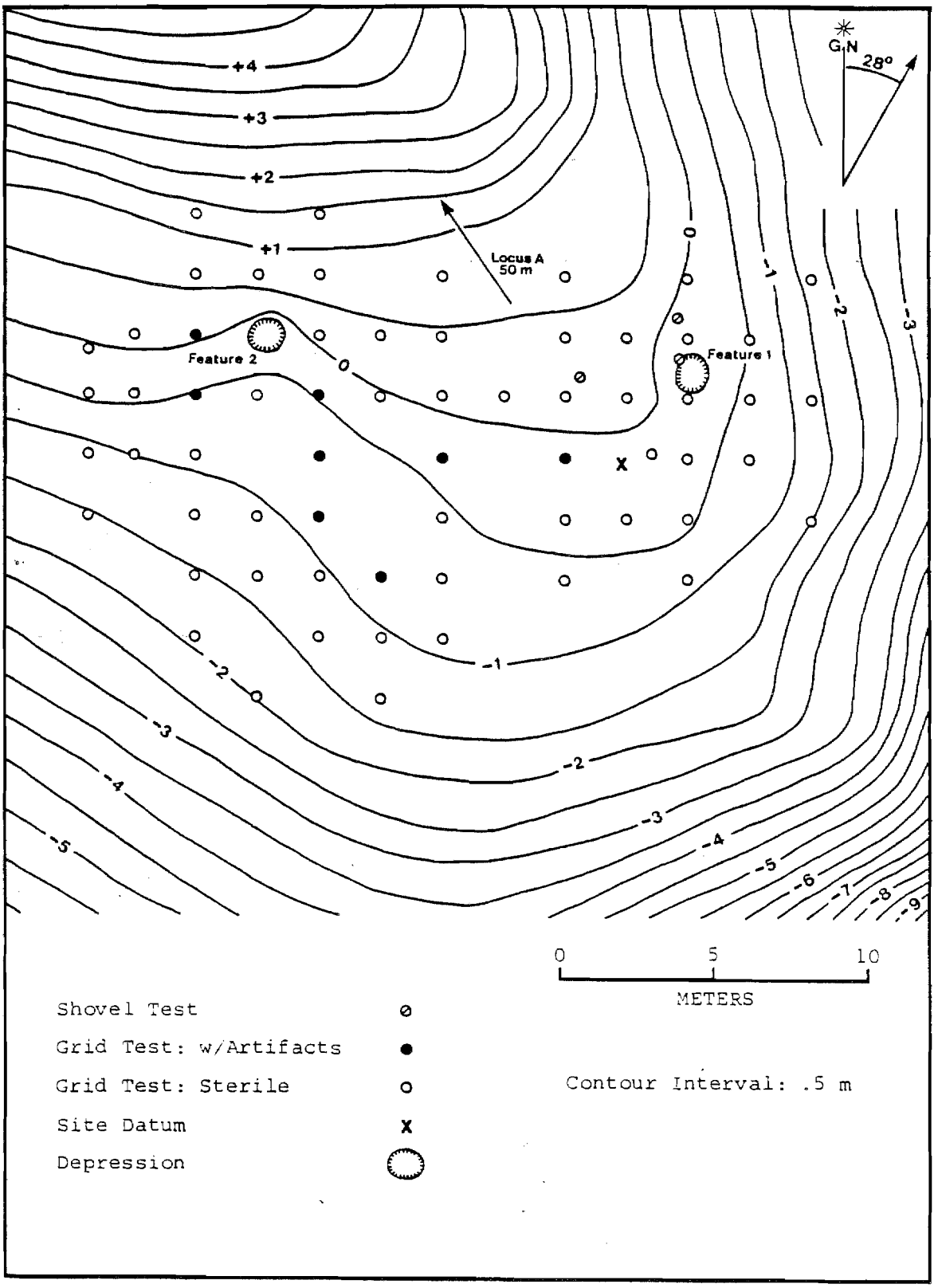


Figure D.309. Site Map, TLM 234 Locus B

AHRS Number TLM 235; Accession Number UA84-90

Area:	West of Watana Creek
Site Map:	Locus A, Figure D.310
	Locus B, Figure D.311
	Locus C, Figure D.312
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The three loci (A, B, and C) of TLM 235 are situated on a north-south oriented razorback ridge west of Watana Creek. At an elevation of ca. 562 m (1845 feet) the ridge intersects a broad bench measuring approximately 100 (north-south) x 70 m (east-west). The ca. 10-15 m wide ridge rises and falls at about the same elevation until, near the southern end, it descends to the southeast toward Watana Creek ca. 25-30 m lower in elevation and 70-90 m distant, at a ca. 30-degree gradient. The west side of the ridge descends to a ca. 100 m wide valley ca. 7 m lower in elevation. Two clear water streams occur near the site. Both streams originate on the glaciolacustrine plain to the northwest. The smaller stream is ca. 50 cm wide and follows a course along the southern extent of the ridge, where it bends northwest-southeast. Downcutting has left terraces on both sides of the stream approximately 15 m higher than the stream bed. The larger stream, trending northwest-southeast occurs ca. 500 m northeast of the site, at that end of the ridge. The ca. 100 m wide stream valley which parallels the ridge to the west opens onto these two streams, but drains into the smaller one to the southeast. Eight other sites are located within a ca. 500 m radius of TLM 235. The closest sites are TLM 226 and TLM 231, both in view ca. 350 m distant to the southwest and northwest, respectively. On-site vegetation includes Labrador tea, blueberry, sphagnum moss, dwarf birch, paper birch, black spruce, lowbush cranberry, dogwood, caribou lichens, and sparse grasses. Black spruce are more numerous in the stream valley to the west and paper birch are common across the eastern slope.

Locus A: Locus A is located at the northern extent of the ridge, at an elevation of 564 m asl (altimeter: 1849 feet). The locus is at the intersection with the broad bench to the north. The landform rises to the north. Views are open, except to the north where the higher terrain limits the view to ca. 70 m. The view southward overlooks the ridge crest. The view westward includes TLM 231 (approximately 350 m to the northwest) and the ca. 100 m wide valley in between. Locus A of TLM 226 is in clear view ca. 300 m to the southwest. A large bend in Watana Creek is visible to the southeast, about 30 m lower in elevation.

Locus B: Locus B is located along the ridge crest ca. 70 m south of locus A. This location is approximately the center of the ridge, at an elevation of 564 m asl (altimeter: 1851 feet), ca. 30 m north of where the ridge bends southeast. Unique to this locus setting is a ca. 15 x 15 m relatively flat lobe ca. 10 m south of the site. Both locus A and locus C are in clear view, as are TLM 231 and TLM 225 locus A. A well-worn game trail is positioned along the eastern side of the ridge crest. The descending slopes described for locus A typify the slopes of locus B. A white lichen mat blankets the surface.

Locus C: Locus C, at an elevation of 559 m asl (altimeter: 1835 feet), is situated at the southern extent of the razorback ridge ca. 70 m south-southeast of locus B and ca. 150 m south-southeast of locus A. A small, relatively flat, triangular-shaped bench characterizes the site vicinity. This triangular-shaped bench is approximately 2 m lower in elevation than locus B. From this small, level area the ridge continues southeast, sloping down toward Watana Creek (ca. 70 m distant and ca. 25 m lower in elevation). Both sides of the narrow ridge slope steeply. Watana Creek is to the northeast and an unnamed creek is to the southwest, approximately 60 m distant and 25 m lower in elevation. A distinct landslide scar is situated ca. 15 m east of the site. The unvegetated, steep slope bears evidence of active slope movement. The high promontory offers an excellent view of a large bend in Watana Creek to the east. The flood plain of Watana Creek is clearly visible to the northeast. Views to the north and northwest are limited by the higher terrain to ca. 80 m. The view to the west includes the unnamed stream

valley, oriented east-west. Locus A of TLM 226 is in view ca. 300 m to the southwest. Watana Creek is visible to the south. The black spruce forest obstructs the view to the southeast.

Testing:

Locus A: A shovel test turned up 14 argillite flakes at the contact of the Watana and Oshetna tephras (Table D.397). A subsequent test pit (test pit 1), superimposed over the shovel test, yielded 16 argillite flakes at the contact of the Watana and Oshetna tephras. In addition, 105 argillite flakes and one basalt flake were collected from the Oshetna tephra. Seventeen additional survey shovel tests produced no artifactual material. Placement of 22 grid shovel tests around test pit 1 resulted in a single, positive grid shovel test, yielding one quartzite flake.

Locus B: Locus B consists of a depression (feature 1) ca. 80 cm in diameter and ca. 20 cm deep. A 40 x 40 cm test pit (test pit 2) was excavated on the north side of the depression edge and revealed mixing of the Watana and Oshetna tephras, inside the depression. Evidence of a berm is vague. An additional shovel test (shovel test 3) uncovered two river-rounded cobbles in the tephra sequence, in either the Devil or Watana tephra. Seven additional survey shovel tests failed to reveal concrete evidence of cultural association. Forty grid shovel tests were placed around test pit 2. Three of these produced cultural material, including 23 argillite flakes and four thermally altered rocks. An additional (possibly) thermally altered rock was located on the surface (Table D.397).

Locus C: Locus C consists of three circular depressions (features 2, 3, and 4) approximately 70 cm in diameter, ca. 10-15 cm deep at the center, and ca. 8 m apart along a northwest-southeast axis. Subsurface testing (test pit 3) was initiated at the edge of one of the depressions (feature 2) and revealed an oxidized Watana tephra stratigraphically situated above the Devil tephra. A possible berm was recognized on the northern perimeter of feature 2. A shovel test along the south

perimeter was expanded into a 40 x 40 cm test pit (test pit 3). This test pit produced 1 basalt biface fragment (UA84-90-10; Figure D.396b) (from the finely sorted organics), 9 basalt flakes (from the contact between the finely sorted organics and the Devil tephra), and 5 argillite flakes (from the Oshetna tephra) (Table D.397). Two isolated exposures failed to produce artifactual material. Placement of 28 grid shovel tests around test pit 3 and features 3 and 4 resulted in two positive tests, located south and east of test pit 3. Seventeen quartzite flakes and one argillite flake were recovered from these shovel tests.

Observed size for locus A based on the distribution of artifacts is 12 square meters. Observed size for locus B based on the distribution of artifacts is 26 square meters. Observed size for locus C based on the distribution of artifacts is 33 square meters (Table D.2).

Table D.397.

Artifact Summary, TLM 235

Provenience		Description
Lithic Material		
Surface:		
Locus B:	1	Thermally altered rock
Subsurface:		
Locus A:		
Test pit 1	135	Argillite flakes
	1	Basalt flake
Shovel test 2	1	Quartzite flake
Locus B:		
Shovel test 1	11	Argillite flakes
	12	Flakes less than 1/8 inch
Shovel test 2	3	Thermally altered rocks
Shovel test 3	1	Thermally altered rock
	2	Cobbles

Table D.397. (Continued)

Provenience		Description
Locus C:		
Shovel test 1	16	Quartzite flakes
Shovel test 2	1	Argillite flake
	1	Quartzite flake
Test pit 3	1	Basalt biface fragment (UA84-90-10)
	5	Argillite flakes
	9	Basalt flakes

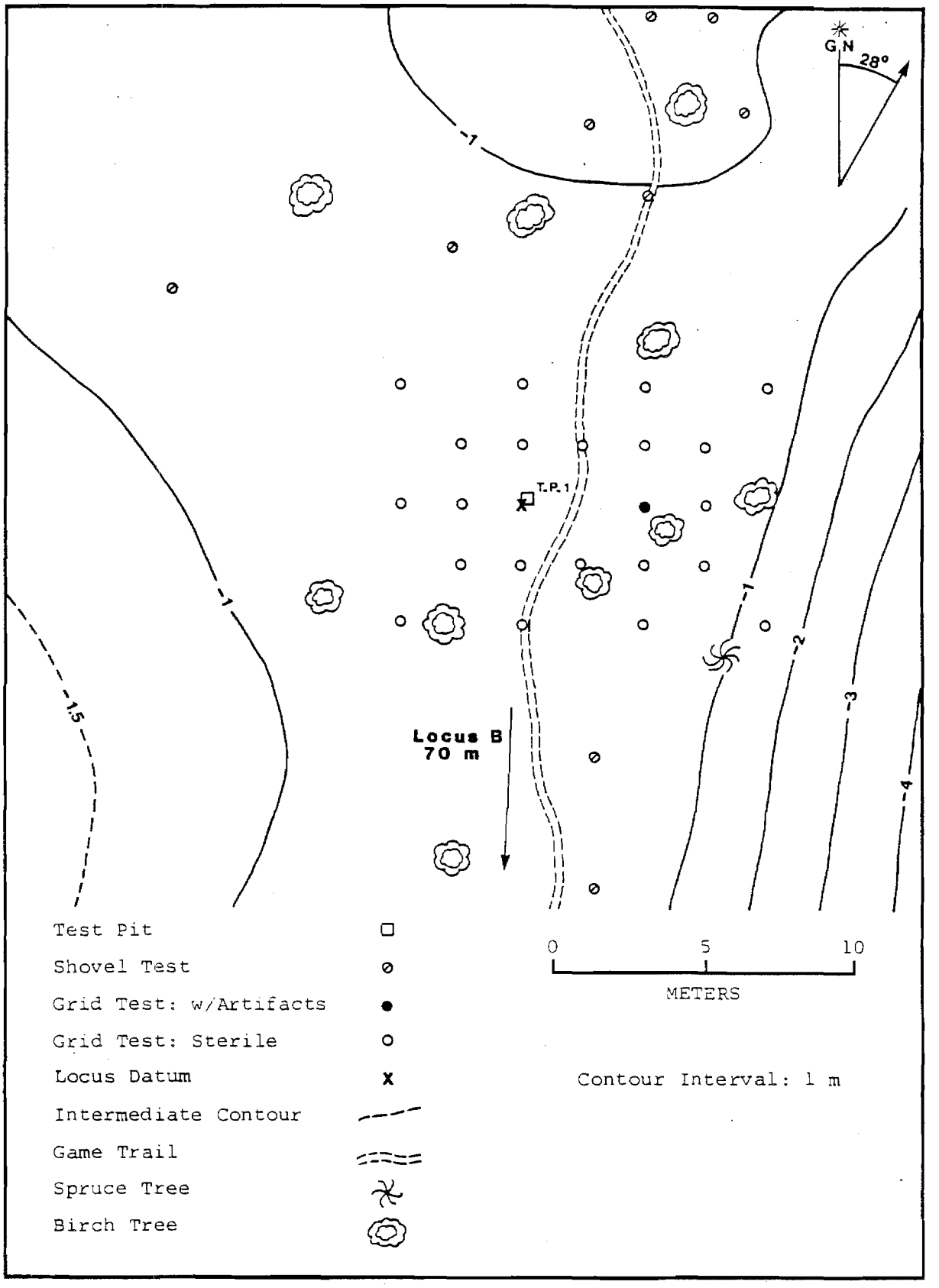


Figure D.310. Site Map, TLM 235 Locus A

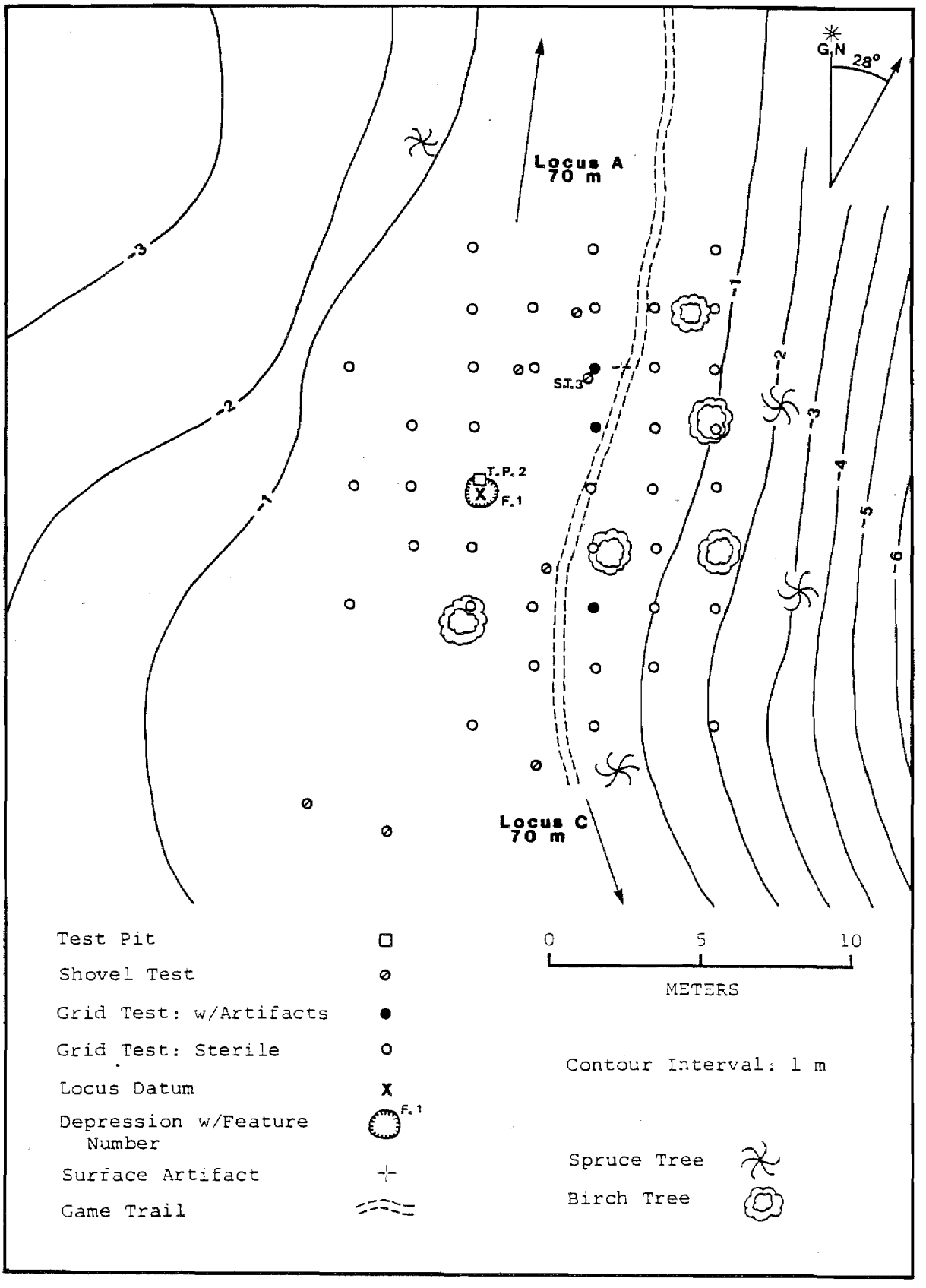


Figure D.311. Site Map, TLM 235 Locus B

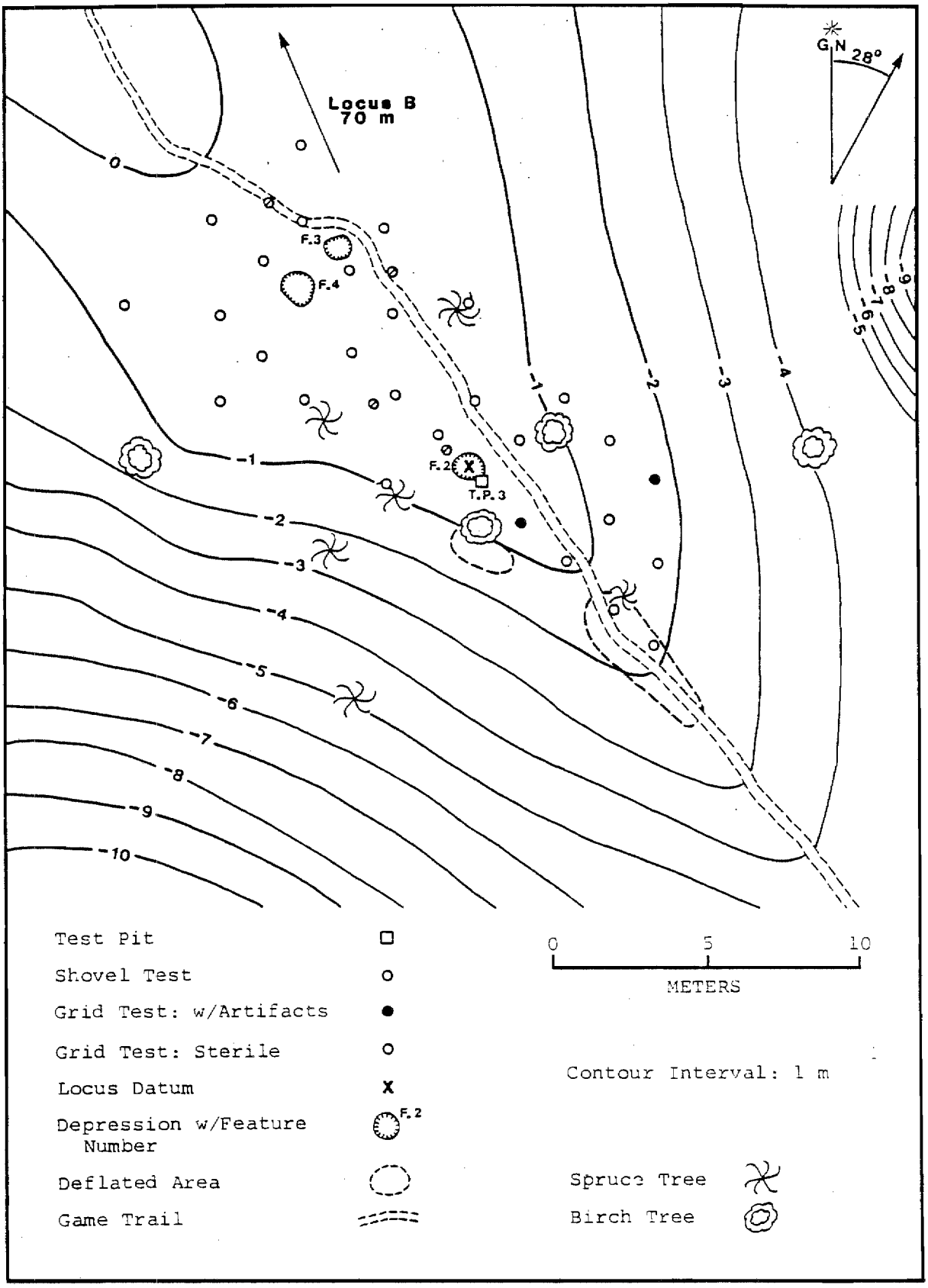


Figure D.312. Site Map, TLM 235 Locus C

AHRS Number TLM 236; Accession Number UA84-91

Area:	West of Watana Creek
Site Map:	Figure D.313
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site is situated on a crescent-shaped ridge west of Watana Creek at an elevation of 567 m asl (altimeter: 1860 feet). The site is in the center of the ca. 20 m wide relatively level ridge which is oriented north-northeast by south-southwest. At the northern, end the ridge is oriented northwest and descends ca. 4 m for a distance of approximately 30 m. At the southern end, the ridge is oriented southwest and descends ca. 8 m for a distance of 40 m. The ridge widens to the northeast descending ca. 2 m for about 10 m where the slope drops ca. 7 m in elevation and where a ca. 40 x 20 m terrace hugs the east slope. This terrace is visible from the site to the east and southeast. Beyond this terrace Watana Creek is visible to the east with a ca. 14 ha grass-covered flood plain in between. This flood plain is fed by the stream north of the site. The stream valley is in clear view from the site as well as the terraces opposite the stream to the north and northeast. Directly west of the site is a drainage vegetated by black spruce ca. 6 m lower than the site. Views beyond the basin are limited to the ascending slope to the valley rim of Watana Creek ca. 30 m higher in elevation and approximately 400 m distant. Views in a southerly direction are obstructed by the spruce forest on the razorback ridge. Other sites are located within a 500 m radius. To the southwest ca. 500 m is TLM 235 at a similar elevation as TLM 236. TLM 231 is located ca. 500 m west-southwest of the site on the northern terminus of a higher ridge, 607 m asl (altimeter: 1990 feet), and is in view. On-site vegetation consists of low ground cover including bog blueberry, Labrador tea, lowbush cranberry, mountain avens, sphagnum moss, and lichens. Willow are present but sparse at the slope breaks. Black

spruce and dwarf birch are numerous across the ridge. The descending slopes support a denser cover of blueberry and Labrador tea. The eastern descending slope supports a higher number of paper birch than does the west descending slope.

Testing:

The site consists of one large argillite flake (of unknown stratigraphic provenience) found in a shovel test. A 40 x 40 cm test pit (test pit 1) was superimposed over the productive shovel test, but subsequent excavation failed to yield additional artifactual material. Thirteen survey shovel tests within 15 m of the find were also sterile.

Forty-four grid expansion shovel tests were excavated to estimate site extent and assist in the determination of stratigraphic association of cultural material. Five tests produced lithic artifacts, all were located in the organic unit (Table D.398). Artifacts recovered from shovel tests N96/E104, N98/E104, and N96/E108 appear to have been transported from the ridge crest down the steep west face by erosional processes. Observed site size based on the distribution of artifacts is 30 square meters (Table D.2).

Table D.398.

Artifact Summary, TLM 236

Provenience		Description
Lithic Material		
Subsurface:		
Shovel test 1	1	Argillite flake
Shovel test N96/E108	3	Argillite flakes
Shovel test N98/E98	1	Basalt flake
Shovel test N98/E104	24	Argillite flakes
Shovel test N98/E104	3	Basalt flakes
Shovel test N100/E102	1	Basalt flake

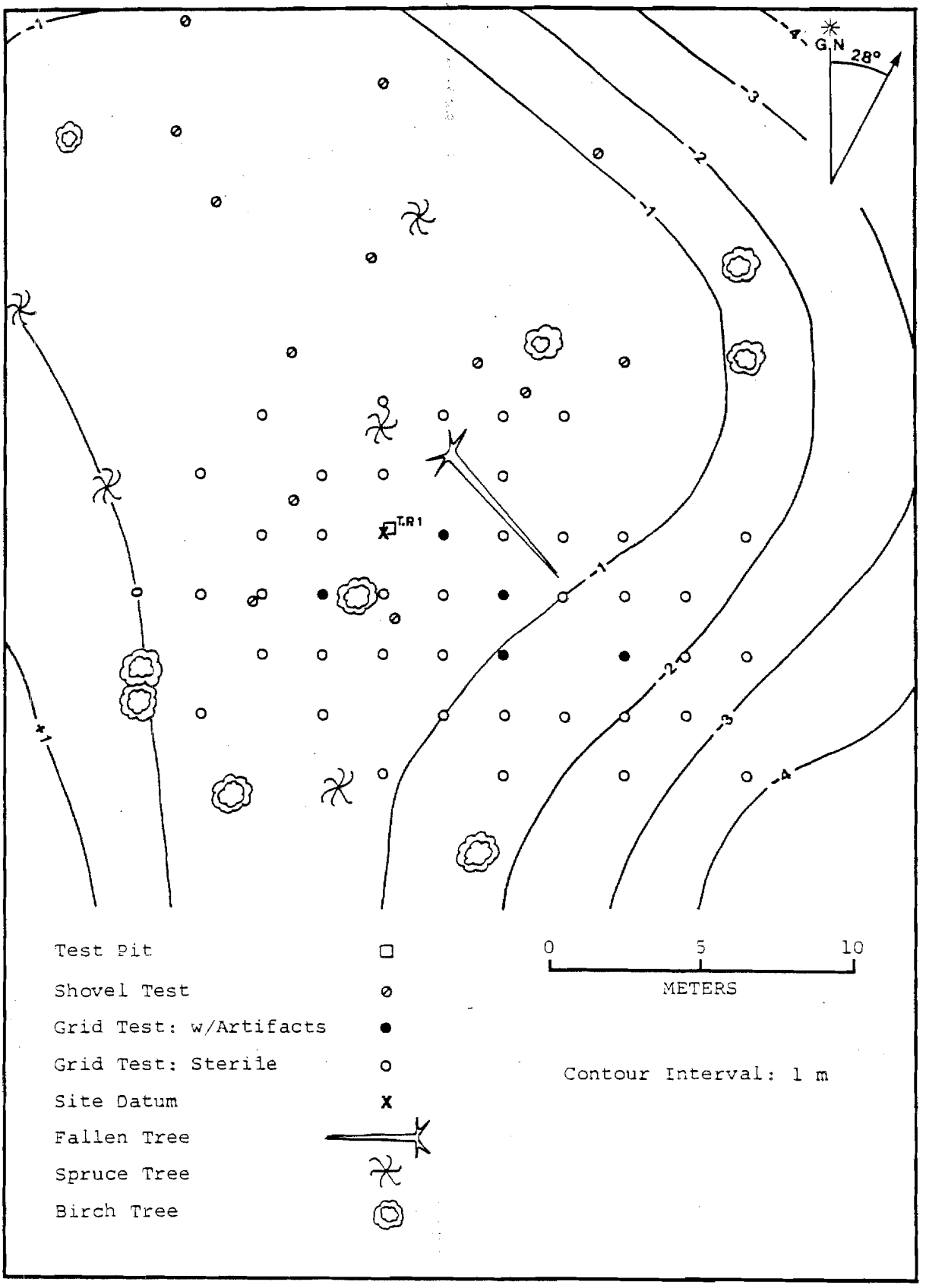


Figure D.313. Site Map, TLM 236

AHRS Number TLM 237; Accession Number UA84-92

Area:	West of Watana Creek
Site Map:	Figure D.314
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site is situated on a triangular-shaped terrace west of Watana Creek, at an elevation of 613 m asl (altimeter: 2011 feet). The terrace measures approximately 75 (north-south) x 40 m (east-west). The site is slightly offset to the south of the center of the terrace. The eastern slope consists of a ca. 4 ha landslide scar. This prominent landslide is parabolic in shape and approximately 125 m wide. Tension cracks are common along a strip approximately 10 m from the bluff edge. Immediately beyond the terrace edge the bluff drops ca. 3-4 m lower in elevation. Unvegetated exposures indicate that current erosional processes are affecting the unstable terrace edge. Terrain in all other directions, except for a ca. 2 m incised drainage to the north, merge into the glaciolacustrine plain along a ca. 1-degree slope. A clear water stream situated approximately 80 m north of the site is ca. 1 m wide following the site contour along a ca. 2-3 degree slope. Downstream from this point the stream follows a steeper grade, ca. 7-9 degrees, along the landslide scar down to Watana Creek, ca. 600 m to the southeast. The second clear water stream occurs ca. 600 m south of TLM 237 where the stream trends west into Watana Creek. Watana Creek is ca. 600 m southeast from the site, at the nearest location, where a bending course is followed. A commanding view is available to the east and southeast where the stream valley, a ridge paralleling the stream to the south, and a ca. 3.5 km stretch of Watana Creek valley are in view. A view of a 1 km stretch up the clear water stream valley is available to the northwest. The view north and northwest overlooks the undulating plain for a distance of ca. 2 km. Black spruce forest obstructs the visibility to the southwest and west. The surface in the immediate

vicinity of the site is relatively flat with hummocks that range between ca. 0.3-1.5 m in diameter. A vegetation mat, ca. 15-25 cm thick, covers the majority of the site surface interspersed with lichen mats. The vegetation mat drapes the steep walls of the eroding bluff edge. Flora present includes abundant sphagnum moss, bog blueberry, equisetum, lowbush cranberry, dwarf birch, black spruce, sparse fireweed, grasses, white lichen, and caribou lichen.

Testing:

One chert flake was recovered from the finely sorted organics in a subsurface shovel test (Table D.399). A subsequent 40 x 40 cm test pit (test pit 1) was superimposed over the shovel test, but did not result in additional artifactual material. Five previous survey shovel tests failed to produce cultural material. A grid shovel testing program was undertaken to locate additional subsurface remains and to assist in determining the site size. Sixteen grid shovel tests were excavated, but all were sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.399.

Artifact Summary, TLM 237

Provenience		Description
Lithic Material		
Subsurface:		
Shovel test 1	1	Chert flake

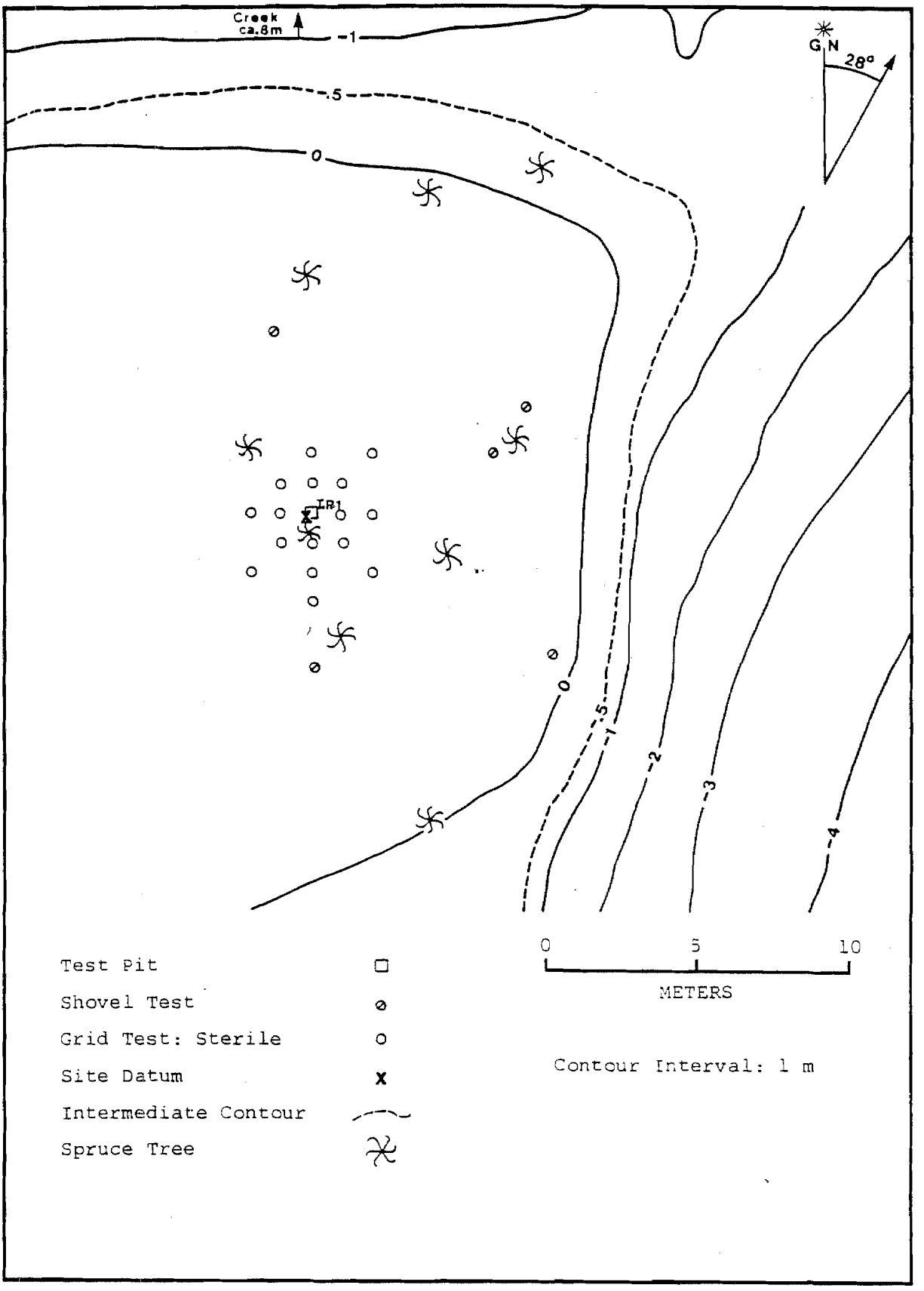


Figure D.314. Site Map, TLM 237

AHRS Number TLM 238

Area:	East-southeast of Kosina Creek Mouth
Site Map:	Figure D.315
Survey Locale 83:	Figure E.158
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 238 is situated on a 400 m north-south trending terrace of Kosina Creek, east-southeast of the mouth of Kosina Creek. The site is on the southern end of the terrace at 533 asl (altimeter: 1748 feet), 2 m east of the west facing terrace slope and ca. 5 m above the surrounding bottomlands to the west. The terrace runs along the base of higher ridges to the south, to an intersection with a terrace of the Susitna River north of the site. TLM 065 is visible to the southwest and about 100 m higher in elevation. Views in all other directions are limited to about 80 m by present forest cover. A small clear water stream flows south-north along the base of the terrace ca. 5 m west of the site. Vegetation in the site vicinity consists of lowland spruce-hardwood forest grading from fairly dense spruce forest in bottomlands to open spruce and birch forest along the terrace edge. A well-developed lichen mat covers the terrace edge, becoming more scattered and interspersed with mosses. Labrador tea, lowbush cranberry, and deciduous shrubs occur away from the terrace edge and in more poorly drained areas.

Testing:

The site was located during surface survey of the southern portion of the terrace. It consists of a house or large cache pit depression, semirectangular in shape. The depression measures 3.5 (north-south) x 2.4 m (east-west) and 60 cm deep at the center. A vague berm is discernable around the depression and measurements were taken inclusive of it. Test pit 1 was placed at the southeast corner of the depression feature so as to intersect the berm. The 40 x 40 cm test pit revealed

wood fragments (oriented north-south) below the present organic mat. These wood fragments could be structural members of the feature. No other artifacts were found in this test pit. A grid shovel testing program was conducted subsequent to the recording of TLM 238. Twenty-one grid shovel tests were excavated. No subsurface lithic artifacts were encountered, but partially decayed wood was found below the organic mat. These tests were all within 2 m of the depression's perimeter and these wood pieces could also be structural components associated with this feature. Despite the absence of artifacts, the similarity of this feature to cultural depressions at other sites in the project area indicates its probable cultural origin. Observed site size based on the distribution of artifacts is 26 square meters (Table D.2).

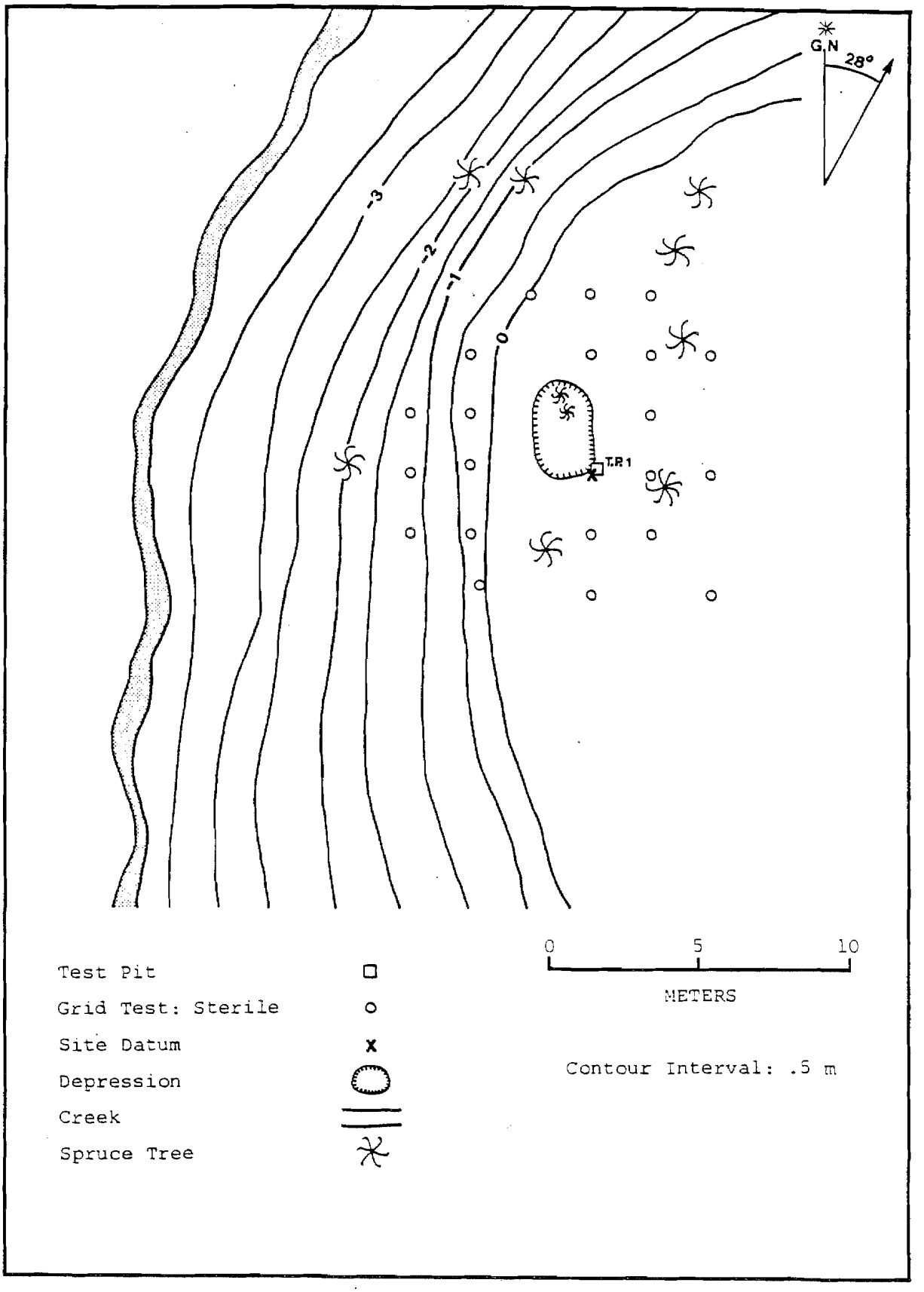


Figure D.315. Site Map, TLM 238

AHRS Number TLM 239; Accession Number UA84-94

Area:	East of Kosina Creek Mouth
Site Map:	Figure D.316
Survey Locale 83:	Figure E.158
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 239, at an elevation of 531 m asl (altimeter: 1742 feet), is located at the point of convergence of a north-south oriented terrace of Kosina Creek with an east-west oriented terrace of the Susitna River. The terraces form a topographic projection ca. 12 m above the surrounding bottomland terrain and ca. 20 m above the present Susitna River level. The Kosina Creek terrace runs approximately 400 m to the south where it abuts the base of higher north-west facing ridges. The Susitna River terrace runs for approximately 600 m to the southwest where it merges with the base of higher northwest facing ridges. The location of TLM 239 offers a 180 degree panoramic view of the Susitna River valley bottom to the west, north, and east. The TLM 065 site area, approximately 100 m higher in elevation, is visible 600 m to the southwest. The forested bottomlands around the Kosina Creek mouth are also visible to the southwest. The terrace end is moderately well drained and directly overlooks interspersed spruce forest and marsh. Vegetation in the site vicinity consists of lowland spruce-hardwood forest grading from fairly dense spruce stands and muskeg in more poorly drained areas below the terrace to open spruce, birch, and poplar forest along the better-drained terrace top. Lichens, mosses, and Labrador tea are the dominant ground cover, with dwarf birch and low bush berries commonly occurring farther away from the terrace edge. A 1 ha grassy pond surrounded by a mature balsam poplar stand is just southeast of the site.

Testing:

One obsidian modified flake (UA84-94-1) was recovered from a shovel test which was later expanded into a 40 x 40 cm test pit (test pit 1). Three unidentifiable calcined bone fragments of a medium-large mammal were excavated from the Oshetna tephra horizon, which was mixed with an overlying paleosol in this test. Two survey shovel tests, located within 5 m of test pit 1, were sterile. A subsequent grid shovel testing program involved the excavation of 23 grid shovel tests, two of which yielded artifacts. One basalt modified flake (UA84-94-3) and 12 basalt flakes were recovered from these grid shovel tests, all of which were located within 7 m of test pit 1 (Table D.400). Observed site size based on the distribution of artifacts is 12 square meters (Table D.2).

Table D.400.

Artifact Summary, TLM 239

Provenience		Description
Lithic Material		
Subsurface:		
Shovel test 1	1	Obsidian modified flake (UA84-94-1)
Shovel test N2/E2	1	Basalt modified flake (UA84-94-3)
	5	Basalt flakes
Shovel test N2/E4	7	Basalt flakes
Faunal Material		
Subsurface:		
Test pit 1	3	Unidentifiable bone fragments, calcined, medium-large mammal

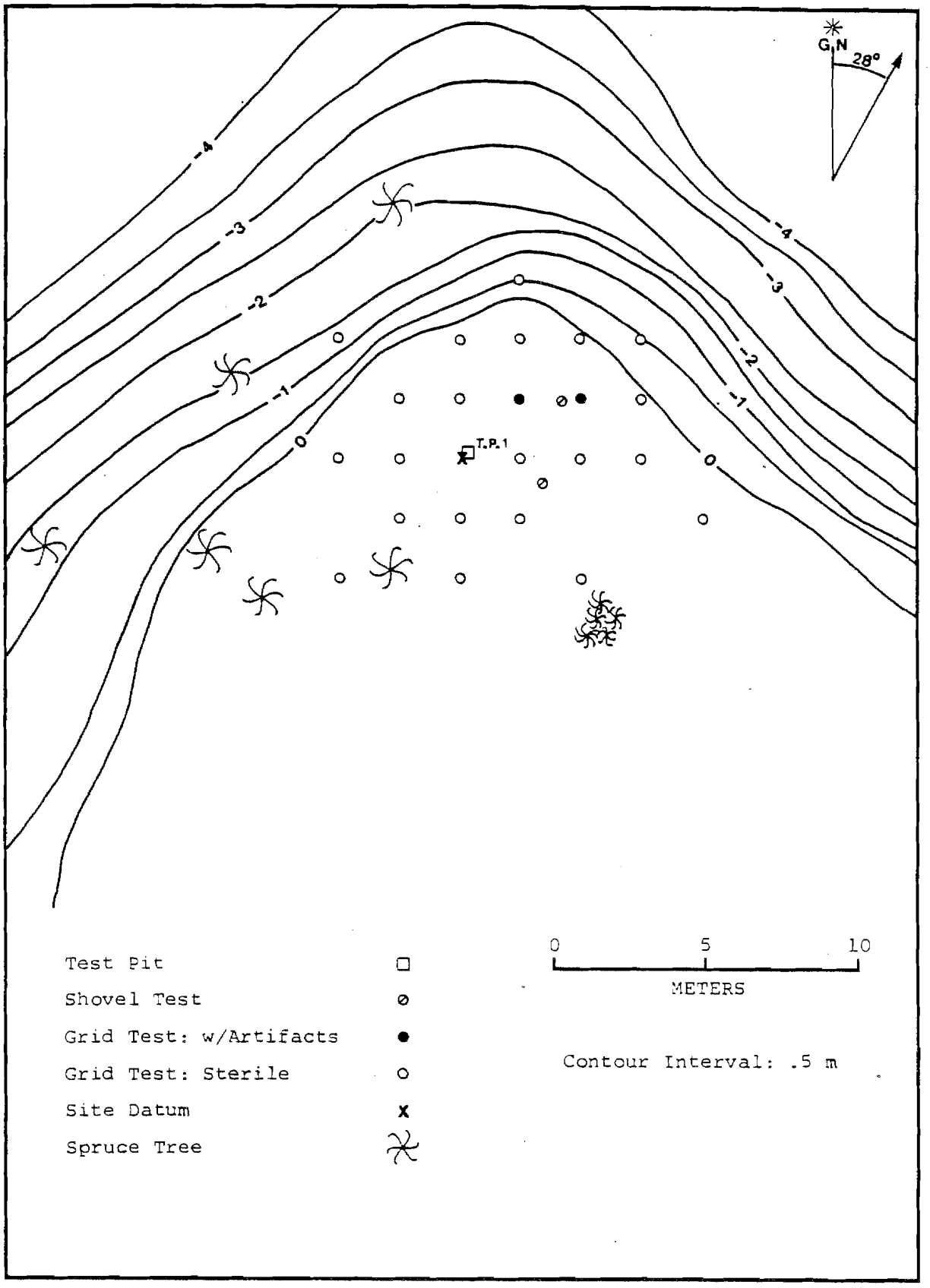


Figure D.316. Site Map, TLM 239

AHRS Number TLM 240; Accession Number UA84-97

Area:	North of Jay Creek
Site Map:	Figure D.317
Survey Locale 33:	Figure E.110
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 240 is located on an outside bend on the east bank of Jay Creek, upstream from its confluence with the Susitna River. The site is located on a ca. 1.5 m high terrace comprised of fine alluvial sands and silts at an elevation of 540 m asl (altimeter: 1771 feet). The wall of Jay Creek canyon above the creek mouth is to the east of the terrace. Several higher raised stream terraces are located behind the site to the north. Views from the site are restricted by dense spruce and birch stands, extensive willow gallery growth, and rising slopes. Only a short stretch of the Jay Creek stream course and canyon walls may be observed from the terrace edge. Vegetation on the terrace consists of old growth spruce, birch, cottonwood, and aspen. Understory growth includes the typical subarctic herbaceous shrub assemblage. Thick moss and lichen forms a forest floor cover. Moister areas behind the site contain black spruce and tussocks. The site is presently endangered by erosion from two sources, the southward lateral migration of Jay Creek, and an all-terrain vehicle trail that crosses the site.

Testing:

TLM 240 was identified by the presence of a large rectangular house depression (feature 1) located near the terrace edge. A survey shovel test placed in the southwest corner of the structure suggested the presence of a collapsed wood-frame and earth roof. A second shovel test placed adjacent to a large surface rock (N96/E100) produced charcoal and bone fragments. A third test placed at the terrace edge near a surface rock cluster proved sterile.

Grid shovel testing was implemented to assist in determining the distribution of cultural materials. One hundred twelve grid shovel tests were excavated, 26 of which produced cultural material. Shovel test (N100/E100) produced a single opaque white tube bead (UA84-97-6; Figure D.396c). This test was later expanded into test pit 1 and the site datum was established in the southwest corner. Two additional opaque white beads (UA84-97-20, 12) were recovered from grid shovel test N90/E102. Shovel test N88/E88, later expanded into test pit 2, was located in the base of a second rectangular depression (feature 2). Five additional beads recovered from an organic level (possible floor) are: a single opaque white seed bead fragment (UA84-97-12), two semitransparent, light blue seed beads (UA84-97-13, 14; Figure D.396e,f), and two red-on-white Cornaline d'Aleppo (UA84-97-10, 11; Figure D.396d) Two articulating fragments of a creamware saucer (UA84-97-39; Figure D.396g) were recovered from a 25 cm thick layer of ash and burned earth in shovel test N100/E108. Thermally altered rocks, calcined bone, unburned bone, and cultural ash units comprised the component.

Faunal remains recovered from this site include caribou (Rangifer tarandus), moose (Alces alces), indeterminate cervid fragments, and indeterminate small mammal remains. Both the caribou and moose skeletal elements include forelimb and extremity fragments. The cervid remains, which could be either caribou or moose, consist of cranial and axial skeletal elements. Identifiable fragmentary skeletal elements indicate the presence of only one individual per species. Three long bone fragments exhibit gnaw marks.

Artifacts not associated with a feature were recovered from the present organic unit and from a burned organic unit (Table D.401). At least four episodes of silt deposition and subsequent revegetation are evident in the profile of test pit 1. Basement material comprised of sands and gravels were encountered in only two tests. Rock clusters were observed along the terrace edge. These clusters are based upon the most recent silt deposit. Origin from ice-rafting or root-web inclusion is ruled out due to their relatively recent placement behind mature trees that

lack ice-scour scars, and the absence of decomposing drift stumps. No similar arrangements are observed elsewhere on the creek banks. Given the thin amount of vegetation surrounding the clusters and the apparently late period of occupation of the site it is very likely that they are contemporaneous in time and cultural in origin.

Old axe-cut stumps are noted on the site and in surrounding spruce stands. These may be associated with early historic mining cabin construction and lumbering activity. It is of interest to note that the stumps are cut ca. 50 cm from the ground with downward strokes around the circumference of the stump. Trees cut in this manner have been associated with an aboriginal approach to tree-felling as opposed to an Euro-American notch and backcut (hinge) technique (Ream and Bennett 1979). An estimation of site age based on site tree diameters and an average of tree ring counts of similar size sawn drift logs, and the type and frequency of Euro-American trade suggests a middle to late 1800's occupation for the terrace. Observed site size based on the distribution of artifacts is 314 square meters (Table D.2).

Table D.401.

Artifact Summary, TLM 240

Provenience		Description
Historic Remains		
Subsurface:		
Test pit 1	1	Tubular bead (UA84-97-6)
Test pit 2	2	Cornaline d'Aleppo beads (UA84-97-10, 11)
	2	Seed beads (UA84-97-13, 14)
	1	Seed bead fragment (UA84-97, 12)
N90/E102	1	Seed bead (UA84-97-20)
N100/E108	2	Creamware saucer fragments (UA84-97-39)

Table D.401. (Continued)

Provenience		Description
Faunal Material		
Subsurface:		
Test pit 1	1	Cranial fragment, unburned, cervid
	1	Axis vertebra fragment, unburned, cervid
	1	Possible rib fragment, unburned, cervid
	5	Long bone and unidentifiable fragments, unburned, medium-large mammal
	9	Long bone and unidentifiable fragments, heavily burned and calcined, medium-large mammal
Test pit 2	2	Scapula fragments (glenoid fossae), calcined, caribou (Rangifer tarandus)
	1	Humerus shaft fragment, burned, caribou (Rangifer tarandus)
	7	Long bone and unidentifiable fragments, unburned, medium-large mammal
	50	Long bone and unidentifiable fragments, heavily burned and calcined, medium-large mammal
	6	Unidentifiable fragments, burned, medium-large mammal

Table D.401. (Continued)

Provenience		Description
Grid shovel tests	1	Right mandibular third molar, unburned, moose (Alces alces)
	2	Mandibular fragments, unburned, moose (Alces alces)
	1	Left scapula (glenoid fossa), unburned, moose (Alces alces)
	1	Possible humerus head fragment, unburned, moose (Alces alces)
	1	Sesamoid, unburned, moose (Alces alces)
	4	Proximal fragments proximal phalanx, burned, moose (Alces alces)
	1	Left calcaneus, unburned, caribou (Rangifer tarandus)
	1	Distal metapodial (hindlimb) fragment, unburned, caribou (Rangifer tarandus)
	2	Rib fragments, unburned, cervid
	4	Long bone fragments, unburned, large mammal
	1	Long bone fragment, burned, large mammal
	3	Long bone fragments, calcined, gnaw marks, medium-large mammal
	3	Flatbone fragments, unburned, medium-large mammal

Table D.401. (Continued)

Provenience		Description
	1	Flatbone fragment, calcined, medium-large mammal
	4	Long bone and unidentifiable fragments, unburned, medium-large mammal
	ca. 100	Long bone and unidentifiable fragments, burned and calcined, medium-large mammal
	1	Unidentifiable fragment, heavily burned, medium-large mammal
	10	Bone fragments (cranial, rib, and long bone), calcined, small mammal
	1	Cranial fragment, calcined, mammal
	1	Unidentifiable fragment, calcined, mammal

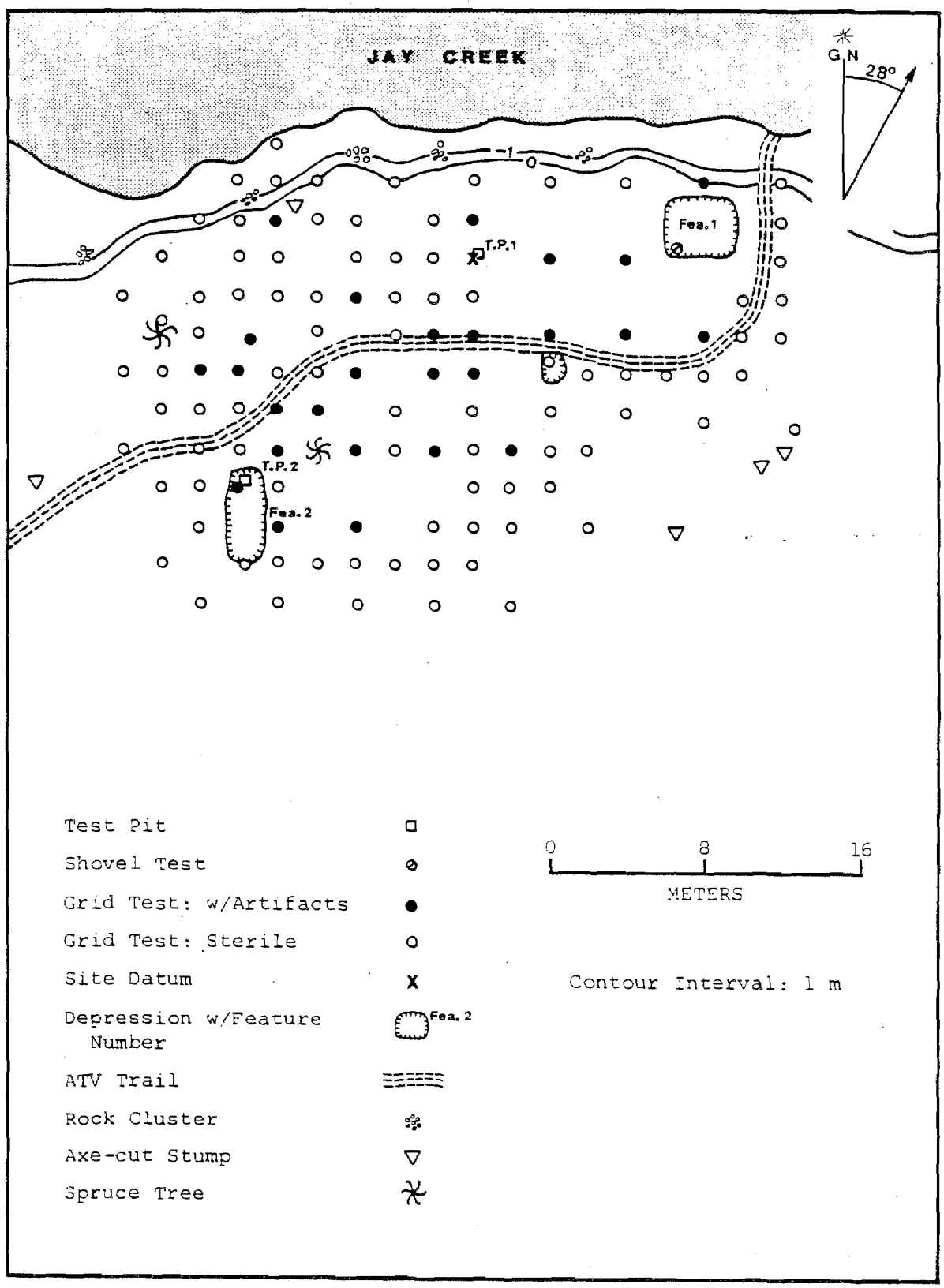


Figure D.317. Site Map, TLM 240

AHRS Number TLM 241; Accession Number UA84-98

Area:	Southeast of Kosina Creek Mouth
Site Map:	Figure D.318
Survey Locale 84:	Figure E.158
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 241 is located on a narrow north-south oriented relict terrace of Kosina Creek at an elevation of 531 m asl (altimeter: 1741 feet). The site is located near the southern end of the 1 m high terrace. The terrace is ca. 8 m wide in the vicinity of the site, thinning into bottomland terrain ca. 350 m north, and is characteristic of the lower Kosina Creek alluvial fan deposits. TLM 065 is visible through tree tops about 250 m south and ca. 100 m higher in elevation. Visibility in other directions is limited to about 60 m by present forest vegetation. Although not visible, Kosina Creek can be heard easily to the west. Vegetation around the site is composed of lowland spruce-hardwood forest with open to dense stands of white and black spruce dominating areas neighboring the terrace features. Scattered birch and mature white spruce occur on better-drained terrace remnants. Ground cover composed of lichens and scattered Labrador tea, mosses, dwarf birch, blueberry, and rose occur off the terrace in less well drained areas.

Testing:

Nine basalt flakes and one chert flake were recovered from a shovel test near the middle of the terrace (Table D.402). This test was expanded into a 40 x 40 cm test pit (test pit 1) which produced 21 basalt flakes and an additional chert flake. All lithic artifacts excavated in the test pit occurred between the base of the Watana tephra and the top of the glacial drift and alluvial deposits, in a mixed and somewhat cryoturbated Oshetna tephra and paleosol unit. A survey shovel test 18 m northeast of test pit 1 was sterile.

Sixteen grid shovel tests were excavated to assist in determining site size and the distribution of cultural material. The southwest corner of test pit 1 was selected as site datum (Figure D.318). No additional cultural material was recovered. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.402.

Artifact Summary, TLM 241

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	30	Basalt flakes
	2	Chert flakes

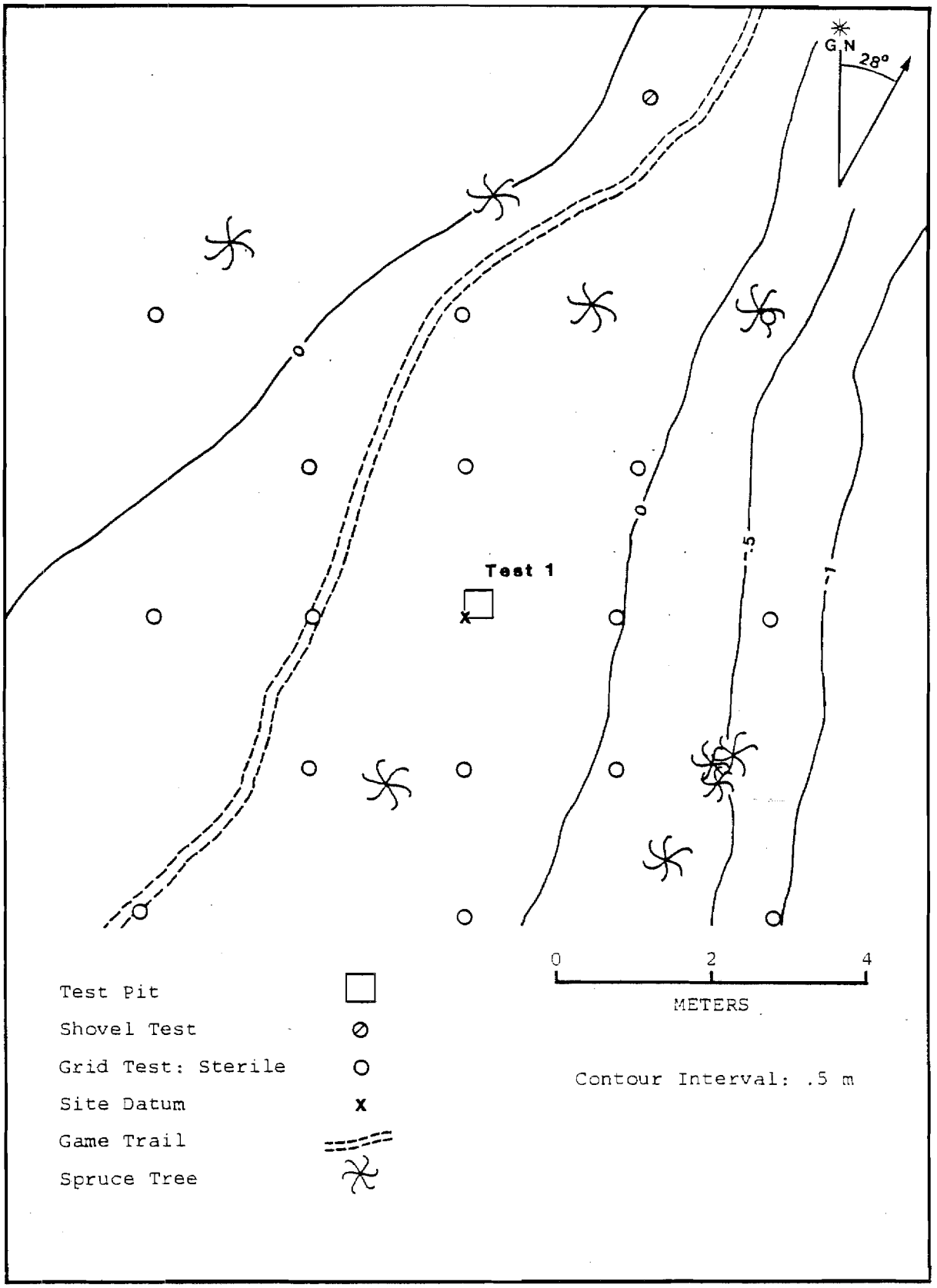


Figure D.318. Site Map, TLM 241

AHRS Number TLM 242; Accession Number UA84-99

Area:	Southeast of Kosina Creek Mouth
Site Map:	Figure D.319
Survey Locale 84:	Figure E.158
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 242 is located on a low, north-south oriented, relict terrace east of Kosina Creek at an elevation of 532 m asl (altimeter: 1745 feet). The surface of the terrace is relatively flat, merging into surrounding terrain ca. 150 m north, while it has been cut on its east and west sides by stream erosion. The upstream end of the terrace comes to a point ca. 23 m south of the site. Views from the site are limited to ca. 100 m by an open spruce and birch forest. Kosina Creek is partially visible to the east and TLM 065 is visible through the trees ca. 400 m to the south and ca. 100 m higher in elevation. Higher terrain to the south, west, and north is also partially in view. The ecosystem of the site is characterized by lowland spruce-hardwood forest. The vegetation is comprised of open white spruce forest with stands of birch occurring on low, relatively well drained rises and relict terraces. The surface vegetation of the site consists of dwarf birch, Labrador tea, lowbush cranberry, blueberry, dwarf dogwood, wild rose, lichen, heath, and sphagnum moss.

Testing:

One unburned long bone shaft fragment, 1 partially calcined long bone fragment, and 21 calcined long bone and unidentifiable bone fragments were recovered during survey from a shovel test placed 30 cm west of an east-west oriented rectangular depression (Table D.403). The depression is deep and steep-sided and measures 70 (north-south) x 90 (east-west) x 55 cm deep. A 40 x 40 cm test pit (test pit 1) was superimposed over the initial shovel test and revealed 1 chert flake, 2 quartzite flakes,

burned and unburned bone fragments, and 2 pieces of birch bark. Five hundred and thirty-two of 539 unburned and burned bone fragments recovered from test pit 1 were long bone and unidentifiable bone fragments. Six of the seven identifiable bones are attributable to caribou (Rangifer tarandus), one possible rib fragment is attributable only to medium-large mammal. Caribou skeletal elements recovered represent the axial, forelimb, hindlimb, and extremity components. Cut marks are present on a caribou phalanx fragment. All materials were excavated from a stratigraphic unit containing ash, charcoal, burned and unburned bone fragments, and lithics. This unit underlies a sand and gravel matrix mixed with organics that is presumably backfill material from the depression, and overlies a fluvial sand and sandy silt. A radiocarbon sample taken from the cultural unit yielded a modern date (Beta-10795). Three additional shovel tests within 25 m of test pit 1 were sterile.

To assist in determining the extent and stratigraphic context of the site, a grid shovel testing program was implemented; 57 shovel tests were excavated during this program. Five of these grid shovel tests contained faunal material found in an organic silt below the thick organic mat. Identifiable caribou (Rangifer tarandus) skeletal remains were recovered in three of these grid shovel tests. The skeletal elements include axial, hindlimb, and extremity components. No lithic material was found during the grid shovel testing phase. Observed site size based on the distribution of artifacts is 49 square meters (Table D.2).

Table D.403.

Artifact Summary, TLM 242

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	1	Chert flake
	2	Quartzite flakes
Faunal Material		
Subsurface:		
Test pit 1	1	Proximal rib fragment, unburned, probable caribou (Rangifer tarandus)
	1	Possible ulna shaft fragment, unburned, probable caribou (Ragifer tarandus)
	1	Left distal tibia fragment, unburned, caribou (Ragifer tarandus)
	1	Left fibula, unburned, caribou (Rangifer tarandus)
	1	Sesamoid, calcined, caribou (Rangifer tarandus)
	1	Distal fragment proximal phalanx, calcined, cut marks, caribou (Rangifer tarandus)
	1	Possible rib fragment, unburned, medium-large mammal

Table D.403. (Continued)

Provenience		Description
	1	Long bone shaft fragment, unburned, medium-large mammal
	18	Long bone and unidentifiable bone fragments, unburned, medium-large mammal
	513	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
Shovel test N96/E104	1	Cervical vertebra fragment, unburned, caribou (Rangifer tarandus)
Shovel test N96/E106	1	Right distal femur shaft fragment, unburned, caribou (Rangifer tarandus)
Shovel test N98/E98	1	Long bone fragment, unburned, medium-large mammal
Shovel test N104/E104	1	Long bone shaft fragment, unburned, medium-large mammal

Table D.403. (Continued)

Provenience		Description
Shovel test N106/E102	1	Left astragalus, unburned, caribou (*Rangifer tarandus*)
	1	Left naviculo-cuboid, unburned, caribou (*Rangifer tarandus*)
Other		
Subsurface:		
Test pit 1	2	Birch bark fragments

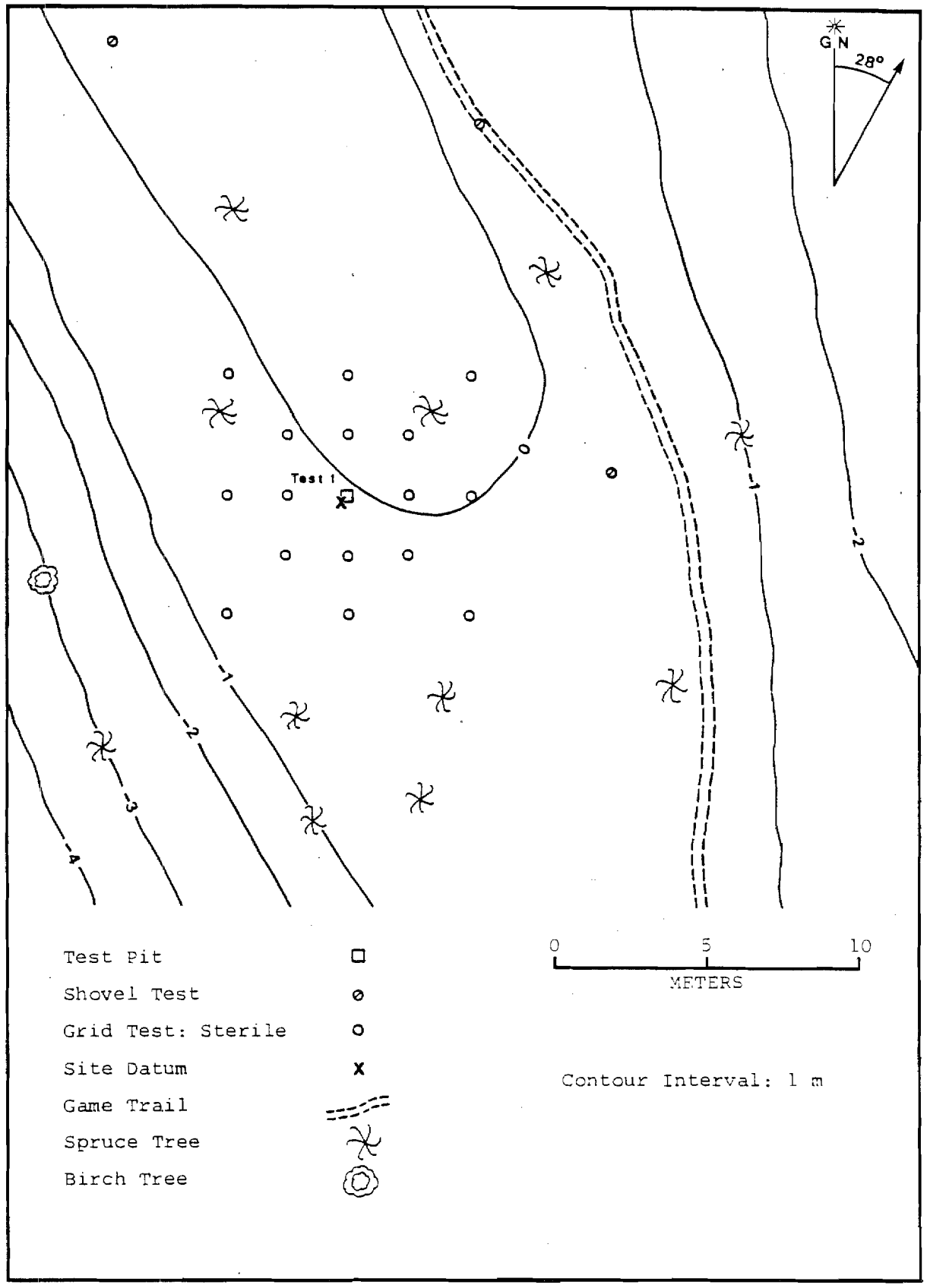


Figure D.319. Site Map, TLM 242

AHRS Number TLM 243; Accession Number UA84-129

Area:	West of Watana Creek
Site Map:	Figure D.320
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site is situated along a slightly descending linear ridge west of Watana Creek, at an elevation of 591 m asl (altimeter: 1938 feet). The ridge is a continuous terrain feature approximately 400 x 10 m, oriented northwest-southeast. The site is located in the central area of the ridge on a relatively flat surface at the southwest edge. Approximately 20 m southeast of the site the ridge constricts to a width of ca. 4 m and continues in that direction toward Watana Creek. To the northwest, approximately 40 m, the terrain abruptly rises about 1 m in elevation. Terrain to the northeast and southwest descends to a stream valley in each direction, both paralleling the linear ridge. The slope to the northeast descends to a lower elevation ca. 10 m from the site and then descends an additional ca. 15 m to the stream bed approximately 60 m beyond the slope break. The clear water stream northeast of the site, approximately 1 m wide, follows a straight course along a ca. 7-9 degree gradient and has a very rocky bed with cobbles up to 50 cm in diameter. The slope to the southwest abruptly descends to a dry stream bed ca. 10 m lower in elevation approximately 40 m southwest. TLM 237, located approximately 250 m to the northwest at the top of a landslide scar, is visible from the site. The ca. 4 m wide razorback ridge crest is in view to the southeast for a distance of approximately 40 m where the spruce forest begins to obstruct views beyond this distance. The east valley rim of Watana Creek is also in clear view. Views to the south, southwest, and west include the dry relict stream valley and adjacent knolls. Flora presently at the site includes bog blueberry, wild rose, crowberry, Labrador tea, dwarf birch, paper birch, black spruce, willow,

dwarf dogwood, sphagnum moss, and lichens. Black spruce are more numerous in the valleys on either side of the ridge.

Testing:

One of four survey shovel tests produced a single rhyolite flake at the contact between the finely sorted organics and the lower sandy silt (Table D.404). A 40 x 40 cm test pit (test pit 1) was superimposed over the positive survey shovel test but no additional artifactual material was recovered. Sixteen additional shovel tests were excavated during grid shovel testing and all were sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.404.

Artifact Summary, TLM 243

Provenience		Description
Lithic Material		
Subsurface:		
Shovel test 1	1	Rhyolite flake

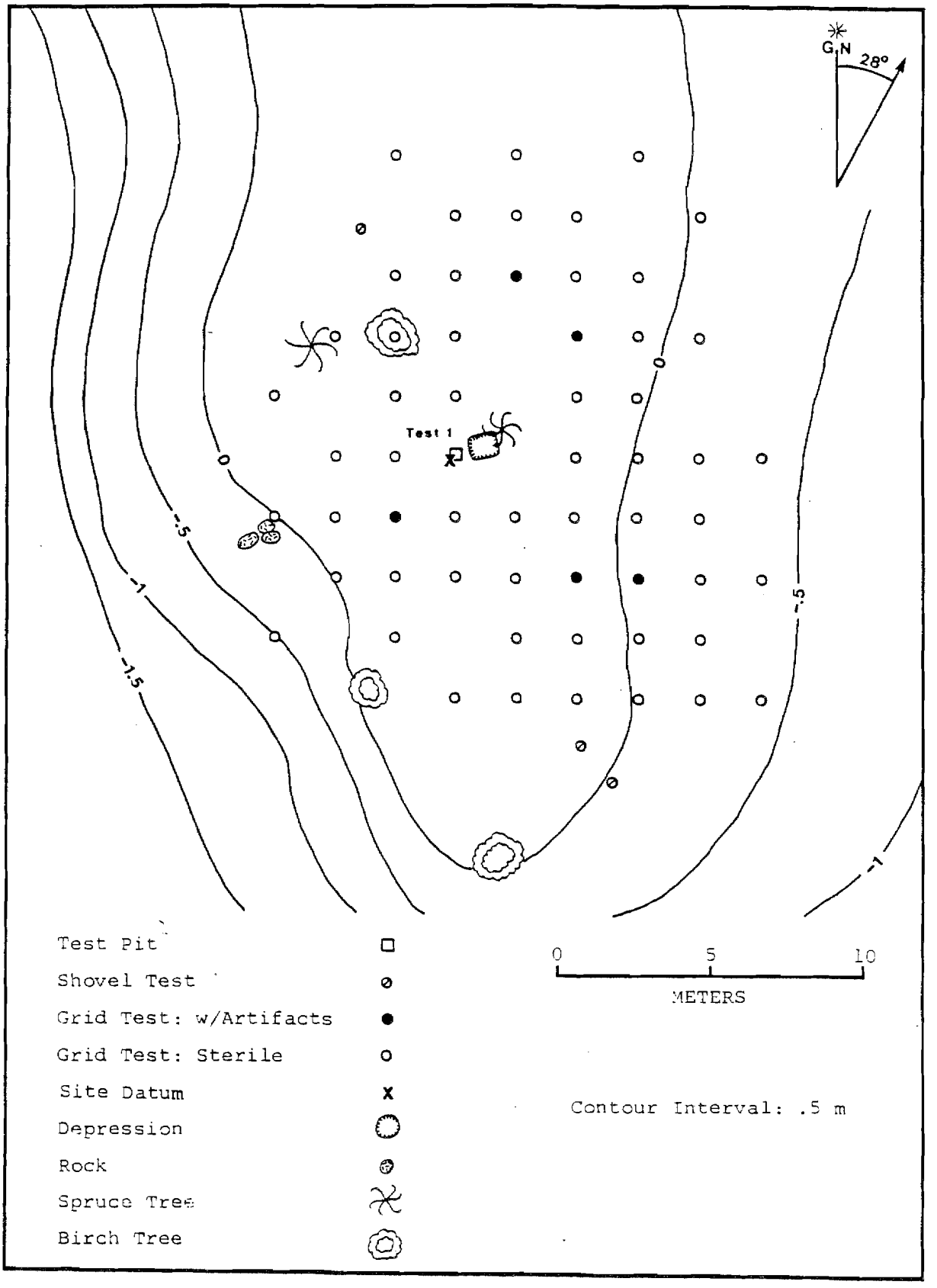


Figure D.320. Site Map, TLM 243

AHRS Number TLM 244

Area:	West of Watana Creek
Site Map:	Figure D.321
Survey Locale 138:	Figure E.221
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

The site is situated on a north-south trending ridge west of Watana Creek at an elevation of 631 m asl (altimeter: 2070 feet) with the surrounding terrain descending in all directions. The ridge upon which the site is located is an isolated terrain feature measuring ca. 35 x 15 m. It is centrally located on a larger ridge oriented northeast-southwest and measuring ca. 400 x 100 m which is generally between 4 and 7 m higher than the surrounding glaciolacustrine plain. The greatest change in elevation is seen on the south slope where the terrain descends approximately 7 m beginning ca. 10 m south of the site and leveling ca. 30-35 m south onto the boggy glaciolacustrine plain. A small ravine occurs ca. 25 m east which is ca. 2 m lower in elevation. The ridge extends ca. 20 m north about the same elevation before descending approximately 2 m onto a lower horizontal surface. The terrain to the west descends to an area ca. 2 m lower approximately 20 m distant. Further west and southwest is a clear water stream trending west-northwest by east-southeast originating on the gradually sloping glaciolacustrine plain to the northwest. This stream follows a slightly bending course along a ca. 1-2 degree slope with its nearest approach about 200 m southwest of the site. Views from the site are differentially obstructed by the spruce forest. The only open view is available to the north-northwest where the glaciolacustrine plain is seen beyond the spruce treetops. Despite the obstructed views to the northeast, east, and southeast, a view of the larger ridge adjacent to the site can be seen up to ca. 20 m beyond the small ravine. A small clearing in the spruce forest to the south allows a view of TLM 215 ca. 700 m distant from the southern area of the site. A ca. 75 m stretch of

the large ridge is in view to the west-southwest. The site surface is quite flat with small undulations no greater than ca. 10 cm in height. The site surface is covered with a white lichen mat with mosses and lowbush cranberry. Eight clusters of shrubs, ranging between 50 and 150 cm in diameter, occur across the lichen mat and are composed of dwarf birch, Labrador tea, sphagnum moss, heath, and caribou lichen. Additional flora includes bog blueberry, lowbush cranberry, Labrador tea, mushrooms, black spruce, and a single paper birch. Black spruce are more numerous at the base of the ridge to the north and paper birch are numerous along the south-facing slope.

Testing:

A concave depression (feature 1) was located near the central area of the site during survey shovel testing. The circular depression is ca. 90 cm in diameter and ca. 20 cm deep at its center. A 40 x 40 cm test pit (test pit 1) positioned on the northeast rim failed to produce artifactual material but did reveal stratigraphic disturbances. The north profile shows an anomalous mottled reddish brown silt/tephra above a discontinuous Devil tephra. The south wall profile illustrates a truncation of the Devil and Watana tephras. Despite the absence of artifacts, the stratigraphic disturbances suggest that the depression may be cultural in origin. None of the additional eleven survey shovel tests produced artifactual material.

A grid shovel testing program was implemented to assist in refining the stratigraphic context of the site feature and to assist in determining the site size. Sixteen grid shovel tests were excavated, but none produced cultural remains. Observed site size based on a cultural feature is 4 square meters (Table D.2).

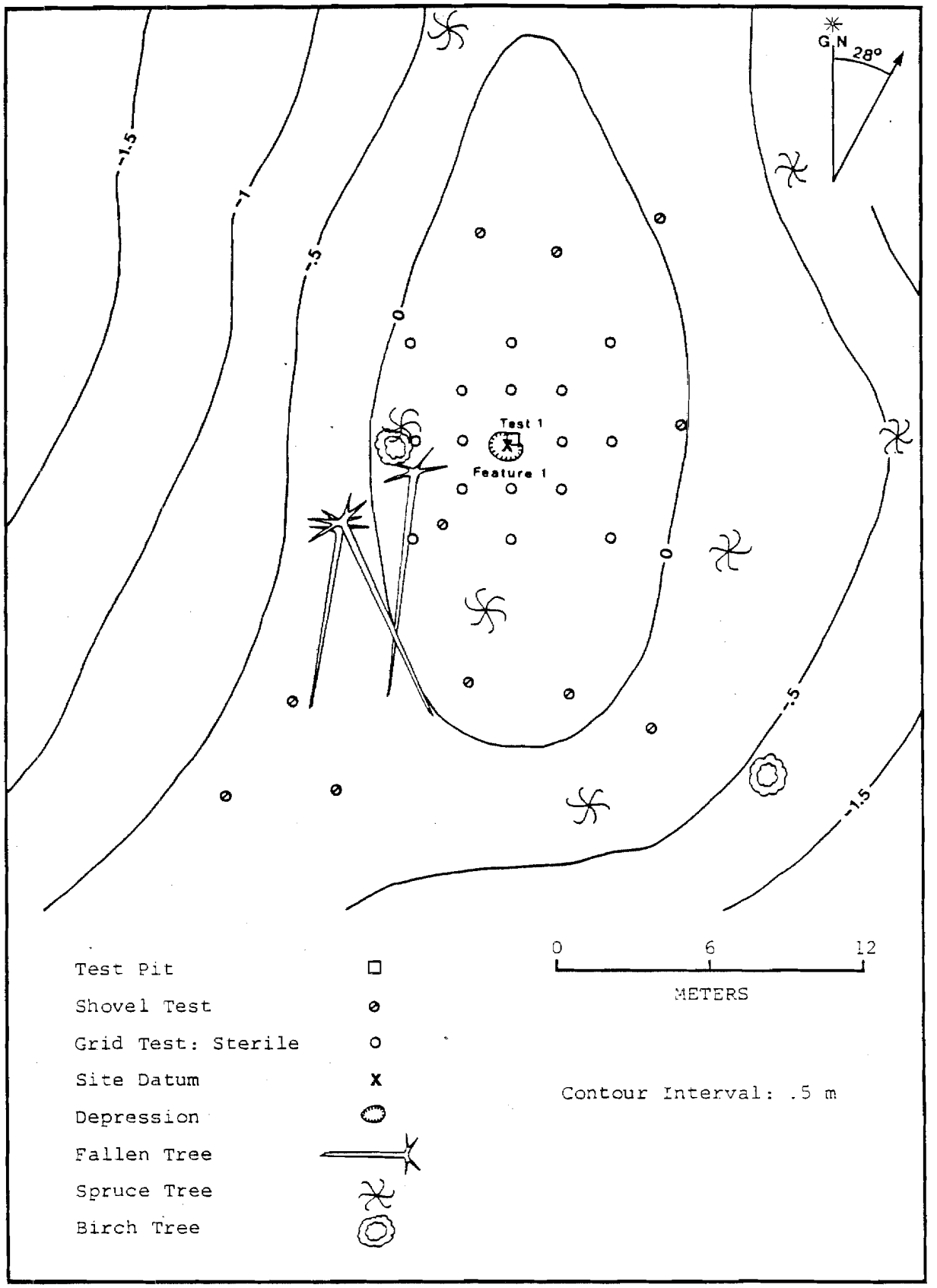


Figure D.321. Site Map, TLM 244

AHRS Number TLM 245; Accession Number UA84-131

Area:	West of Deadman Creek
Site Map:	Figure D.322
Survey Locale 150:	Figure E.243
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 245 is located atop a prominent kame west of and overlooking Deadman Creek, at an elevation of approximately 722 m asl (2400 feet). The kame is oriented north-northeast by south-southwest, gradually decreasing in elevation to the southwest, northwest, and north. Slopes are steeper to the northeast and southeast, overlooking the Deadman Creek valley. The lower portions of this kame merge into the ice-stagnation terrain typical of the area between the lower stretches of Deadman and Tsusena creeks. Several northwest-southeast oriented kettle lakes are located west of the site, the largest of which (ca. 30 ha) is visible about 200 m northwest of the site. Views from the site are panoramic, only locally obstructed by high brush. Visibility is greatest to the north, east, and southeast encompassing about 3 km of Deadman Creek valley and associated terraces, as well as the higher ice-stagnation terrain east of Deadman Creek. The creek becomes constricted about 500 m southeast of the site where it begins downcutting through glacial gravels and bedrock toward the Susitna River. Vegetation consists of high brush, willow, and birch-covered slopes, knolltops, and basins with scattered white spruce occurring about 100 m below tree line in this area. Well-developed lichens and low bush berries cover open areas between higher brush thickets and are common on knolltops and upper slopes in the immediate site vicinity.

Testing:

Two argillite flakes were recovered from a shovel test. Another argillite flake was found in the wall of this shovel test while enlarging to clarify stratigraphy (Table D.405). A fourth argillite flake was found in test pit 1 which was placed adjacent to the survey shovel test. Both in situ flakes were recovered from a thin paleosol between the Watana and Oshetna tephras at a depth of 20 cmbs. Two additional shovel tests within 13 m of test pit 1 were sterile. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.405.

Artifact Summary, TLM 245

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	4	Argillite flakes

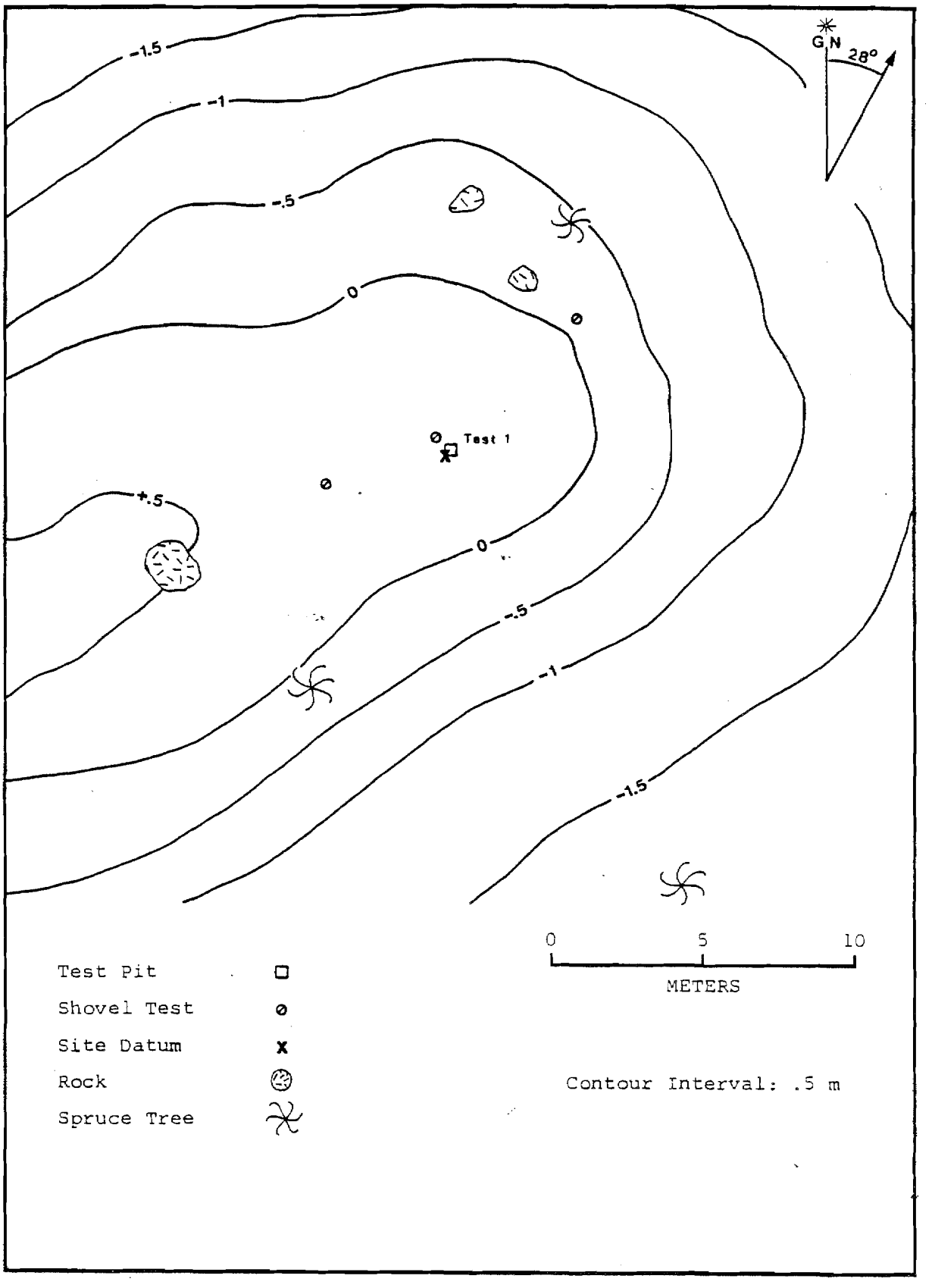


Figure D.322. Site Map, TLM 245

AHRS Number TLM 246; Accession Number UA84-132

Area:	West of Jay Creek
Site Map:	Figure D.323
Survey Locale 33:	Figure E.110
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

The site is located at an elevation of 592 m asl (altimeter: 1943 feet) on the southern extreme of a small, discrete, north-northeast by south-southwest oriented ridge. This ridge, to the west of Jay Creek, is part of a larger ridge which stretches between the edge of the plateau above the Jay Creek canyon and the mouth of Jay Creek. The large ridge descends in a sinuous fashion along a slope varying from 2-15 degrees. Many small benches characterize this large ridge. Lower topographic relief surrounds the site with the exception of the area to the north and northeast where the terrain is ca. 1 m higher in relief ca. 60-80 m distant. The terrain ca. 20 m to the west is approximately 1 m lower in elevation. Further to the west a trough is ca. 4-5 m lower in relief approximately 100 m distant. A prominent conical knoll is situated ca. 350 m north-northwest of the site but is not in view from the site. A lower terrace, ca. 5 m lower in elevation, occurs approximately 50 m to the south and southwest. Terrain to the east and southeast drops to lower elevations approximately 20 m east toward Jay Creek along a ca. 10-15 degree slope. Visibility is obstructed in all directions by the hardwood forest. The most open views are to the north and northwest where the edge of the plateau and valley wall of the Susitna River are in view. A large bedrock cliff exposure is clearly visible to the west. The Susitna River is discernible through the trees to the southeast, south, southwest, and west. The forested alluvial fan of Jay Creek is discernible to the southeast. Visibility up the ridge is limited by forest and higher topographic relief to about 100 m. The site surface is relatively flat with minor undulations. Included in the floral inventory are lichens, bog blueberry, Labrador tea, sphagnum

moss, heath, lowbush cranberry, caribou lichen, wild rose, dwarf birch, paper birch, aspen, and black spruce. Paper birch are numerous along the ridge crest toward the north-northwest. Aspen are dominant along the south and east slopes of the ridge and black spruce are slightly denser in the trough to the west. In addition, alder occurs sporadically on the east slope that descends to Jay Creek.

Testing

An argillite flake was uncovered in a survey shovel test at the contact between the Devil and Watana tephras. Subsequent excavation of a 40 x 40 cm test pit (test pit 1) yielded 10 argillite flakes and 5 calcined long bone and unidentifiable bone fragments (Table D.406). The flakes were collected from the contact between the finely sorted organic and Devil tephra to the contact of the Devil and Watana tephras. The calcined bone was stratigraphically placed at the contact between the Devil and Watana tephras.

A grid shovel testing program was implemented to assist in determining the site size and distribution of cultural materials. Sixteen grid shovel tests were excavated during this program, but all proved sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.406.

Artifact Summary, TLM 246

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	11	Argillite flakes
Faunal Material		
Subsurface:		
Test pit 1	5	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

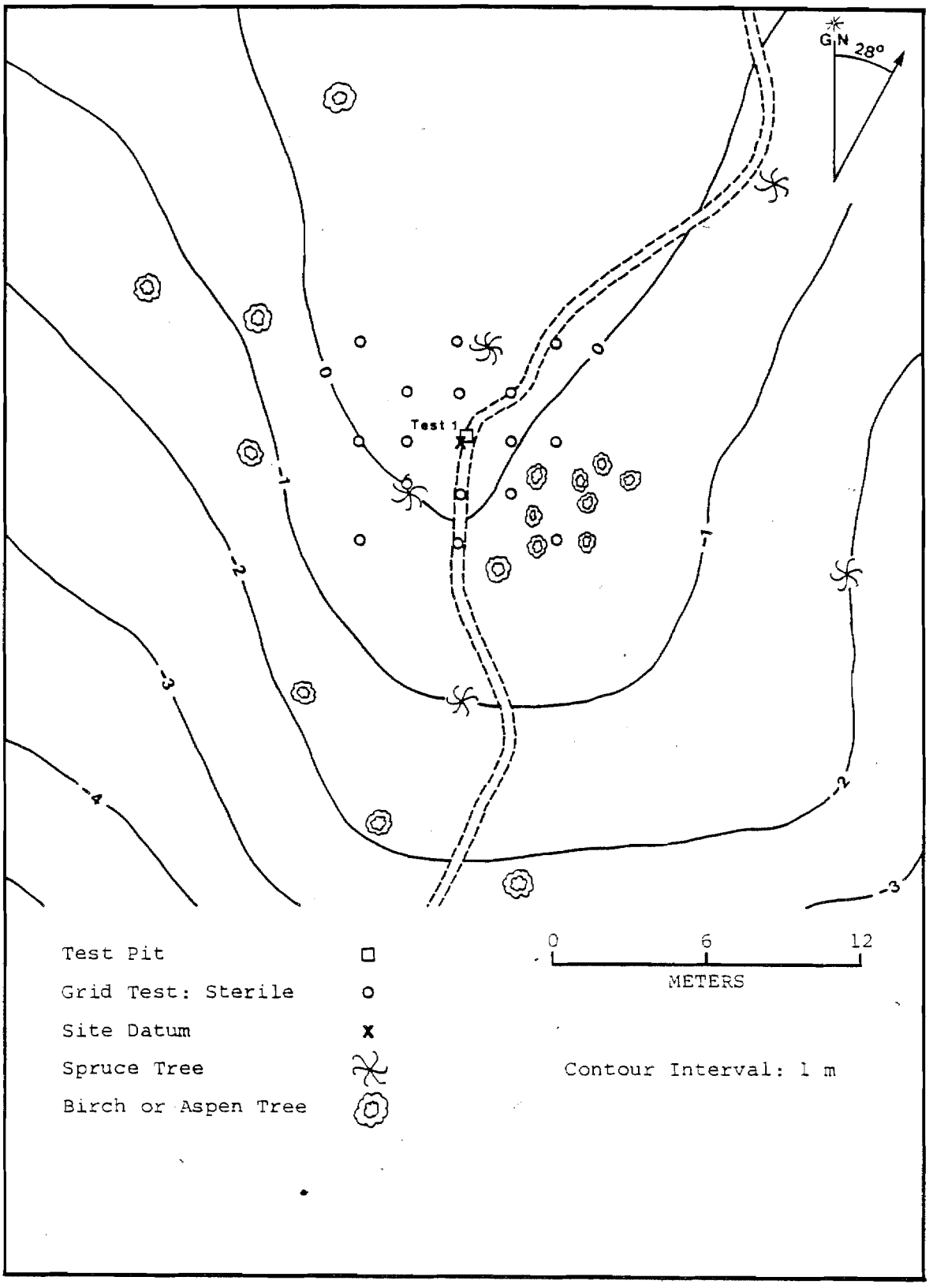


Figure D.323. Site Map, TLM 246

AHRS Number TLM 247; Accession Number UA84-133

Area:	West of Jay Creek
Site Map:	Figure D.324
	Locus A, Figure D.325
	Locus B, Figure D.326
	Locus C, Figure D.327
Survey Locale 33:	Figure E.110
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 247 consists of three loci (A, B, and C) and is located on a north-south oriented terrace west of Jay Creek. The elevation of locus A is 547 m asl (altimeter: 1795 feet), locus B is 544 m asl (altimeter: 1785 feet), and locus C is 534 m asl (altimeter: 1752 feet). The ridge descends southward to the Susitna River from the top of the valley wall north of the site. The site area occupies the lower fourth of this terrace which is composed of undifferentiated colluvium and basal tills over bedrock. Localized slope creep and slumpage are common, forming benches, rises, and areas of isolated topographic relief. Visibility from the site is limited to about 80 m by present forest cover although parts of the Susitna River and a section of Jay Creek can be seen through trees to the southwest and southeast, respectively. Several sites are in the vicinity of TLM 247. TLM 246 is ca. 200 m up the ridge to the north. TLM 072, TLM 079, TLM 232, TLM 240, TLM 249, and TLM 250 are located east of Jay Creek on alluvial terraces of the creek and the Susitna River. Vegetation at the site consists of open poplar, birch, and spruce forest on well-drained benches and small ridges, and grades into white and black spruce forest on lower and less well drained areas. Ground cover is composed of Labrador tea, rose, lowbush cranberry, blueberry, dwarf birch, and isolated lichen patches. Sphagnum moss of varying thickness is commonly associated with Labrador tea, blueberry, and flood plain vegetation below the terrace.

Testing:

Eight surface features were located during survey of the terrace (Figure D.324). Two spatially discrete groups of depressions were identified and designated locus A (northern group) and locus B the (southern group). Test pit 1 was placed on the berm of a partially slumped depression (feature 6) in locus B and revealed unburned bones of caribou (Rangifer tarandus) and medium-large mammals as well as a hammerstone (UA84-133; Figure D.396h) beneath ca. 20 cm of sandy gravel backfill but above a thin buried organic horizon. An unaltered sequence of Devil tephra, Watana tephra, and gravelly drift occurred below the buried organic horizon. Eight additional surface depression features were identified during subsequent intensive survey of the site area. One of the depression features was located on a projection of the terrace, ca. 60 m west of the locus B area, and was given the designation of locus C, feature 14.

Grid shovel testing was conducted to estimate the spatial limits of the site, and to assess the occurrence and distribution of subsurface artifactual material. Grid shovel tests were excavated around all 16 of the depression features, resulting in the excavation of 141 grid shovel tests some of which are east of the locus A map and not represented graphically. Eight of the shovel tests contained subsurface cultural material in association with either the surface organic unit or the Devil tephra. The inventory includes 11 flakes, 2 thermally altered rocks, 1 complete bone, and 7 bone fragments (Table D.407). The flakes were of argillite, basalt, and chert, with one of the basalt flakes exhibiting secondary modification (UA84-133-7). Bone fragments are unburned and represent the remains of moose (Alces alces) and caribou (Rangifer tarandus).

The 16 features at TLM 247 are surface depressions. Features 4, 6, 7, 8, 10, 11, 12, 13, and 14 are roughly circular depressions varying from ca. 30-90 cm in diameter and from 10-30 cm in depth with no apparent berms. Features 2, 5, 9, and 15 are circular depressions varying from 0.6-2 m in diameter and from 20-60 cm in depth, which may have berms.

Feature 15 (locus A) lies 15 m east-southeast of the map boundary (Figure D.324). Feature 1 is a subrectangular surface depression ca. 1.5 m in length, with a possible berm and extension. This feature extends to a depth of ca. 20-30 cmbs. Feature 14, a circular depression ca. 1.5 m in diameter and 50-60 cmbs, is an isolated depression in locus C. Features 2, 5, 6, 14, and 16 are the most distinctive and well defined. Cultural material was found in shovel tests within 4 m of features 2, 7, and 8. Artifactual material was also recovered from test pit 1 located on the edge of feature 6. The distribution of artifacts collected during grid shovel testing suggests that the site area is characterized by an overall low-density and diverse composition of artifacts in the area surrounding and between surface depression features. Observed site size based on the distribution of artifacts is 592 square meters (Table D.2).

Table D.407.

Artifact Summary, TLM 247

Provenience		Description
Lithic Material		
Surface:		
Locus A:	2	Thermally altered rocks
Subsurface:		
Shovel test N140/E100	1	Argillite flake
	2	Chert flakes less than 1/8" mesh
Shovel test N144/E100	4	Basalt flakes
	2	Chert flakes
Locus B:		
Shovel test N114/E98	1	Quartz piece
	2	Thermally altered rocks
Shovel test N106/E114	1	Basalt flake modified (UA84-133-7)
Shovel test N98/E98	1	Chert flake
Test pit 1	1	Hammerstone (UA84-133-1)

Table D.407. (Continued)

Provenience		Description
Faunal Material		
Subsurface:		
Locus A		
Shovel test N160/E148	1	Axis, immature, unburned, cut marks and gnaw marks, moose (Alces alces)
Shovel test N160/E152	1	Long bone fragment, calcined, mammal
Locus B		
Test pit 1	1	Right astragalus, unburned, gnaw marks, caribou (Rangifer tarandus)
	1	Metapodial distal shaft fragment, unburned, caribou (Rangifer tarandus)
Shovel test N100/E98	1	Left proximal radius fragment, unburned, caribou (Rangifer tarandus)
	1	Left proximal ulna shaft fragment, unburned, caribou (Rangifer tarandus)
	3	Long bone and unidentifiable fragments, unburned, medium-large mammal

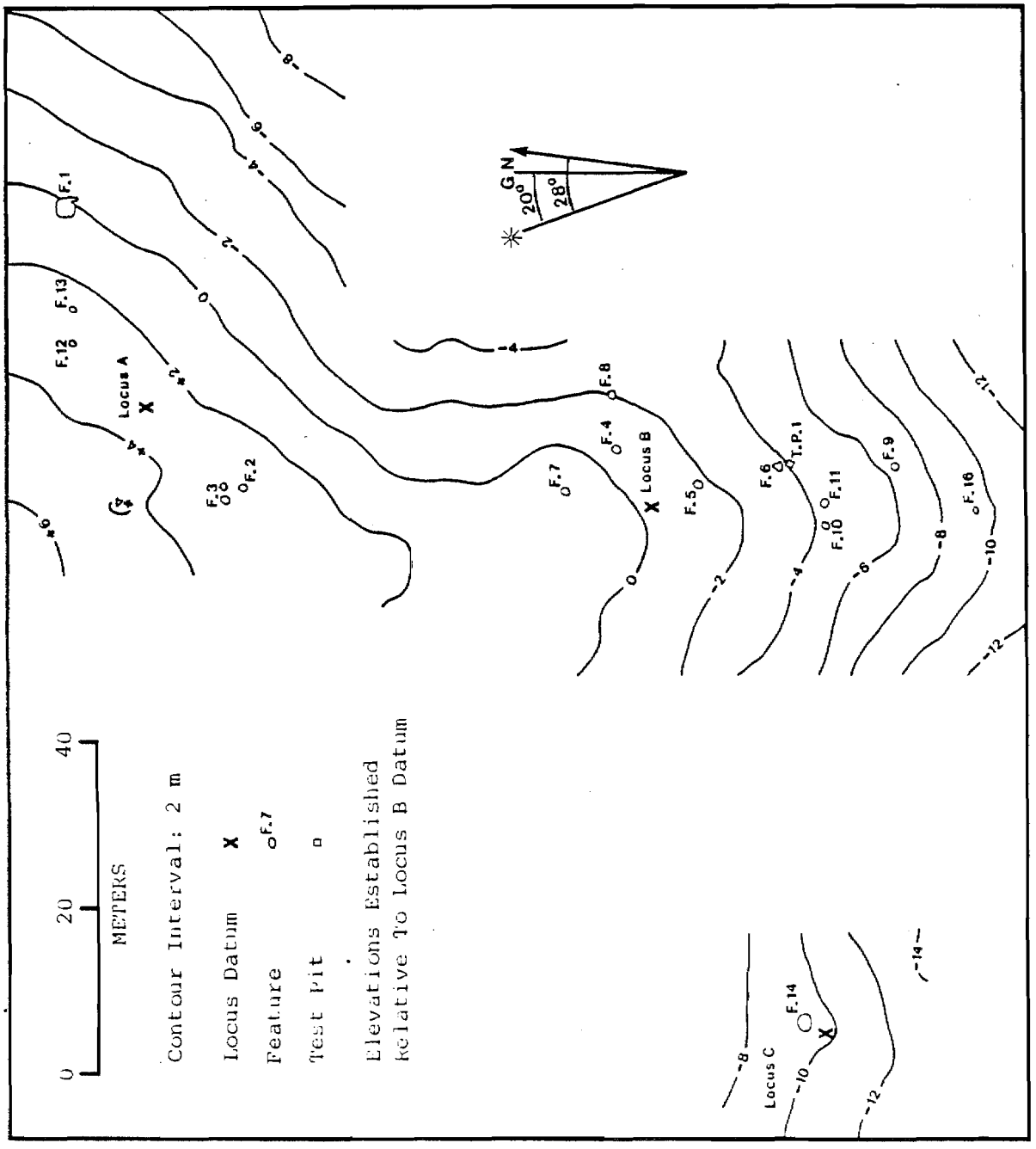


Figure D.324. Site Map, TLM 247

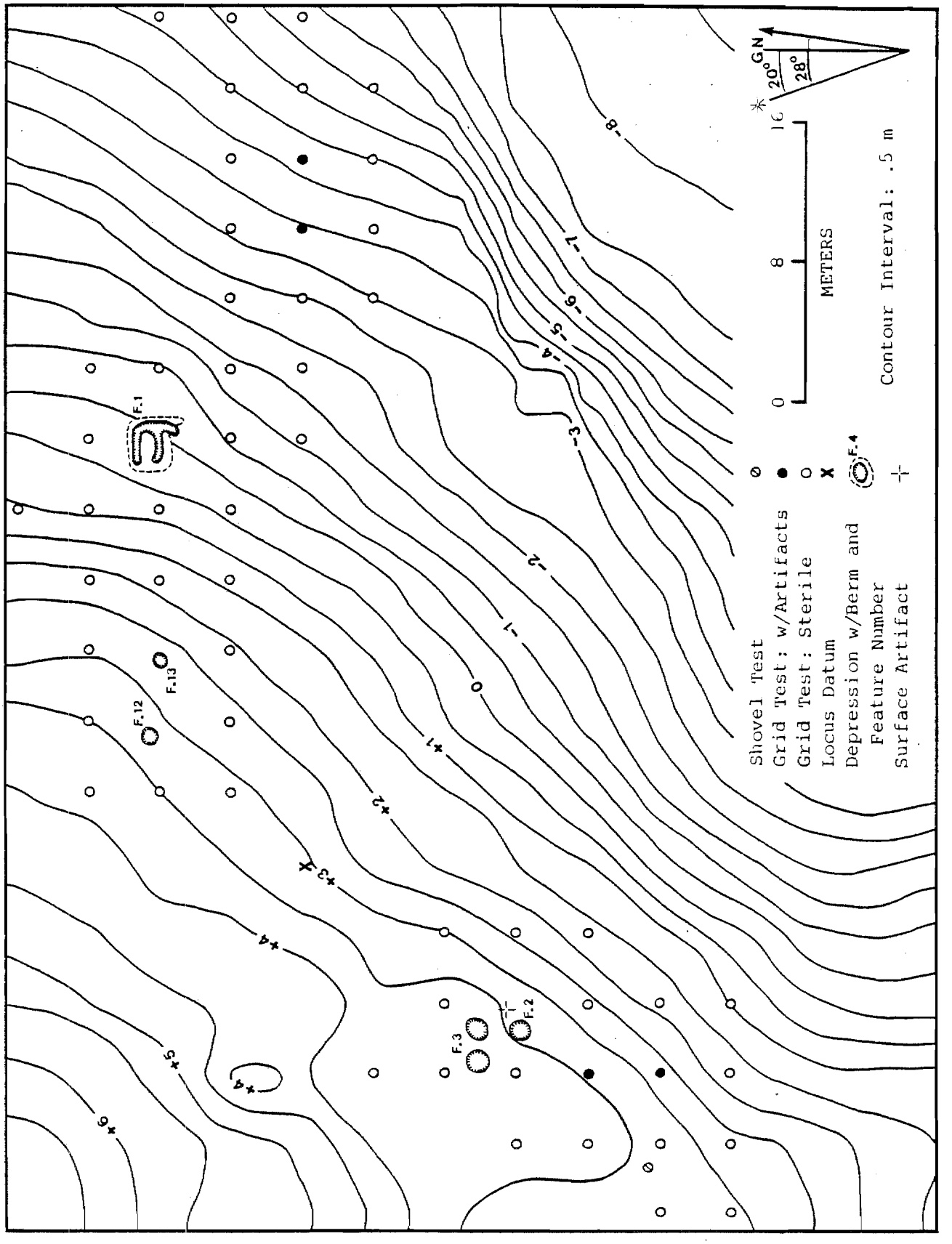


Figure D.325. Site Map, TLM 247 Locus A

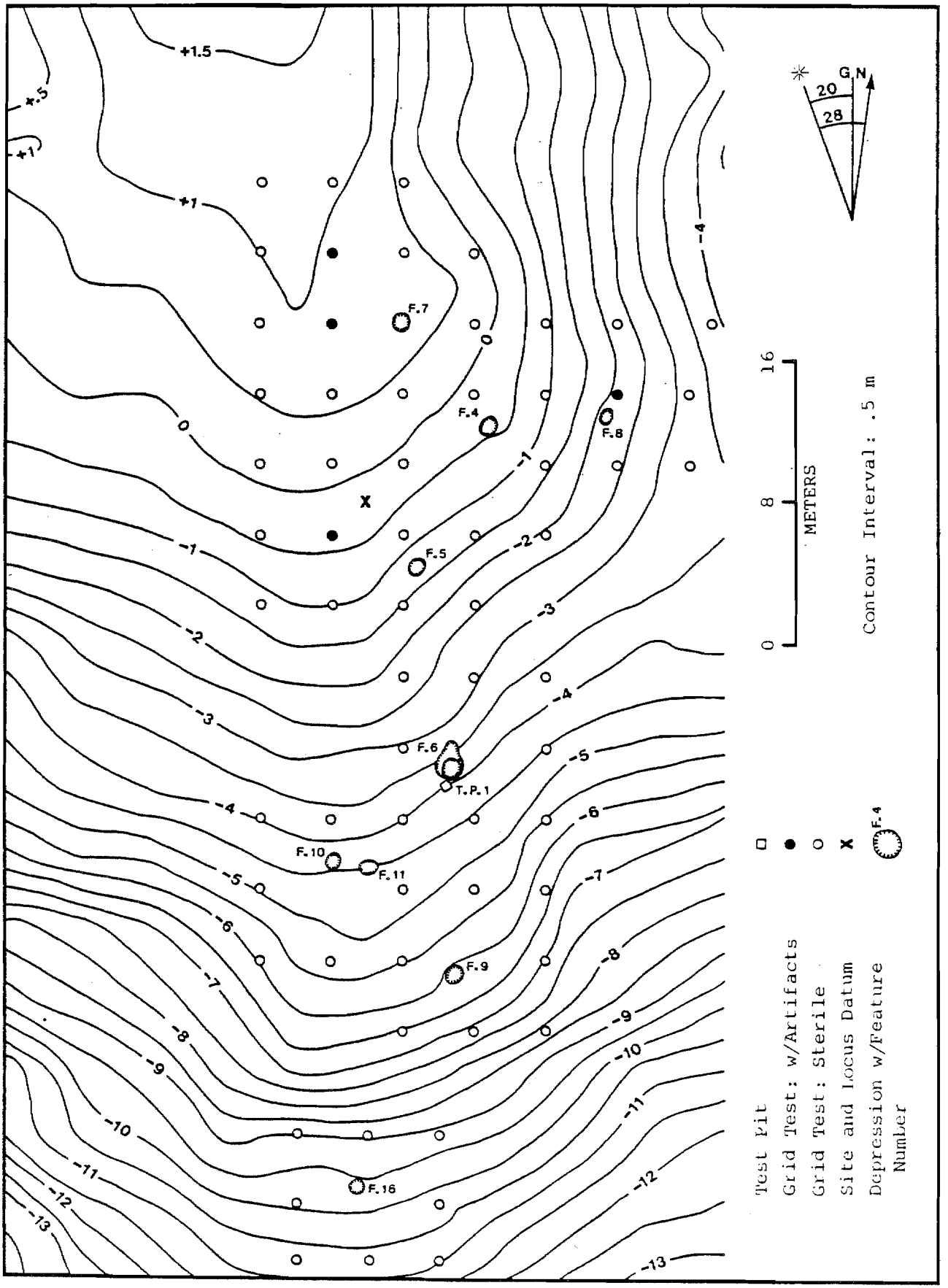


Figure D.326. Site Map, TLM 247 Locus B

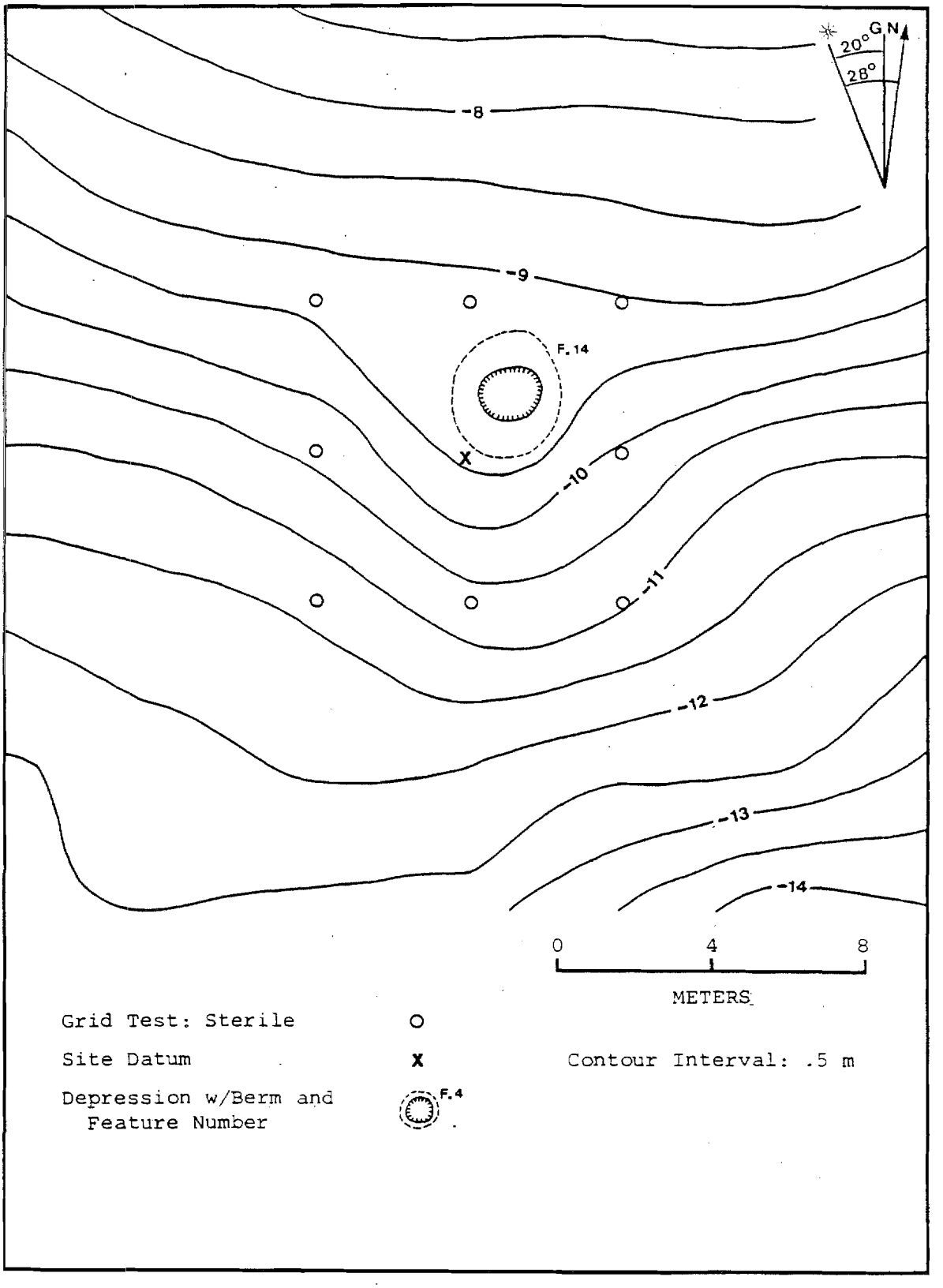


Figure D.327. Site Map, TLM 247 Locus C

AHRS Number TLM 248

Area:	West of Jay Creek
Site Map:	Figure D.328
Survey Locale 33:	Figure E.110
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

The site is located on an alluvial terrace along the west side of Jay Creek. Situated at an elevation of 561 m asl (altimeter: 1840 feet) the discrete terrace, approximately 100 (northeast-southwest) x 50 m, is triangular in shape and ca. 1 m higher than Jay Creek. The creek follows the perimeter to the northeast, east, southeast, south, and southwest. Terrain to the north, northwest, and west is characterized by an abruptly ascending slope that merges into the glaciolacustrine plain at the valley rim approximately 150 m above the site. Jay Creek and its east valley wall are in view to the southeast, south, and southwest. The view to the north-northeast is limited to a distance of ca. 200 m due to high brush and forest on the west side of the creek. Jay Creek is approximately 5 m wide and flows rapidly as it follows the perimeter of the terrace. A small clear water tributary stream enters Jay Creek through a ca. 20 m incised valley approximately 80 m east of the site. The site vicinity is characterized by a relatively flat surface with undulations of less than 50 cm. The floral inventory includes black spruce, paper birch, alder, abundant grasses, wild rose, bog blueberry, dwarf dogwood, fireweed, currants, and a fairly continuous sphagnum moss mat. Deciduous trees are more numerous across the western valley wall of Jay Creek, while willows dominate the flood plain vegetation.

Testing:

Danny Thomas, a contemporary miner presently mining a claim at the mouth of Jay Creek, reported the site. He reports that a late 19th century miner was buried at the southeastern point of the terrace. The reported grave (feature 2) is demarcated by a northwest-southeast alignment of small cobbles. No subsurface testing was initiated at this location. In addition, a subrectangular wood-cribbed pit (feature 1) is situated near the southern point of the terrace. The depression measures ca. 2 (north-south) x 2.5 m (east-west) and is ca. 70 cm deep. The character of the log-cribbing suggests that it is an exploratory mining shaft as indicated by Mr. Thomas. However, it may also represent a house pit. Estimated site size based on the distribution of features is 25 square meters (Table D.2).

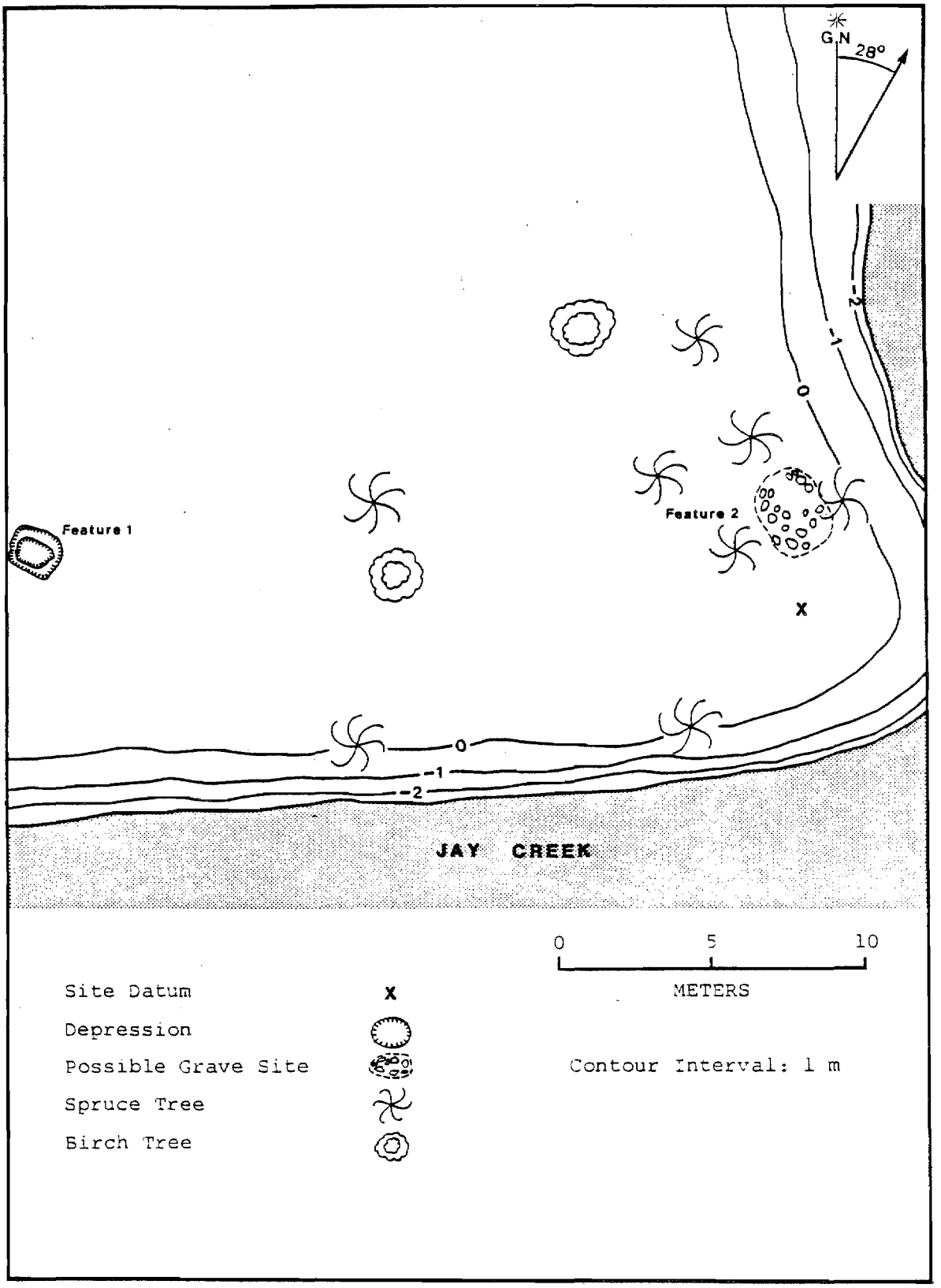


Figure D.328. Site Map, TLM 248

AHRS Number TLM 249; Accession Number UA84-241

Area:	East of Jay Creek Mouth
Site Map:	Locus A, Figure D.329
	Locus B, Figure D.330
Survey Locale 33:	Figure E.110
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

TLM 249 consists of two loci (A and B) located ca. 36 m apart along the edge of a terrace, at an elevation of 532 m asl (altimeter: 1745 feet). The site is located on the low alluvial terrace above the Susitna River and a river slough east of Jay Creek. The slough is an intermittent high-water channel of the Susitna River where it has cut the eastern side of the terrace. The terrace top is presently about 4 m above river level and has undergone periodic flooding as evidenced by alternating overbank, sandy silts, and buried organic horizons. The terrace runs for about 300 m to the northeast where it abuts older, higher terrace deposits at the base of the relatively steep Susitna River valley wall. Visibility from the site is greatest to the east, southeast, and south overlooking the slough and a forested sand bar beyond, as well as the Susitna River to the southeast and south. Fairly dense mature forest obscures views in other directions away from the river. A number of other sites occur in the vicinity of TLM 249. TLM 079, TLM 232, and TLM 240 are located on the same alluvial terrace group as TLM 249. TLM 250 is located on the forested sand bar east of the slough, and TLM 072 is northeast of the site on the main valley wall. TLM 246, TLM 247, and TLM 248 are located west of Jay Creek along a prominent ridge. Vegetation at the site is composed of bottomland spruce, cottonwood, and birch forest grading into alder and willow thicket near the exposed terrace edges. Shrub willow, dwarf birch, and fireweed are dominant on the gravel and sand river banks. Ground cover on the

terrace consists of highbush cranberry, currant, fireweed, equisetum, and grasses. Sphagnum moss and lichens are also common in the forested area away from the river.

Testing:

Cultural material was found in two spatially discrete areas along the terrace edge (Table D.408). Two survey shovel tests at the southern end of the terrace (locus A) produced cultural material. Test pit 1 was superimposed over shovel test 1 which contained a 10-14 cm thick horizon of charcoal, thermally altered rock, and 40 bone fragments. A radiocarbon sample taken from this feature yielded a modern date (Beta-10797). Test pit 2 was superimposed over shovel test 2 which contained bone fragments (locus B) 36 m northeast of test pit 1. Test pit 2 yielded one thermally altered rock and three unburned caribou (Rangifer tarandus) bone fragments.

Grid shovel testing was conducted to assist in determining the extent and the distribution of cultural material at each locus. Two of the 37 grid tests excavated at locus A contained artifactual material. One unburned cranial fragment and three thermally altered rocks were recovered from a test 2 m northwest of test pit 1. Grid testing at locus B consisted of the excavation of 16 grid shovel test but none produced cultural remains. Six caribou (Rangifer tarandus) bone fragments were identified at both loci. At locus A caribou skeletal elements consisted of hindlimb and extremity components, while at locus B caribou skeletal elements consisted of cranial and hindlimb components. Observed site size based on the distribution of artifacts is 24 square meters (Table D.2).

Table D.408.

Artifact Summary, TLM 249

Provenience		Description
Lithic Material		
Subsurface:		
Locus A		
Test pit 1	1	Modified quartzite flake (UA84-241-6)
	45	Thermally altered rocks
Shovel test N2/W2	3	Thermally altered rocks
Locus B		
Test pit 2	1	Thermally altered rock
Faunal Material		
Subsurface:		
Locus A		
Shovel test 3	1	Right medial tibia shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Long bone shaft fragment, unburned, medium-large mammal

Table D.408. (Continued)

Provenience		Description
	4	Flatbone fragments, unburned, medium-large mammal
Test pit 1	1	Possible femur shaft fragment, burned, possible caribou (Rangifer tarandus)
	2	Rib fragments, burned, medium-large mammal
	21	Long bone fragments, heavily burned, medium-large mammal
	13	Long bone and unidentifiable fragments, burned and calcined, medium-large mammal
	3	Unidentifiable fragments, unburned, medium-large mammal
Shovel test N2/W2	1	Cranial fragment, unburned, medium-large mammal
Shovel test S2/E0	1	Left proximal metapodial (hindlimb) fragment, unburned, caribou (Rangifer tarandus)
	1	Cranial fragment, unburned, medium-large mammal
Locus B		
Test pit 2	1	Left mandibular fragment, unburned, caribou (Rangifer tarandus)
	2	Left humerus shaft fragments, unburned, caribou (Rangifer tarandus)

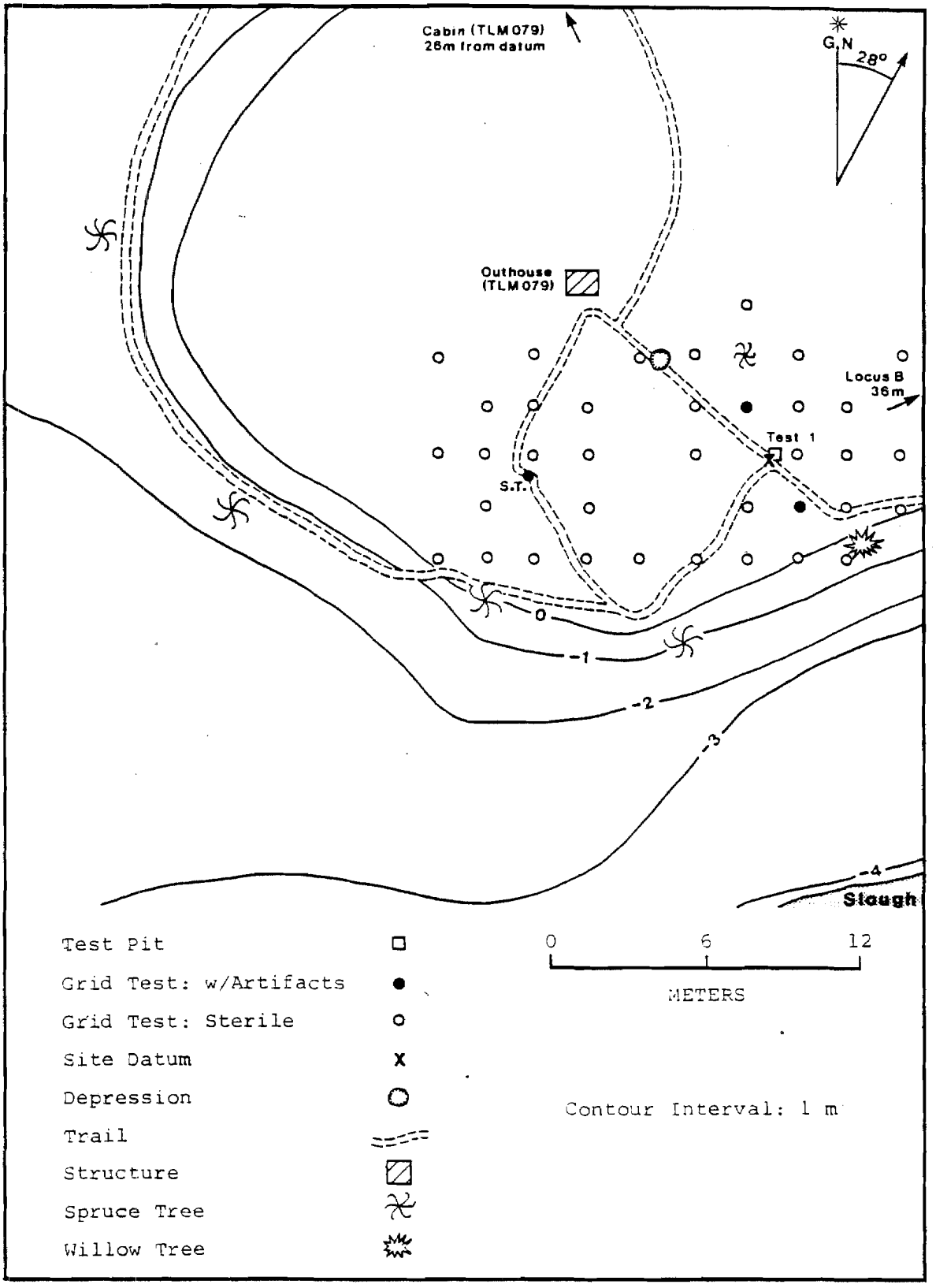


Figure D.329. Site Map, TLM 249 Locus A

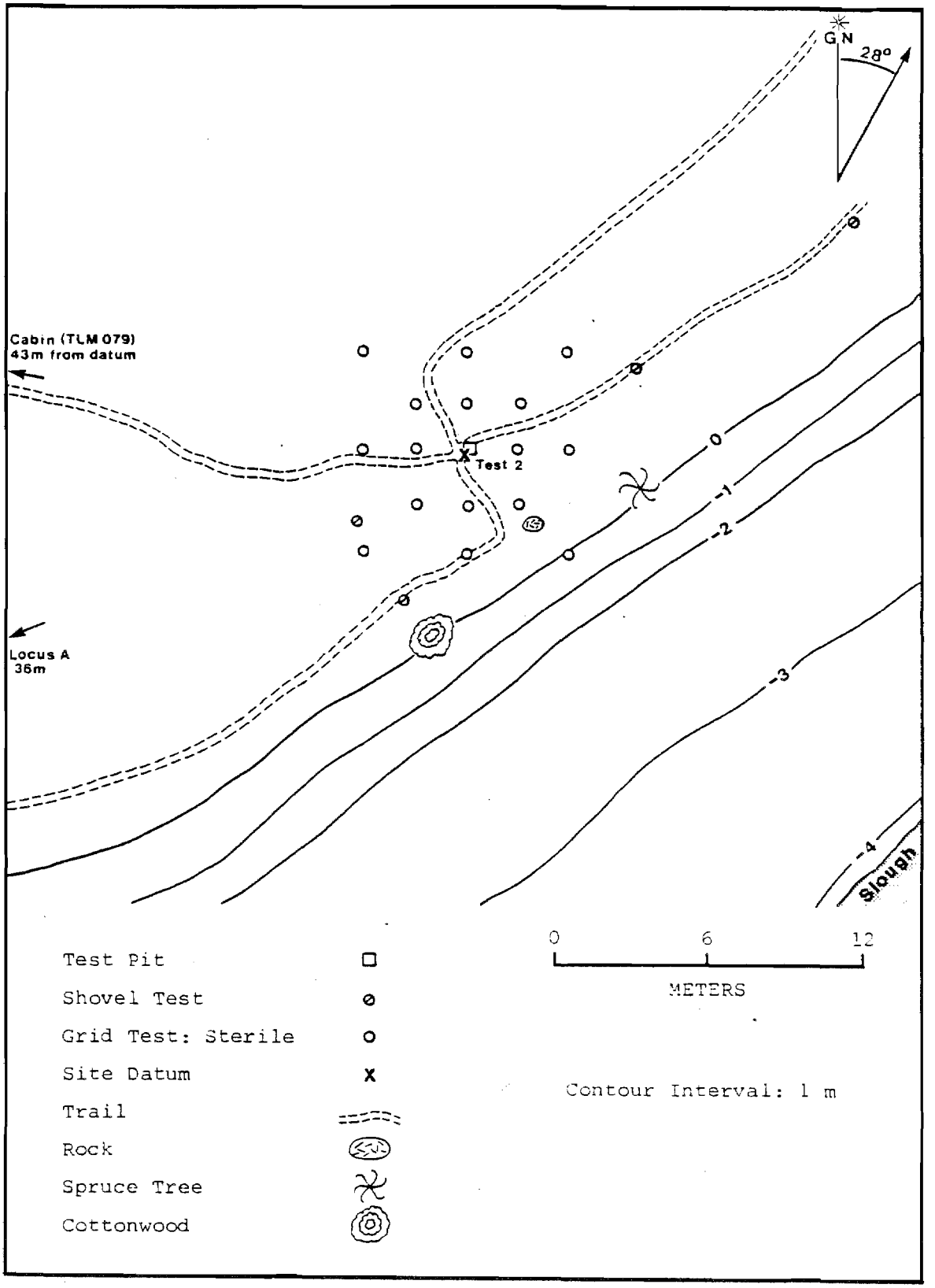


Figure D.330. Site Map, TLM 249 Locus B

AHRS Number TLM 250; Accession Number UA84-24

Area:	East of Jay Creek
Site Map:	Figure D.331
Survey Locale 33:	Figure E.110
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

Situated at an elevation of 513 m asl (altimeter: 1682 feet) the site is located on an east-west trending alluvial plain east of Jay Creek. The alluvial plain is bordered by a ca. 1 m wide slough of the Susitna River on the north and the Susitna River on the south. The site occurs in a cutbank exposure in the southern bluff face of a ca. 200 x 600 m truncated terrace which trends east-west paralleling the northern bank of the Susitna River. From the site the bluff stretches ca. 350 m east and ca. 150 m west. The Susitna River is ca. 3-4 m lower in elevation than the bluff top and approximately 4 m south from the slumping alluvium. Surrounding terrain to the west, north, and east is at similar topographic relief, undulating less than 1 m in any direction. Visibility is generally open except to the north and northeast where the mixed hardwood forest masks a distant view. The visibility to the southeast, south, and southwest is clear overlooking the Susitna River and the southern bank edge. Directly south a clear view is available of the ascending valley wall and a prominent dome of bedrock above the glaciolacustrine plain at the top of the wall. A partially forested point bar on the south side of the Susitna River and a ca. 1 km stretch of the Susitna River are in clear view to the east, to the west a ca. 15 m high bedrock exposure across from the mouth of Jay Creek is clearly visible. TLM 249, located ca. 200 m to the northwest, is discernible through an opening in the forest. An absence of trees on the alluvial plain would provide a view of TLM 232 and the steep valley rim across the river to the north. The bluff edge supports a high-density of herbaceous and shrub flora. Shoots of balsam poplar and alder as well as wild rose, fireweed, grasses, equisetum, sphagnum moss, soapberry,

small black spruce, and several broad leaf plants occur on the bluff top. A small gallery forest of balsam poplar, all less than 10 cm in diameter, occurs ca. 20-25 m west of the site. Large black spruce are abundant starting ca. 5 m north of the site.

Testing:

A cultural unit consisting of abundant charcoal, 1 large mammal long bone fragment, 35 calcined bone fragments, and 1 thermally altered rock fragment was located in a ca. 2.5 m high exposure of cross-bedded sands, silts, and pebbles (Table D.409). The faunal assemblage is unique to the project due to the presence of Dall sheep (Ovis dalli) extremities. Several fragments articulate to assemble one calcined medial phalanx and one calcined distal phalanx. Two articulating metapodial fragments of Dall sheep are also present. The discrete cultural unit is approximately 130 cm below the bluff top, spans ca. 130 cm horizontally, and is between ca. 0.5 and 3 cm thick. A radiocarbon date taken from the cultural unit yielded a date of 370 ± 80 years: A.D. 1610 (Beta-10798). Subsequent facing-off of a ca. 1 m wide section revealed calcined bone, as well as a thin lens of wood ash. On either side of the 130 cm wide zone of bone and charcoal, discontinuous organic lenses were observed at a similar depth up to ca. 5 m away, but no additional charcoal or bone was located. An unburned long bone fragment, probably of moose (Alces alces), was located ca. 30 m west of the site (at the bluff base), but no other bone was located in situ. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.409.

Artifact Summary, TLM 250

Provenience		Description
Lithic Material		
Cutbank Exposure	1	Thermally altered rock fragment
Faunal Material		
Cutbank Exposure	1	Longbone shaft fragment, unburned, probable moose (Alces alces)
	2	Possible distal metapodial fragments, calcined, Dall sheep (Ovis dalli)
	5	Medial phalanx fragments, calcined, Dall sheep (Ovis dalli)
	2	Distal phalanx fragments, calcined, Dall sheep (Ovis dalli)
	3	Long bone shaft fragments, burned, medium-large mammal
	23	Long bone and unidentifiable fragments, calcined, medium-large mammal

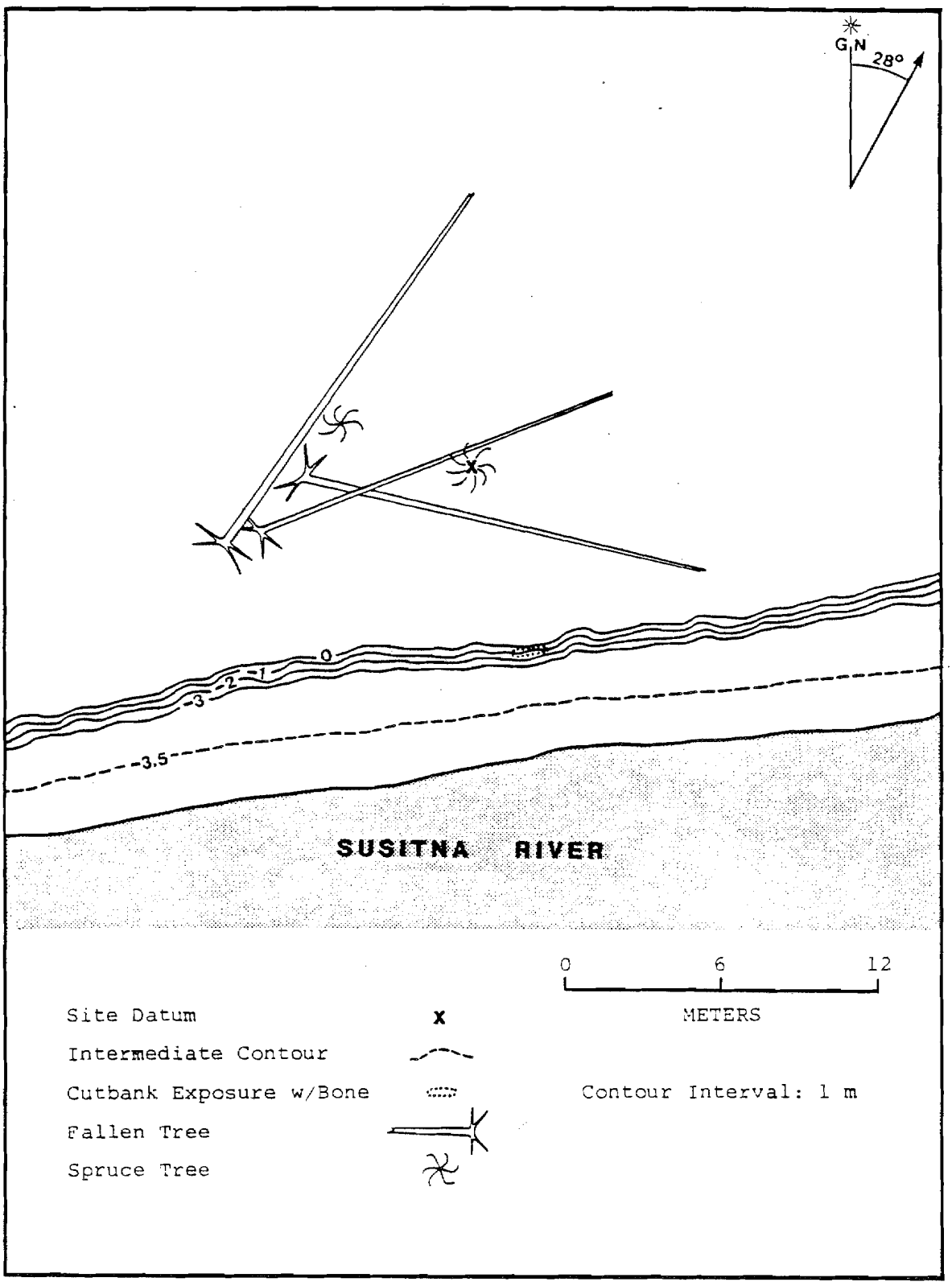


Figure D.331. Site Map, TLM 250

AHRS Number TLM 251; Accession Number UA84-224

Area:	East-southeast of Goose Creek Mouth
Site Map:	Figure D.332
Survey Locale 159:	Figure E.255
USGS Map:	Talkeetna Mts. C-1, Figure E.8
Site Location:	Appendix F

Setting:

TLM 251 is located on a prominent knoll east-southeast of the mouth of Goose Creek and south of a sharp bend in the Susitna River. The terrain feature can be described as a lobe ca. 15 (east-west) x 30 m (north-south) which slopes moderately to the north, east, and west. To the south, the terrain rises gradually for ca. 250 m before ascending abruptly to an upland plateau. The site, at an elevation of 660 m asl (altimeter: 2165 feet), is located on the northern portion of the lobe. It is the highest point of topographic relief between Goose Creek and a ridge which overlooks the Oshetna River to the south, and a prominent ridge on the north side of the the Susitna River. The terrain in the area of the site consists of a series of remnant terraces of the Susitna River that are dissected by drainages which originate on the upland plateau. The terraces are thus divided to form well-drained, isolated knolls with intervening low areas characterized by deposits of silt, sand, and gravel. A well-defined, seasonal drainage is immediately west of the site.

The view from the site is panoramic, but is partially obstructed to the northwest by spruce forest. The view encompasses the Susitna River, the high ridge north of the river on which TLM 026 and TLM 042 are located, the terrace that is associated with TLM 173, terrain to the east including a prominent ridge ca. 1 km distant, and the canyon of Goose Creek to the west. While vegetation on the surface of the site is continuous, it is diffuse in places. Vegetation includes dwarf birch, willow brush, isolated small spruce trees, Labrador tea, lowbush cranberry, blueberry, crowberry, and lichen.

Testing:

TLM 251 was located when subsurface artifacts consisting of 6 basalt flakes, 1 argillite flake, and 12 calcined bone fragments were recovered in a shovel test. A modified cobble (UA84-224-1) was located ca. 6 m distant from this shovel test on the surface of the site. A grid shovel testing program was implemented to assist in determining site size and the distribution of cultural material. Thirty-one grid shovel tests were excavated during this program. Two of the grid shovel tests contained artifacts. After the completion of grid shovel testing a 1 x 1 m test square, N104/E99, was placed in the area of the positive shovel tests and was superimposed over the initial productive test. The test square was excavated to assess the stratigraphic position of the artifacts that had been located during shovel testing. Figure D.332 illustrates the placement of shovel tests, the test square, and the topography of the site.

Discussion:

Testing at TLM 251 consisted of the excavation of 3 survey shovel tests, 31 grid shovel tests, and 1 test square. Ninety flakes and 74 calcined bone fragments were collected during excavation of the 1 x 1 m test square at N104/E99. In addition, two flakes were found, one in each of the two productive shovel tests excavated during grid shovel testing. One hundred flakes, 1 modified cobble, and 86 calcined bone fragments have been recovered from the site. The artifacts are summarized on Table D.411, and listed by stratigraphic unit on Table D.413.

With the exception of the modified cobble (UA84-224-1; Figure D.396i) located on the surface of the site, all of the lithics consist of small unmodified flakes. Basalt is the most abundant material represented, although argillite, chert, and chalcedony are included in the assemblage. The modified cobble is of a greenstone material, ovate in shape and planoconvex in cross section. The cobble is battered and chipped on the edges and represents the only tool recovered at the site.

Five stratigraphic units were defined at TLM 251 based on the exposures in the test square. The stratigraphic sequence is illustrated on Figure D.333, and the units are described in Table D.410. An organic mat with some finely sorted organic material and silt (unit 1) covers the surface of the site. A number of small mound features occur on the surface of the site. These mounds range up to 30 cm in diameter and are covered by a very thin, ca. 1 cm organic layer. While surface exposures are present on the north slope of the knoll associated with the site, the site area itself has a continuous organic mat. Beneath the organic unit is a thin, discontinuous layer of Devil tephra (unit 2). The Devil tephra is underlain by a fine silt that is mottled and oxidized (unit 3), the Watana tephra. Along with strong brown and yellowish brown areas of Watana tephra that were commonly observed were small pockets of pale brown Watana tephra. The Watana tephra sits above a dark grayish brown silty matrix with coarse sand (unit 4). This unit is positioned at the same relative stratigraphic position as the Oshetna tephra, and may represent tephra mixed with sand and silt. Isolated, thin lenses of black matrix with charcoal flecks at the upper contact suggest the presence of a paleosol. Unit 4 was continuous in the test square profiles but was limited in horizontal extent across the site, as indicated by the fact that it was infrequently recognized in the profiles of the grid shovel tests. The basal unit of excavation at the site was a silty-sandy matrix with an abundance of cobbles and pebbles (unit 5).

The artifacts have a broad distribution stratigraphically, but some disturbance of the soil/sediment units was evident in the test square profiles suggesting that artifacts may have been displaced vertically. For instance, unit 4, which has the highest artifact frequency, has frost heavings which extend up to the Devil tephra unit creating disconformities in the stratigraphic sequence. Because the lithic materials are identical throughout the strata and disturbance of the sediments is evident, only one component can be reliably identified at the site.

The single component identified at the site is associated with the dark grayish brown silty sand (unit 4), beneath the Watana tephra (unit 3). Sixty-three percent of the lithics and 82% of the calcined bone fragments were found in direct association with the unit 4 stratigraphic context. The assemblage consisted of small debitage pieces of a variety of material types representative of secondary or final stages of tool manufacture. All of the bone consisted of calcined long bone and unidentifiable fragments (Table D.412).

Evaluation:

TLM 251, located on a prominent knoll southeast of the confluence of Goose Creek with the Susitna River, possesses a component associated with a paleosol and grayish brown matrix beneath the Watana tephra. Artifactual material consisting of lithic debitage and small calcined bone fragments suggests that the site may have been multifunctional and related to activities of tool manufacture and food preparation. The relatively low density of material suggests a short-term occupational episode. Preliminary testing was unable to establish any relationship between the surface artifact and the subsurface material. As the surface artifact, a modified cobble (UA84-224-1), was spatially discrete, grid shovel testing and surface survey revealed no additional artifacts in the immediate vicinity of the surface artifact. This cobble was in a different vertical context than the other artifactual material recovered at the site, it is possible that it represents a limited, separate use of the site. Observed site size based on the distribution of artifacts is 17 square meters (Table D.2).

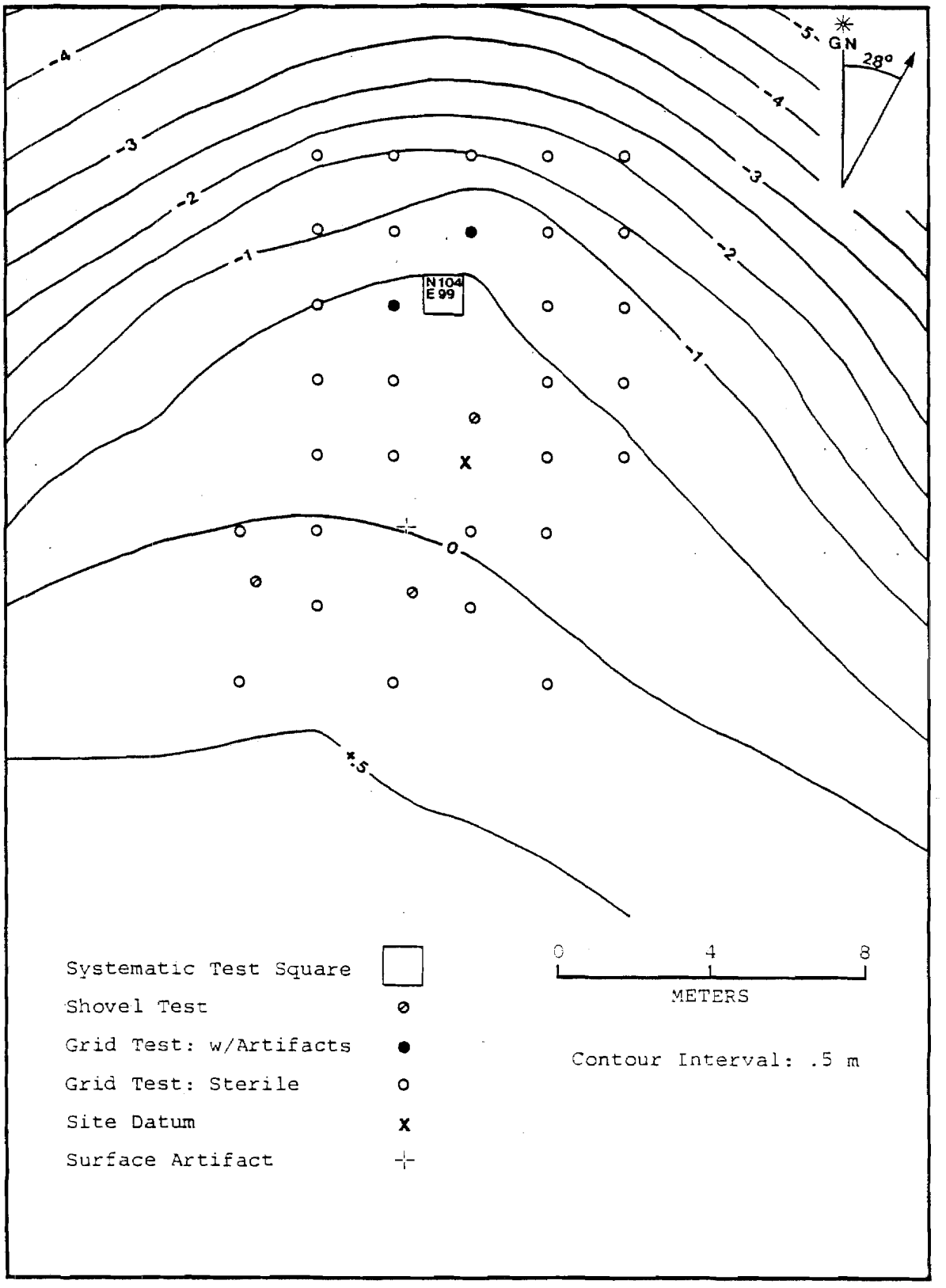


Figure D.332. Site Map, TLM 251

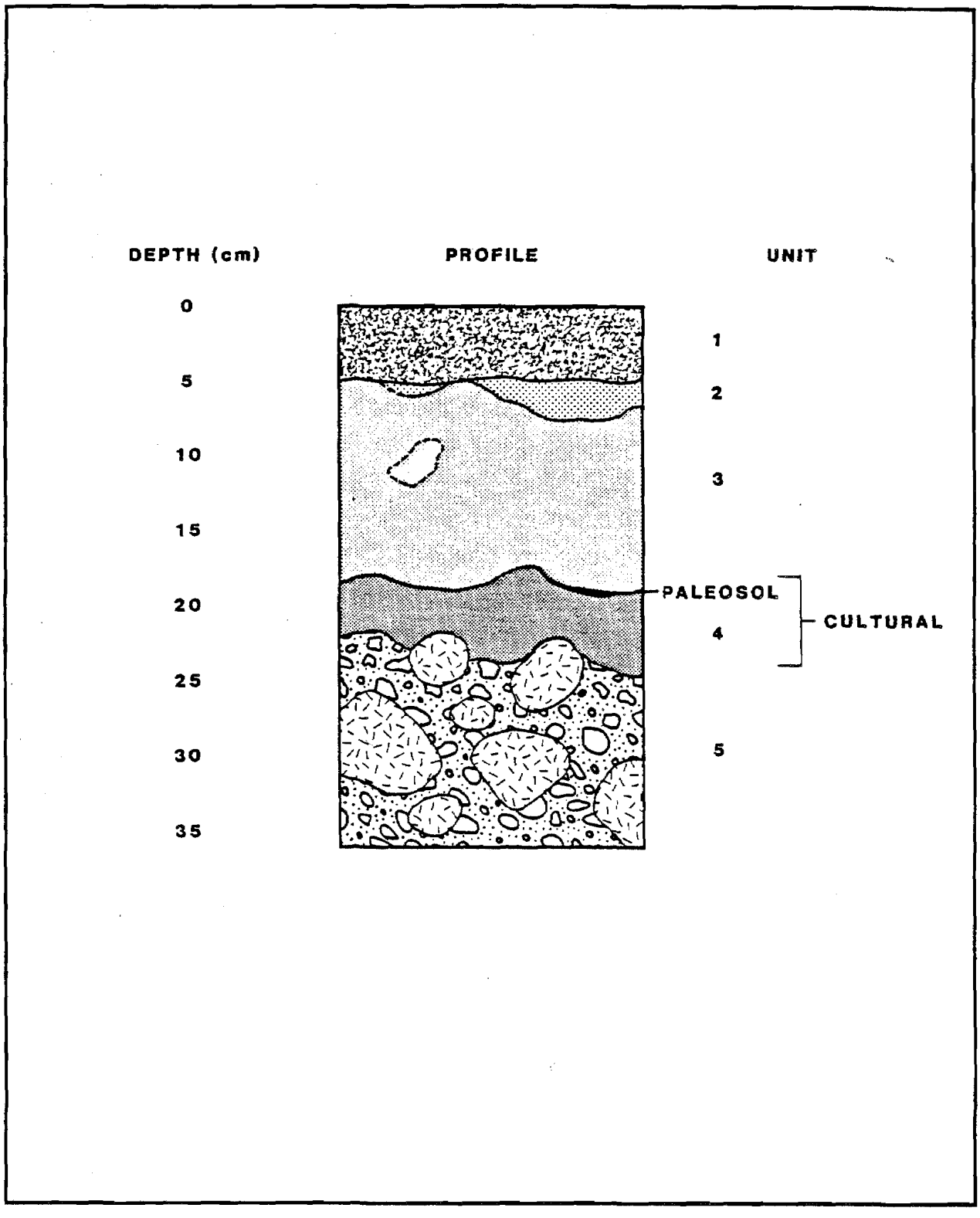


Figure D.333. Composite Profile, TLM 251

Table D.410.

Soil/Sediment Description for Composite Profile, TLM 251

Unit	Description
1	Organic mat. Includes fibrous root mat of Labrador tea, lowbush cranberry, lichen, and moss with some finely sorted organic material and silty matrix; dark reddish brown (10YR 3/2). Varies in thickness from 1-8 cm, with thin areas occurring on mound features. Lower boundary clear. O horizon. Continuous surface cover.
2	Fine silt size particles; light brownish gray (10YR 6/2). Varies in thickness form 1-5 cm. Contact with the underlying unit clear. Tephra (Devil); eluvial A horizon. Discontinuous and patchy. Flakes recovered from this unit probably derived from unit 4.
3	Fine silt size particles; color varies from strong brown (7.5YR 4/6) to yellowish brown (10YR 5/6) to pale brown (10YR 6/3). Varies in thickness from 5-18 cm. Lower contact from steep to abrupt. Tephra (Watana); B horizon. Generally continuous although cryoturbation of unit 4 has created breaks in some portions of the profile. Mottled with strong brown color occurring in association with mound features and more frequently toward upper extent of unit. Pale brown areas in small irregular patches within the unit. Color variation may be due to iron accumulation. Artifacts probably derived from unit 4.

Table D.410. (Continued)

Unit	Description
4	Silty matrix with coarse sand particles; dark grayish brown (10YR 4/2). Varies from 3-9 cm in thickness. Lower boundary clear and wavy. Tephra (Oshetna) mixed with silt and sand; buried eluvial horizon. Continuous. Evidence for paleosol at the upper contact indicated by small, isolated patchy areas of charcoal flecks and black matrix. Lower boundary follows contours of underlying cobbles. Artifactual material present.
5	Silty-sandy matrix with coarse sand, pebbles, and cobbles; dark yellowish brown (10YR 4/6). Cobbles frequent, subangular to rounded in shape, and usually 6-10 cm in diameter, but range up to 23 cm. Excavation into this unit determined limit of excavation.

Table D.411.

Artifact Summary, TLM 251

Tools	
1	Modified cobble
	Greenstone (UA84-224-1)
Lithic Material	
7	Argillite flakes
73	Basalt flakes
2	Chalcedony flakes
12	Chert flakes
6	Flakes less than 1/8" mesh
	3 Basalt
	3 Chert
100	
Faunal Material	
86	Calcined bone fragments

Table D.412.

Faunal Material by Stratigraphic Unit, TLM 251

Unit		Description
2/3 Contact between Devil and Watana tephras	4	Unidentifiable fragments, calcined, medium-large mammal
3/4 Contact between Watana tephra and grayish brown silty sand unit	58 1	Long bone and unidentifiable fragments, calcined, medium-large mammal Unidentifiable fragment, calcined, small-medium mammal
4 Within grayish brown silty sand unit	11	Long bone and unidentifiable fragments, calcined, medium-large mammal
Subsurface unknown (Survey testing)	12	Long bone and unidentifiable fragments, calcined, medium-large mammal

Table D.413.

Artifact Summary by Stratigraphic Unit, TLM 251

Unit		Description
Surface	1	Modified greenstone cobble (UA84-224-1)
1/2	2	Basalt flakes
Contact between	2	Chert flakes
organic silt and		
Devil tephra		
2	7	Basalt flakes
Devil tephra		
2/3	1	Argillite flake
Contact between	10	Basalt flakes
Devil and	1	Flake less than 1/8" mesh (1 chert)
Watana tephras		
3	1	Basalt flake
Within Watana tephra		
2 and 3	1	Basalt flake
Mixed Devil and		
Watana tephras		

Table D.413. (Continued)

Unit		Description
3/4	1	Argillite flake
Contact between	29	Basalt flakes
Watana tephra and	2	Chert flakes
grayish brown silty	3	Flakes less than 1/8" mesh (2 basalt, 1
sand unit		chert)
4	3	Argillite flakes
Within grayish	15	Basalt flakes
brown silty sand	2	Chalcedony flakes
unit	6	Chert flakes
	2	Flakes less than 1/8" mesh (1 basalt, 1
		chert)
5	2	Basalt flakes
Silty sand	2	Chert flakes
with cobbles		
Subsurface	2	Argillite flakes
unknown	6	Basalt flakes

AHRS Number TLM 252; Accession Number UA84-142

Area:	West of Fog Creek
Site Map:	Figure D.334
Survey Locale 7:	Figure E.83
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

Situated at an elevation of 399 m asl (altimeter: 1308 feet) the site is located on an alluvial plain west of Fog Creek. This alluvial plain stretches approximately 2 km trending east-west with the site occurring near the western end of a terrace. Specifically, the site occurs on the edge of a terrace which parallels the northern bank of the Susitna River. Presently the northern edge of the Susitna River is south and southwest of the site and ca. 2.5 m lower in relief. The surrounding terrain on the terrace is ca. 50 cm higher in elevation to the north, northeast, and east. A gravel river bank ca. 7 m wide separates the eroded terrace and the low-water channel of the Susitna River. The Susitna River follows a slightly bending course. The river is ca. 200 m wide, and has gravel bars when at low-discharge levels. To the west approximately 1200 m, the Susitna River distinctively bends north at a right angle. The most distant of the three clear water streams that occur near TLM 252 meets the Susitna River west of this distinctive bend. The closest stream occurs ca. 300 m to the south-southeast where the confluence is in view. The third stream is situated intermediate between the two, ca. 500 m west of the site. The most distinctive landform near the site is a parabolic-shaped recess in the canyon wall that extends as much as ca. 800 m south, away from the Susitna River and ca. 1.5 km along the Susitna River. A clear view of the recess, the Susitna River, and a ca. 60-70 m high bedrock canyon wall west of the recess is available from the site. Visibility is obstructed by the lowland hardwood forest to the north, northeast, and east. The site area is scattered with decomposing fallen trees and a ca. 10-20 cm thick

blanket of sphagnum moss. The floral inventory includes black spruce, paper birch, wild rose, equisetum, lowbush cranberry, dwarf dogwood, grasses, and fireweed. A thicker sphagnum mat with more numerous equisetum and grasses characterizes the vegetation north of the site.

Testing:

A survey shovel test (shovel test 1) revealed ca. 545 burned and unburned bone fragments in and just below the organic mat. Subsequent surface survey resulted in the location of several unburned, large mammal, bone fragments. A 40 x 40 cm test pit (test pit 1) was superimposed over shovel test 1 and yielded ca. 385 unburned, burned, and calcined bone fragments in the vegetation mat and in a lower, brown, fine silty sand (Table D.414). The faunal samples from shovel test 1 and test pit 1 revealed the presence of one adult moose (Alces alces), an unidentified small mammal, and possibly a caribou (Rangifer tarandus). Small parellel cut marks were observed on the ascending ramus of the moose mandibular fragment. The presence of an epiphyseal vertebral facet fragment suggests that the possible caribou actually represents an immature moose. Skeletal elements representative of medium-large mammals are cranial, axial skeleton, and extremity fragments. One heavily burned long bone fragment appears to have been polished, and four small, cylindrical, calcined fragments represent the remains of a discarded bone tool. A large rounded cobble (UA84-142-41) was recovered from the suface, approximately 1 m east of test pit 1. A hammerstone (UA84-142-40) was discovered partially exposed in the present day vegetation mat 20 cm southwest (110 degrees) of the west wall of test pit 1. A third cobble, located approximately 1 m north of the datum, was left in situ. This cobble fragment is apparently associated with faunal remains recovered at this site.

Grid shovel testing (implemented to assist in determining site size and the distribution of cultural material) resulted in the excavation of 14 shovel tests. Two of these grid shovel tests yielded additional medium-large mammal bone fragments. The only definitive bone fragment from either productive shovel test is an unburned, right orbit fragment of

moose (Alces alces). Due to the slumping of the terrace sediments and the presence of bone in a draping organic mat, grid shovel tests were not excavated southwest of the terrace edge. Five bone fragments were surface collected downslope from the slumpage. Observed site size based on the distribution of artifacts is 25 square meters (Table D.2).

Table D.414.

Artifact Summary, TLM 252

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	1	Hammerstone (UA84-142-40)
	1	Rounded cobble
Faunal Material		
Surface:	1	Radius shaft fragment, unburned, weathered, moose (Alces alces)
	1	Right innominate fragment, unburned, moose (Alces alces)
	1	Right tibia shaft fragment, unburned, weathered, moose (Alces alces)
	1	Long bone shaft fragment, unburned, weathered, moose (Alces alces)
	1	Long bone shaft fragment, unburned, weathered, large mammal
Subsurface:		
Test pit 1	4	Modified bone fragments, calcined, medium-large mammal (UA84-142-33)
	1	Right mandibular fragment, unburned, cut marks, moose (Alces alces)

Table D.414. (Continued)

Provenience		Description
	1	Left astragalus, unburned, moose (Alces alces)
	1	Metapodial (hindlimb) fragment, heavily burned, moose (Alces alces)
	2	Sesamoid, unburned, moose (Alces alces)
	2	Sesamoid fragments, unburned, moose (Alces alces)
	2	Vestigial phalanges, unburned, moose (Alces alces)
	1	Vestigial phalanx fragment, unburned, moose, (Alces alces)
	1	Possible antler fragment, burned, probable caribou (Rangifer tarandus)
	1	Cervical vertebra articular facet, burned, probable caribou (Rangifer tarandus)
	1	Rib fragment, unburned, probable caribou (Rangifer tarandus)
	1	Possible distal phalanx fragment, calcined, probable caribou (Rangifer tarandus)
	15	Teeth fragments, calcined, cervid
	2	Possible metapodial shaft fragments, heavily burned, cervid
	1	Long bone fragment, heavily burned, polished, large mammal
	1	Cranial fragment, burned, medium-large mammal
	1	Tooth fragment (enamel), calcined, medium-large mammal

Table D.414. (Continued)

Provenience		Description
	1	Vertebra facet, immature, burned, medium-large mammal
	1	Rib fragment, unburned, medium-large mammal
	3	Probable metapodial shaft fragments, calcined, medium-large mammal
	1	Long bone fragment, calcined, polished, medium-large mammal
	1	Long bone shaft fragment, unburned, medium-large mammal
	15	Long bone shaft fragments, heavily burned, medium-large mammal
	2	Flat bone fragments, unburned, medium-large mammal
	1	Flat bone fragment, burned, medium-large mammal
	51	Long bone and unidentifiable fragments, burned, medium-large mammal
	83	Long bone and unidentifiable fragments, heavily burned, medium-large mammal
	1,334	Long bone, cranial, and unidentifiable fragments, calcined, medium-large mammal
	7	Unidentifiable fragments, unburned, medium-large mammal
	3	Unidentifiable fragments, burned, medium-large mammal
	40	Unidentifiable fragments, heavily burned, medium-large mammal
	1	Rib fragment, heavily burned, small mammal

Table D.414. (Continued)

Provenience		Description
	5	Rib fragments, calcined, small mammal
	1	Rib fragment, burned, mammal
Grid shovel test 2	1	Distal fragment proximal phalanx, unburned, medium-large mammal
	3	Unidentifiable fragments, unburned, medium-large mammal
Grid shovel test 3	1	Cranial fragment (right orbit), unburned, moose (Alces alces)
	1	Cranial fragment, unburned, medium-large mammal
	21	Long bone and unidentifiable fragments, unburned, medium-large mammal

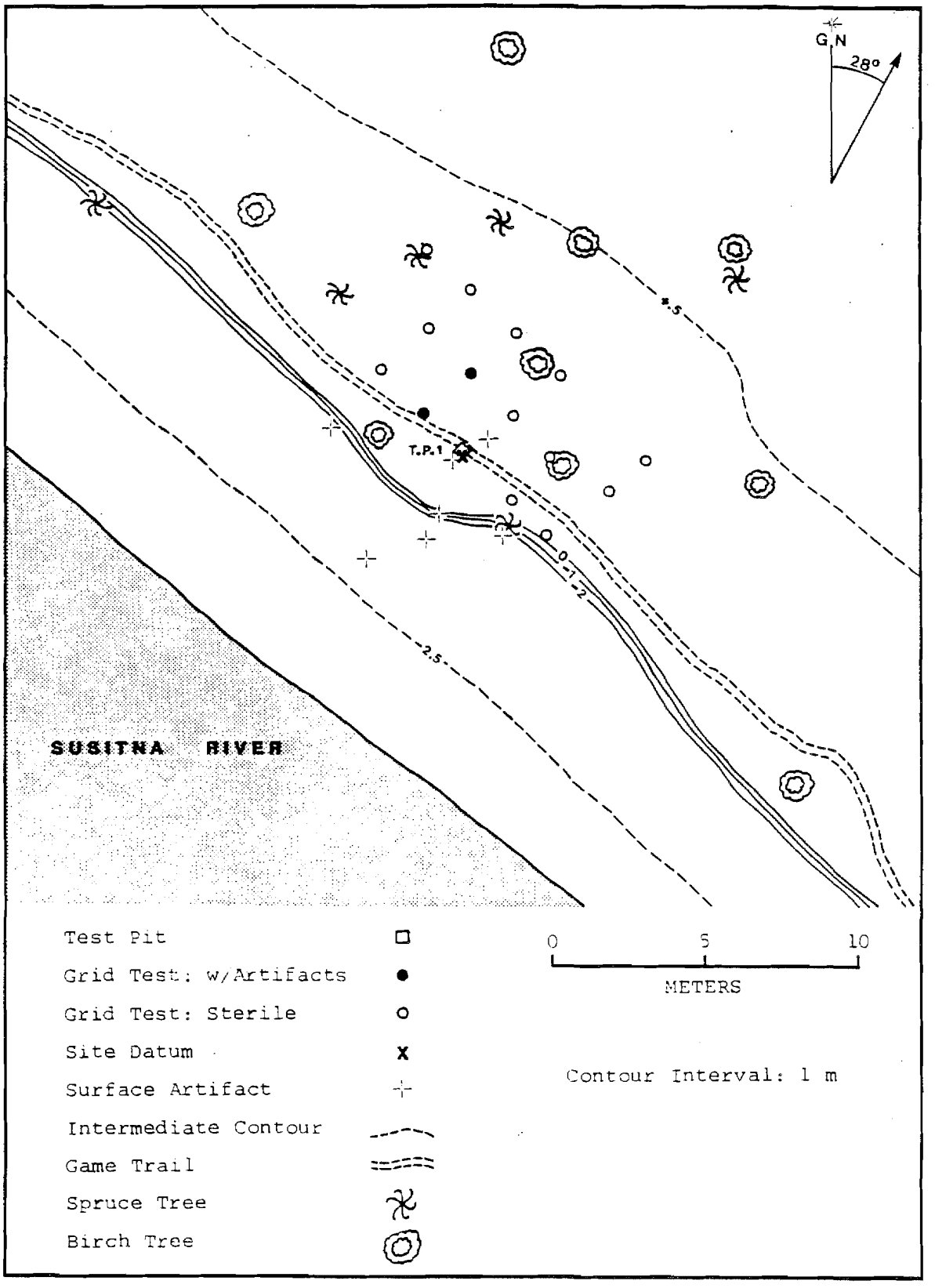


Figure D.334. Site Map, TLM 252

AHRS Number TLM 253; Accession Number UA84-217

Area:	West of Fog Creek
Site Map:	Figure D.335
Survey Locale 7:	Figure E.83
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

The site is situated on an alluvial plain west of Fog Creek and north of the Susitna River. At an elevation of 397 m asl (altimeter: 1303 feet) the site is located on the southern edge and near the center of an east-west trending terrace. The alluvial plain is encompassed by the Susitna River to the south and a ca. 185 m high bedrock canyon wall 200 m north. Specifically, the site is located on the edge of a terrace which parallels the northern bank of the river which is ca. 3 m lower. The river at this point is ca. 200 m wide, relatively straight, and slightly turbulent. The surrounding terrain to the east and west is at a similar elevation along the terrace edge. The terrain to the north dips to ca. 1 m at approximately 80 m distance. Vistas are partially obstructed in all directions. The most open view spans southeast, south, and southwest where the Susitna River, the opposite bank, and a parabolic-shaped recess in the canyon wall are in view. The forest limits views to the east and west to a distance of ca. 60-80 m. Thick forest limits views to the northeast, north, and northwest but the south-facing, sheer bedrock cliff of the canyon rim is discernible through the forest canopy. The parabolic recess spans ca. 1.5 km along the south wall of the Susitna River and reaches a maximum depth of ca. 800 m from the river. A clear water stream which marks the western extent of the recess enters the Susitna River ca. 300 m southeast of the site. The steep walls of an incised clear water stream, occurring near the eastern margin of the recess, are discernible ca. 1.3 km to the southeast. The site surface is relatively flat but exhibits undulations formed by vegetation growing over decomposing tree trunks and stumps. The vegetation includes black spruce, paper birch, alder, sphagnum moss,

lowbush cranberry, dwarf dogwood, wild rose, equisetum, lichen, and heath. To the north, ca. 50-80 m, black spruce are smaller with grasses and equisetum dominating the understory.

Testing:

A concentration of bone fragments was uncovered in a survey shovel test (shovel test 1). A 40 x 40 cm test pit (test pit 1) was superimposed over the shovel test and produced a large number (ca. 8,157) of calcined and heavily burned bone fragments and thermally altered rocks (Table D.415). Several skeletal elements of caribou (Rangifer tarandus) and small mammal bone fragments occur at this site. Cranial fragments, axial skeletal elements, limb bones, and extremities of caribou are represented, suggesting that a minimum of one individual was processed at the site. Butchering activities are also indicated by cut marks on one medium-large mammal, long bone fragment. The majority of the bone was stratigraphically positioned in a discontinuous unit composed of crushed bone fragments and exfoliated granitic rock. A radiocarbon sample taken from the cultural unit yielded a date of 430 ± 130 years: A.D. 1520 (Beta-10796). A grid shovel testing program was implemented to assist in determining the site size and distribution of cultural remains. Thirteen grid shovel tests were excavated, but all proved sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.415.

Artifact Summary, TLM 253

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	22	Thermally altered rocks
Faunal Material		
Subsurface:		
Test pit 1	1	Cranial fragment, calcined, caribou (Rangifer tarandus)
	3	Axis fragments, calcined, caribou (Rangifer tarandus)
	2	Rib articular facets, calcined, caribou (Rangifer tarandus)
	2	Possible humerus fragments, heavily burned, caribou (Rangifer tarandus)
	1	Radius/ulna fragment, calcined, caribou (Rangifer tarandus)
	1	Possible femur head fragment, heavily burned, caribou (Rangifer tarandus)
	1	Right tibia shaft fragment, calcined, caribou (Rangifer tarandus)
	1	Tibia distal fragment, calcined, caribou (Rangifer tarandus)

Table D.415. (Continued)

Provenience		Description
	1	Fibula fragment, calcined, caribou (Rangifer tarandus)
	1	Cuneiform fragment, calcined, caribou (Rangifer tarandus)
	1	Magnum fragment, calcined, caribou (Rangifer tarandus)
	2	Unciform fragments, calcined, caribou (Rangifer tarandus)
	1	Left proximal astragalus fragment calcined, caribou (Rangifer tarandus)
	1	Proximal metapodial fragment, calcined, caribou (Rangifer tarandus)
	1	Possible distal fragment, proximal phalanx, calcined, caribou (Rangifer tarandus)
	11	Phalanx fragments, calcined, caribou (Rangifer tarandus)
	4	Vestigial phalanx fragments, burned, caribou (Rangifer tarandus)
	1	Vestigial phalanx fragment, calcined, caribou (Rangifer tarandus)
	34	Cranial fragments, calcined, medium-large mammal
	1	Radial shaft fragment, heavily burned, medium-large mammal
	1	Long bone shaft fragment, unburned, medium-large mammal
	15	Long bone shaft fragments, heavily burned and calcined, medium-large mammal

Table D.415. (Continued)

Provenience	Description
1	Long bone fragment, calcined, cut marks, medium-large mammal
5	Long bone fragments, unburned, medium-large mammal
114	Long bone and unidentifiable fragments, heavily burned, medium-large mammal
7,651	Long bone and unidentifiable fragments, calcined, medium-large mammal
269	Long bone and unidentifiable fragments, heavily burned and calcined, medium-large mammal
8	Unidentifiable fragments, unburned, medium-large mammal
1	Rib fragment, calcined, small mammal
9	Long bone shaft fragments, calcined, small mammal
10	Cranial fragments, calcined, mammal
3	Unidentifiable bone fragments, unburned, mammal

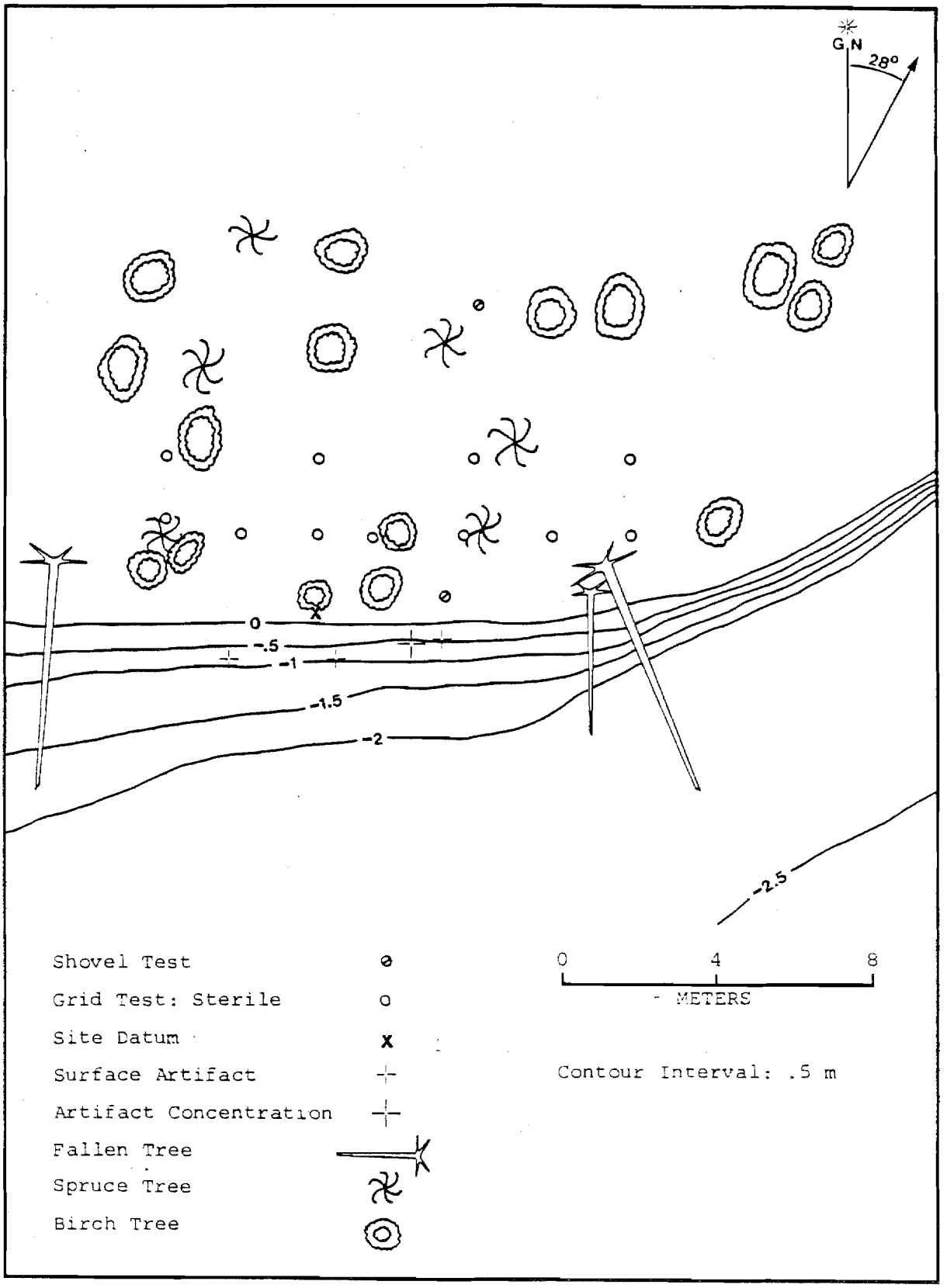


Figure D.335. Site Map, TLM 253

AHRS Number TLM 256; Accession Number UA84-225

Area:	West of Kosina Creek
Site Map:	Figure D.336
Survey Locale 178:	Figure E.155
USGS Map:	Talkeetna Mts. D-2, Figure E.4
Site Location:	Appendix F

Setting:

Situated at an elevation of 518 m asl (altimeter: 1699 feet) the site is located on a forested point bar west of Kosina Creek. This point bar is bordered by a ca. 200 m wide relict channel of the Susitna River on the south and by the Susitna River in all other directions. The site is located on the southeastern point of the ca. 800 x 400 m, triangular-shaped point bar in a ca. 2 m stratigraphic section of alluvium. Terrain in all northerly directions is at a similar elevation but dips ca. 2 m toward the Susitna River bank ca. 80 m to the northeast and ca. 150 m to the north. Terrain to the south abruptly descends ca. 2 m along an east-west trending bluff which marks the southern margin of the point bar. The bluff top is relatively flat with undulations of less than 50 cm. This bluff bends northwest, paralleling the Susitna River, ca. 60 m east of the site. Two streams occur near the site. Kosina Creek occurs ca. 500 m to the southeast and a smaller clear water stream meets the Susitna River ca. 400 m north of the site through an incised valley. The former is clearly visible from the site but the latter is obstructed by the present forest vegetation. Vistas are obstructed by the forest in all northerly directions but are open elsewhere. The Susitna River and the mouth of Kosina Creek are in clear view to the southeast, as is a ca. 800 m stretch of the relict channel to the south and southwest. The forest consists of balsam poplar, paper birch, and white spruce. Grass dominates the floral inventory, but wild rose, fireweed, and equisetum also occur at the site. The understory north of the bluff edge is predominantly equisetum and grasses.

Testing:

Cultural remains from TLM 256 were recovered from an eroding bluff face. An unburned, large mammal bone fragment was located ca. 35 cm below surface. Additional large mammal bones, both unburned and burned, were located at a similar depth along a ca. 6 m wide section of the exposure. Fifty bone fragments were collected and consist of 49 medium-large mammal fragments and one small mammal flatbone fragment. Three unburned bone fragments articulate to form a right proximal radius/ulna fragment of caribou (Rangifer tarandus). An additional, identifiable skeletal element consists of a burned rib fragment of a medium-large mammal. An isolated pocket consisting of silt, wood ash, charcoal flecks, and 43 burned and calcined bones was located at a similar stratigraphic position (Table D.416). A cluster of ca. 15 river-rounded cobbles (none collected) occurred in a silt unit immediately below the organic cultural unit. Two survey shovel tests were excavated, but both were sterile. A grid shovel testing program was implemented to locate additional subsurface material and to assist in determining the areal extent of TLM 256. Eleven grid shovel tests were excavated away from the bluff edge. None of the grid shovel tests yielded cultural material. Observed site size based on the distribution of artifacts is 6 square meters (Table D.2).

Table D.416.

Artifact Summary, TLM 256

Provenience		Description
Faunal Material		
Cutbank exposure	1	Right proximal radius fragment, unburned, caribou (Rangifer tarandus)
	1	Right proximal ulna fragment, unburned, caribou (Rangifer tarandus)
	1	Right proximal radius shaft fragment, unburned, caribou (Rangifer tarandus)
	1	Long bone shaft fragment, unburned, large mammal
	1	Rib fragment, burned, medium-large mammal
	13	Long bone and unidentifiable fragments, burned, medium-large mammal
	31	Long bone and unidentifiable fragments, calcined, medium-large mammal
	1	Flatbone fragment, calcined, small mammal

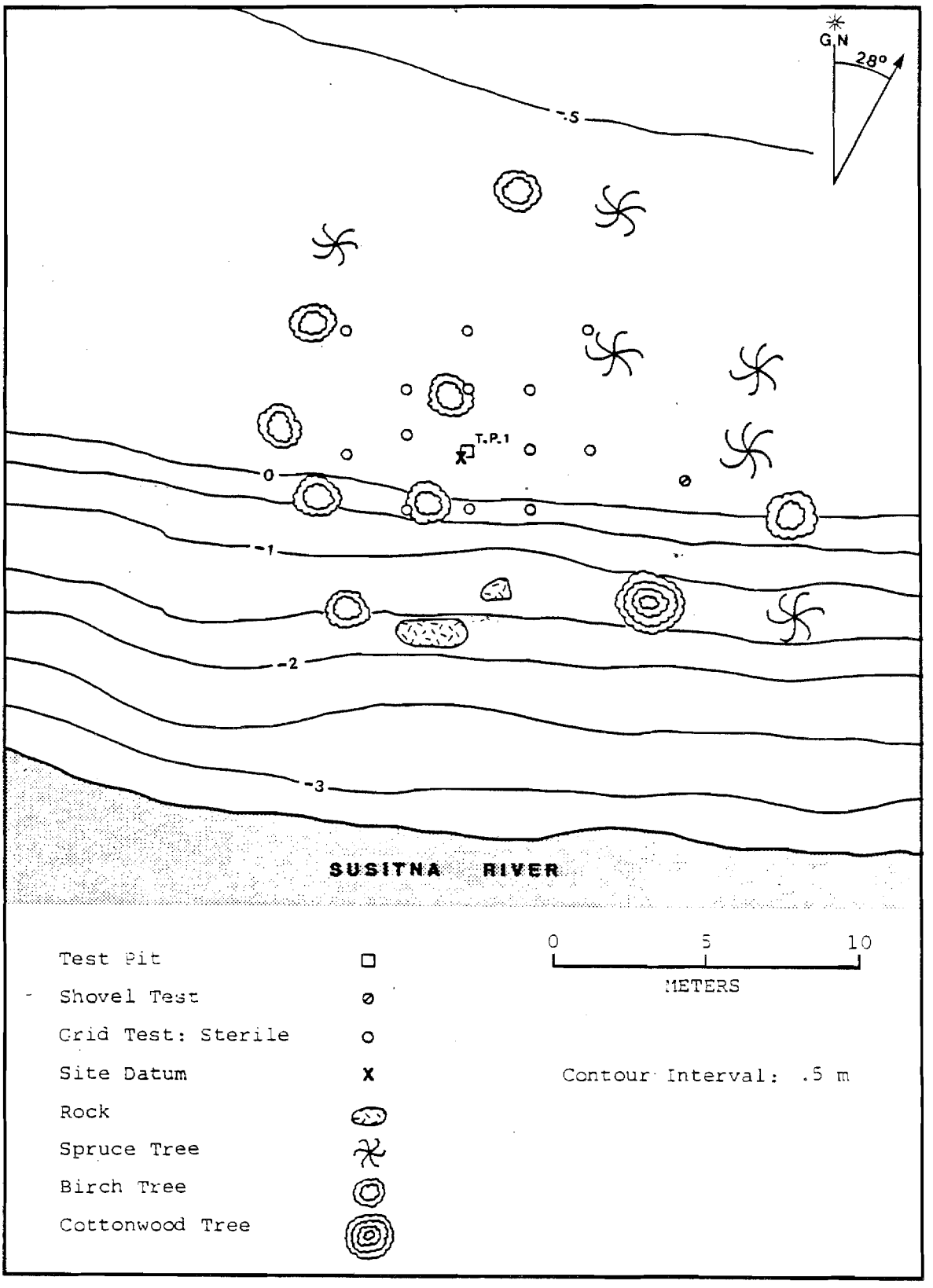


Figure D.336. Site Map, TLM 256

AHRS Number TLM 257

Area:	Northwest of Watana Creek Mouth
Site Map:	Figure D.337
Survey Locale 22:	Figure E.99
USGS Map:	Talkeetna Mts. D-3, Figure E.3
Site Location:	Appendix F

Setting:

TLM 257 is situated near the northwest end of a relatively level terrace at an elevation of ca. 500 m asl (1675 feet), northwest of the confluence of Watana Creek with the Susitna River. The site is located 8 m south of the southern rim of a kettle feature (ca. 50 m in diameter) that is ca. 15 m deep and is ca. 70 m north of the terrace edge which is ca. 30 m above the flood plain of the Susitna River. The terrace extends ca. 120 (north-south) x 200 m (east-west). There is a small, narrow, clear water creek flowing in a southerly direction toward the kettle lake but it seeps into the ground before reaching it. The view to the west is obstructed by a high kame. TLM 200 is located on the north face of this kame. The southern slopes of the Susitna River canyon are visible to the south; however, the Susitna River is not visible. The view to the east is obstructed by spruce trees scattered over the surface of the terrace. The view to the north and northeast overlooks the kettle and the slopes of a high kame where TLM 199 is located. The vegetation at this site can be characterized as an upland spruce-hardwood forest which has a dense-to-open interior forest composed of white spruce, birch, aspen, and cottonwood. There are a few scattered black spruce in low-lying areas. Understory species consist of dwarf birch, Labrador tea, willow, lowbush cranberry, blueberry, dwarf dogwood, fireweed, wild rose, lichen, grasses, heath, and sphagnum moss.

Testing:

TLM 257 is characterized by a shallow, circular depression that may represent a cache pit. The depression measures 1.0 x 1.0 x 0.40 m. A grid shovel testing program was implemented to assist in determining the extent of the site and the distribution of cultural material. Sixteen shovel tests were excavated, but no cultural material was found. A 40 x 40 cm test pit (test pit 1) was superimposed over an initial shovel test in the east wall of the depression. This test pit revealed a sandy backfill matrix above the Devil tephra. Despite the absence of artifacts, the similarity of the depression to cultural depressions at other sites in the project area suggests its probable cultural origin. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

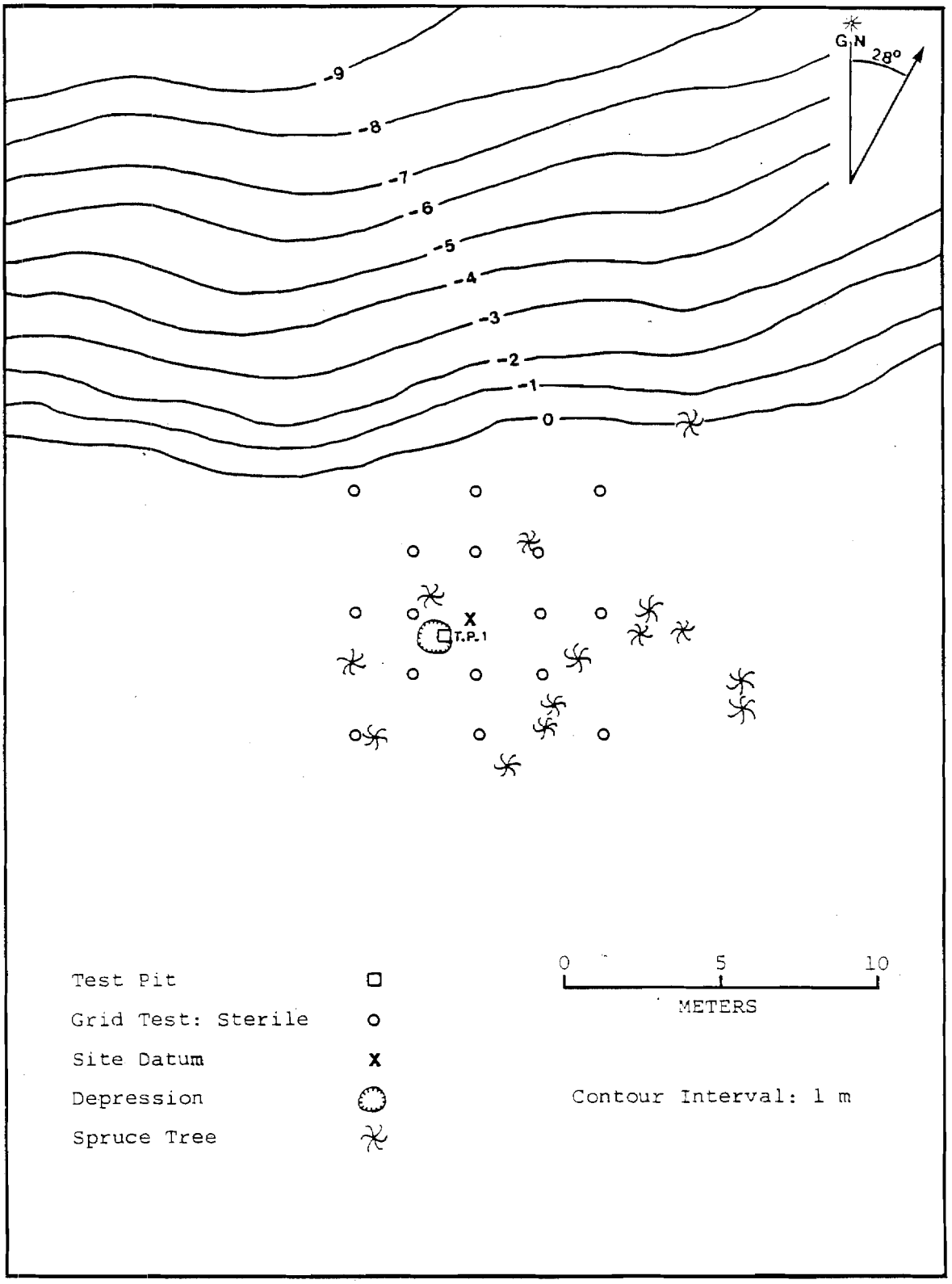


Figure D.337. Site Map, TLM 257

AHRS Number TLM 258

Area:	West of Tsusena Creek
Site Map:	Figure D.338
Survey Locale:	Proposed Borrow E, Figure E.282
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

TLM 258 is located, adjacent to a game trail, on the west bank of a creek, locally known as Bear Creek, immediately upstream from the creek mouth. This creek enters the north side of the Susitna River downstream from Tsusena Creek. At the site location, the creek is clear and fast-flowing and divided into two channels forming a small island extending ca. 30 m upstream from the creek mouth. The terrain in the site vicinity is generally flat, reflecting the alluvial plain morphology. Elevation of the site is 443 m asl (altimeter: 1453 feet). The terrain is level until ca. 375 m to the north where it rises sharply to the upper valley bench. Bear Creek drains a portion of the valley through a steeply incised bedrock canyon. The stream banks are steep and rocky. Vegetation obscures views to the north, east, and west. Vegetation at the site and the surrounding area is that of the lowland spruce-hardwood forest vegetation regime, with white spruce and poplar predominating. The ground surface is irregular, with many fallen trees suggestive of periodic flooding. Moss and Labrador tea are the dominant understory species.

Testing:

TLM 258 consists of a single rectangular depression (2.10 x 1.51 x 0.75 m) located ca. 2 m west of Bear Creek. An initial shovel test was expanded into a 40 x 40 cm test pit (test pit 1), the excavation of which disclosed an overburden level above a buried organic unit.

Despite the absence of artifacts, the similarity of the depression to cultural depressions at other sites in the project area suggests its probable cultural origin. A second survey shovel test, excavated ca. 8 m north of test pit 1, (near the bank edge), was sterile. A third survey shovel test, located 6 m west of test pit 1, also proved sterile.

A grid shovel testing program was implemented to assist in the location of subsurface cultural remains and the determination of site size. Twelve grid shovel tests were excavated, however, all were sterile. Observed site size based on the distribution of artifacts is 12 square meters (Table D.2).

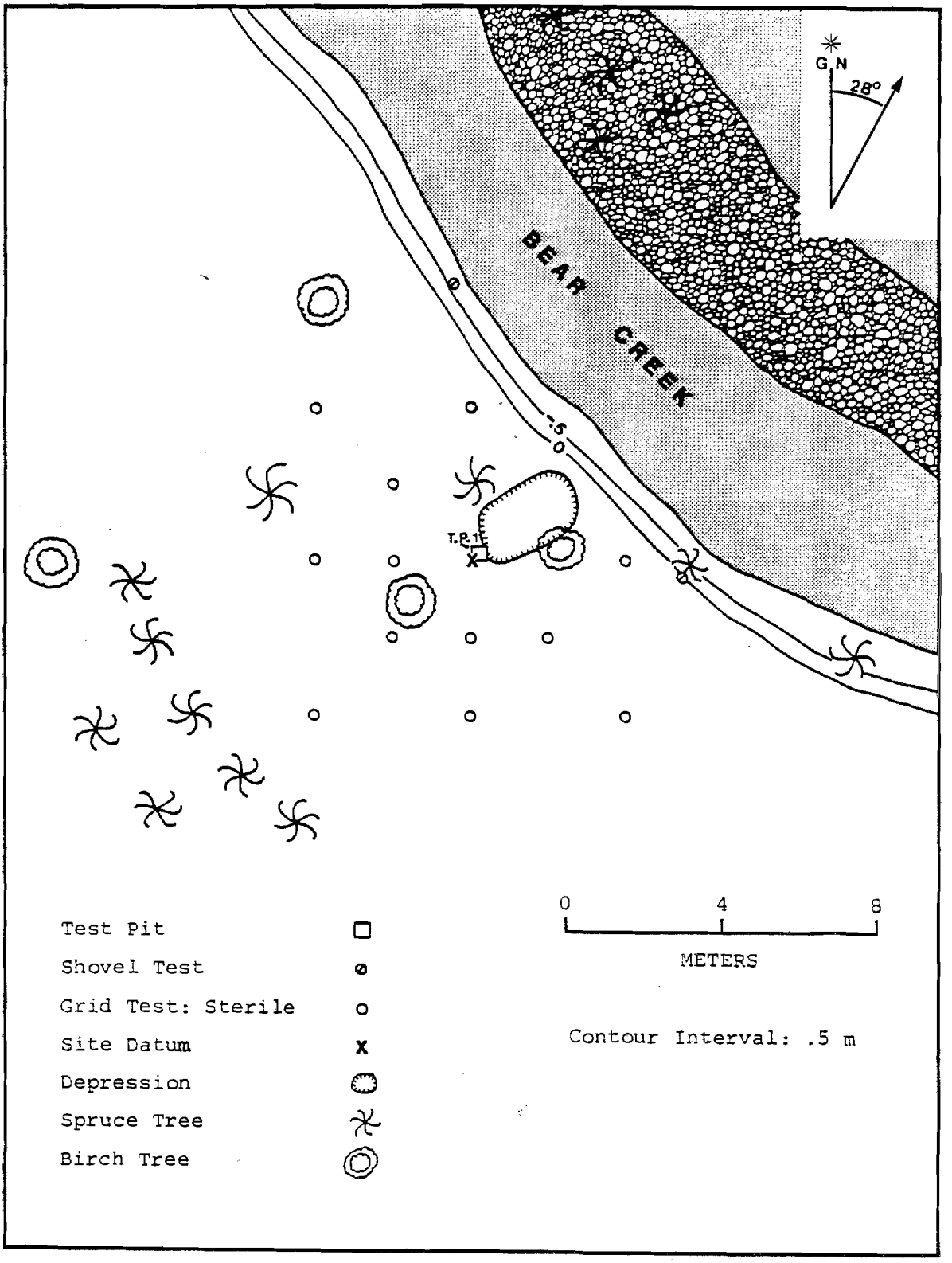


Figure D.338. Site Map, TLM 258

AHRS Number TLM 259; Accession Number UA84-232

Area:	North of Fog Creek Mouth
Site Map:	Figure D.339
Survey Locale 175:	Figure E.270
USGS Map:	Talkeetna Mts. D-4, Figure E.2
Site Location:	Appendix F

Setting:

The site at an elevation of 428 m asl (altimeter: 1404 feet) is on an alluvial plain and cobble river bed, slightly above and adjacent to the Susitna River, north of Fog Creek. The alluvial plain is ca. 800 (northeast-southwest) x 400 m (northwest-southeast), and borders the west side of the river. In the vicinity of the site the eastern margin of the plain is characterized by a cutbank that parallels the river, and is ca. 1-1.5 m higher in elevation than the exposed river bed. The site was located during a period of low-water level, and there was a distance of ca. 7 m between the cutbank edge and the Susitna River. The exposed river bed consists of rounded cobbles and boulders. The confluence of an unnamed creek with the Susitna River is north of the site, and is easily accessible either along the cobble river bed or the margin of the alluvial plain. From the site there is a clear view of the Susitna River and associated terrain for ca. 1 km north where the river bends to the east, and ca. 200 m south where the eastern point of the plain obstructs further view. The terrain features associated with two sites, TLM 027 and TLM 029, on the east side of the river and 300-400 m northeast of the site are also visible. Vegetation on the alluvial plain consists of open-to-closed black spruce forest with occasional deciduous trees. Willow shrub is common along the western margin of the plain, and on the slumped areas along the cutbank. Undergrowth is dense and includes wild rose, mosses, grasses, dwarf dogwood, equisetum, and lowbush cranberry. The surface topography are formed by the vegetation growing over deadfalls.

Testing:

The site was identified when an argillite flake core (UA84-232-8) was found at the base of a cutbank exposure. A basalt flake core (UA84-232-25) and four flakes were found within the cutbank (Table D.417). Subsequent surface survey located a lithic scatter on the cobble river bed. This included unmodified basalt pebbles and cobbles (with a distinctive cortex), basalt flake cores (UA84-232-10, 11, 12, 13), an argillite flake core (UA84-232-9), and basalt and argillite flakes. Argillite, basalt, chert, and rhyolite cobble fragments were also present.

The distribution of artifacts was confined to an area of 15 (north-south) x 6 m (east-west) on the cobble beach, and along a 7.5 m (north-south) section of the cutbank. The basalt cobbles and pebbles were found beyond the limits of the artifact scatter, ca. 20 m south and an undetermined distance north, and were usually within 3 m of the cutbank edge.

Overburden was removed from a 1 m section of the cutbank, in the vicinity of the artifacts. This was done to expose an undisturbed, stratigraphic profile and to attempt to locate in situ artifactual material. The profile from the cleared 1 m section was characterized by 1 m of alluvial sediments, consisting of layered and sorted sands and silty-sands. Numerous organic layers were interbedded within the sediments. The stratigraphic sequence is representative of a series of bank overflow (flood) deposits. Artifactual material recovered while facing off the 1 m section included two basalt flake cores (UA84-232-28, 29), argillite and basalt flakes, and a basalt cobble fragment (UA84-232-30). All of the artifactual material was found at the same stratigraphic position, toward the lower portion of the profile (ca. 1 m below the surface), in association with buried organic lenses. Two shovel tests were placed on the bank west of the cleared 1 m section, but both were sterile. Given the 1 m of overburden, grid shovel testing was not conducted.

The inventory from survey testing includes 9 flake cores, 7 cobble fragments, and 15 flakes. Material types include argillite, basalt, chert, and rhyolite, with basalt being the predominant material. The association of modified and unmodified basalt cobbles with a distinctive cortex, with the frequent occurrence of cores and cobble fragments suggest that the site area may have been a primary source for basalt material, and possibly represents a quarry site for the basalt cobbles. The basalt cobbles recovered from this site have a distinctive vesicular cortex, these vesicles apparently are the result of solution processes. This type of cortex weathering is present on basalt found at many of the archeological sites in the Susitna Hydroelectric Project area. Estimated site size based on the distribution of artifacts is 123 square meters (Table D.2).

Table D.417.

Artifact Summary, TLM 259

Provenience		Description
Lithic Material		
Surface:	1	Argillite flake
	5	Basalt flakes
	1	Rhyolite flake
	2	Argillite flake cores (UA84-232-8, 9)
	4	Basalt flake cores (UA84-232-10, 11, 12, 13)
	1	Argillite cobble fragment (UA84-232-14)
	3	Basalt cobble fragments (UA84-232-15, 16, 17)
	1	Chert cobble fragment (UA84-232-18)
	1	Rhyolite cobble fragment (UA84-232-19, 20)
Subsurface:		
Cutbank slump	2	Argillite flakes
	2	Basalt flakes
1 m face of cutbank	3	Argillite flakes
	1	Basalt flake
	3	Basalt flake cores (UA84-232-25, 28, 29)
	1	Basalt cobble fragment (UA84-232-30)

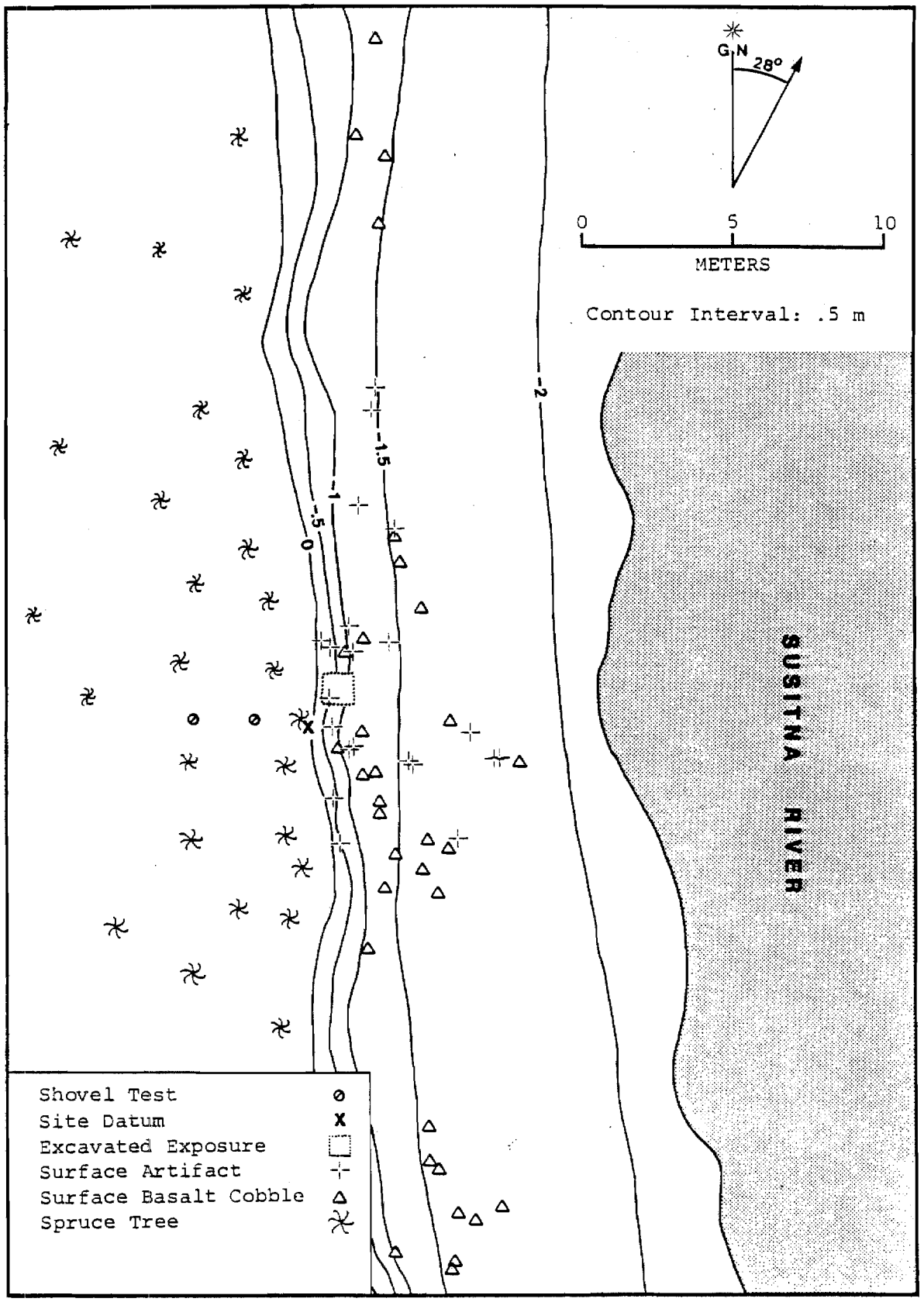


Figure D.339. Site Map, TLM 259

AHRS Number HEA 007

Area:	South Side of Stampede Trail, West of George Parks Highway
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Healy D-5, Figure E.37
Site Location:	Appendix F

Description:

HEA 007, located on the northern end of a ridge, south of Stampede Trail and west of George Parks Highway, consisted of a large bipointed biface. This prehistoric site was reported by Holmes in 1973 (AHRS files), but was not visited during the present study.

AHRS Number HEA 012

Area:	South of Little Panguingue Creek
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Healy D-5, Figure E.37
Site Location:	Appendix F

Description

TLM 012, a prehistoric site located south of Little Panguingue Creek, was defined on the basis of a surface collection from a borrow pit. The materials collected from this site consisted of chips, flakes, and a point base. TLM 012 was not visited during the present study.

AHRS Number HEA 033; Accession Number UA76-173

Area:	North Side of the Stampede Trail, West of George Parks Highway
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Healy D-5, Figure E.37
Site Location:	Appendix F

Description:

HEA 033, located on a high ridge along the north side of the Stampede Trail, was reported by Plaskett (1976). This site was not visited during the present study. Site vegetation consisted of an alder thicket, while the surrounding vegetation was characterized by spruce, scattered alder, and low brush.

Two 50 x 50 cm test pits were excavated on the ridge. One of these test pits revealed a chert flake from an oxidized layer contacting the drift at 44 cmbs (Table D.418).

Table D.418.

Artifact Summary, HEA 033

Provenience		Description
Lithic Material		
Subsurface:		
Test Pit	1	Chert flake

AHRS Number HEA 035; Accession Number UA76-175

Area:	North of Panguingue Creek
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Healy D-5, Figure E.37
Site Location:	Appendix F

Description:

HEA 035, located on a ridge top north of Panguingue Creek, was reported by Plaskett (1976). Site vegetation consisted of scattered spruce and moss. The surrounding topography was low, flat, and open. This prehistoric site was not visited during the present study.

Three 50 x 50 cm test pits were excavated on the ridge. Test pit 1 produced 5 flakes, 1 scraper, 2 articulating microblade fragments, and 1 microblade core fragment from 20 cmbs; however, their stratigraphic provenience was undetermined. Test pit 2 produced 36 flakes from 22-26 cmbs. Test pit 3 contained five flakes from a brown silt at 25-30 cmbs (Table D.419).

Table D.419.

Artifact Summary, HEA 035

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	5	Flakes
	1	Scraper (UA76-175-1)
	2	Microblade fragments (UA76-175-4 articulates with 5)
	1	Microblade core fragment (UA76-175-8)
Test pit 2	36	Flakes
Test pit 3	1	Basalt flake
	3	Chert flakes
	1	Flake

AHRS Number HEA 038; Accession Number UA76-178

Area:	North of Little Panguingue Creek
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Healy D-5, Figure E.37
Site Location:	Appendix F

Description:

HEA 038, located on a terrace on the north side of Little Panguingue Creek, was reported by Plaskett (1976).The site vegetation was characterized by a spruce forest in an open tundra ecosystem, and the surrounding topography was low and wooded. This prehistoric site was not visited during the present study.

Plaskett (1976) excavated one 50 x 50 cm test pit (test pit 1) on the terrace. This test pit yielded a microblade component associated with wedge-shaped cores, scrapers, possible core preforms, and flake debitage (Table D.420). Powers and Hoffecker (1984) returned to HEA 038 and excavated four 1 x 1 m test squares. Two components were identified. The upper component represented an early microblade assemblage, which occurred in an early Holocene soil and may be assigned to the Denali complex. The lower component produced unretouched flakes from a lower paleosol similar to the basal soils/sediments at Dry Creek and Moose Creek sites (Powers and Hoffecker 1984).

Table D.420.

Artifact Summary, HEA 038

Provenience		Description
Lithic Material		
Subsurface:		
Test pit 1	1542	Flakes
	1	Modified (retouched) tabular rock (UA76-178-9)
	2	Scrapers (UA76-178-1, 5)
	61	Microblades (UA76-178-4, 10, 13)
	1	Ridge spall (UA76-178-2)
	2	Microblade core tablets (UA76-178-3, 6)
	2	Possible core preforms (UA78-178-14)

AHRS Number HEA 081

Area:	North of Healy
Location:	Proposed Transmission Line: Healy to Fairbanks
USGS Map:	Healy D-4, Figure E.38
Site Location:	Appendix F

Description:

HEA 081, the Dry Creek bridge along the Alaska Railroad, spans Dry Creek north of Healy. The bridge was fabricated by the American Bridge Company in 1925, and installed during the construction of the Alaska Railroad. The bridge was constructed of three 60-foot through plate girders with four bents resting on concrete abutments (AHRS files).

AHRS Number HEA 091

Area:	North-northwest of Lignite
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Healy D-5, Figure E.37
Site Location:	Appendix F

Description:

HEA 091 is known as the Stampede Trail, which begins at the Alaska Railroad tracks just north of Lignite and extends west, paralleling the northern boundary of Denali National Park for approximately 50 mi. (80 km). The old trail has now been converted to a road and has been used by mining operations since the 1920's. This road leads to the gold, silver, lead, and antimony mining operations on the Stampede and Crooked creeks in the eastern area of the Kantishna Hills (Dilliplane et al. 1980).

AHRS Number HEA 137; Accession Number UA77-510

Area:	North of Panguingue Creek
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Healy D-5, Figure E.37
Site Location:	Appendix F

Description:

HEA 137, located on a terrace on the north side of Panguingue Creek, was reported by Powers and Hoffecker (1984). The site vegetation consisted of a mixed birch and spruce forest with a xeric understory. This prehistoric site was not visited during the present study.

A 1 x 10 m test trench was excavated in the center of a small lobate headland on the southernmost portion of the stream terrace. Four hundred fifty-three artifacts were found directly below a soil unit beneath the vegetation mat at 15-20 cmbs and extended throughout the trench to a depth of 40 cmbs (Powers and Hoffecker 1984). The lithic cultural material represented a single component which has been radiocarbon dated at 5620 ± 65 years: 3670 B.C. (SI-3237).

Table D.421.

Artifact Summary, HEA 137

Unit		Description
Lithic Material		
Subsurface:		
Test trench	1	Diabase flake
	19	Chalcedony flakes
	45	Chert flakes
	232	Quartzite flakes
	25	Rhyolite flakes
	1	Sandstone flake
	1	Chert modified (retouched) flake
	1	Quartzite modified (utilized) flake
	1	Sandstone modified (utilized) flake
	2	Quartzite scrapers
	1	Chert blade-like flake
	1	Quartzite blade-like flake
	2	Quartzite blades
	4	Rhyolite blades
	3	Chalcedony microblades
	9	Chert microblades
	1	Rhyolite microblade
	1	Microblade
	1	Chert burin
	1	Chert burin spall
	1	Diabase biface fragment

Table D.421. (Continued)

Unit		Description
	1	Quartzite biface fragment
	1	Chert lanceolate point
	2	Quartzite macroblade core tablets
	1	Chert microblade core tablet
	1	Detached core face

AHRS Number HEA 174; Accession Numbers UA80-252, UA81-201

Area:	Northeast Shore Deadman Lake
Site Map:	Figure D.340
Site Location Map:	Figure E.67
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site is located in glacially scoured terrain at the northeastern end of Deadman Lake at an elevation of approximately 961 m asl (3150 feet), northeast of the point where Deadman Creek enters the lake. The site lies near the top of a 30 m high, deflated knoll which is connected to the main valley wall to the north by a ridge approximately 15 m lower than the top of the knoll. In other directions the knoll slopes moderately down to Deadman Lake on the west, Deadman Creek on the east, and low, poorly drained muskeg terrain to the southeast. This knoll lies at the intersection of two major glacial valleys and is in close proximity to two large lakes, Deadman Lake (ca. 190 ha) to the southeast and Big Lake (ca. 390 ha) to the southwest. The two lakes are in view and easily accessible from the site location. Intervening land between these lakes is low, poorly drained terrain with standing water. Deadman Creek, east of the site and in view, meanders slowly through this flat valley bottom in a deep, narrow channel. The view from the site is panoramic overlooking Deadman Lake to the west, Deadman Creek to the south and southeast, and Deadman Creek valley to the northeast. The site is above tree line and vegetation consists of low shrubs and lichen on an extensively deflated ground surface. Dwarf birch is present in more protected portions of the knoll. Lower terrain in the vicinity of the site is primarily moist tundra with concentrations of willow and alder along the creek drainage.

Testing:

The site is a surface lithic scatter on the top, western, and southeastern slope of the deflated knoll. A basalt modified flake (UA80-252-2; Figure D.397e) and tci tho (UA80-252-1; Figure D.397g) were surface collected from the western slope of the knoll. An additional 15 surface artifacts were also collected. These included 1 gray quartzite preform (UA81-201-1; Figure D.397d), 1 basalt scraper (UA81-201-2; Figure D.397b), 2 chert scrapers (UA81-203-3, 4; Figure E.397a,c), 1 chert endscraper fragment (UA81-201-5; Figure D.397f), 3 modified flakes, and 7 waste flakes. The raw materials present at the site included argillite, basalt, chalcedony, chert, quartz, and quartzite. No concentration of lithic debitage indicating a chipping station was observed.

No subsurface cultural material was found at the site. Test pit 1, a 50 x 50 cm test excavated 10 m northwest of the datum, was sterile and showed glacial drift directly under the patchy organic mat. No further subsurface testing was done because most of the ground surface was deflated. Estimated site size based on the distribution of artifacts is 2,000 square meters (Table D.2).

Table D.422.

Artifact Summary, HEA 174

Provenience		Description
Lithic Material		
Surface:	1	Argillite flake
	1	Chalcedony flake
	4	Chert flakes
	1	Quartz flake
	2	Argillite modified flakes (UA81-201-12, 15)
	1	Basalt modified flake (UA80-252-2)
	1	Chert modified flake (UA81-201-4)
	1	Tci tho (UA80-252-1)
	1	Basalt scrapers (UA81-201-2)
	3	Chert scrapers (UA81-201-3, 4, 5)
	1	Quartzite preform (UA81-201-1)

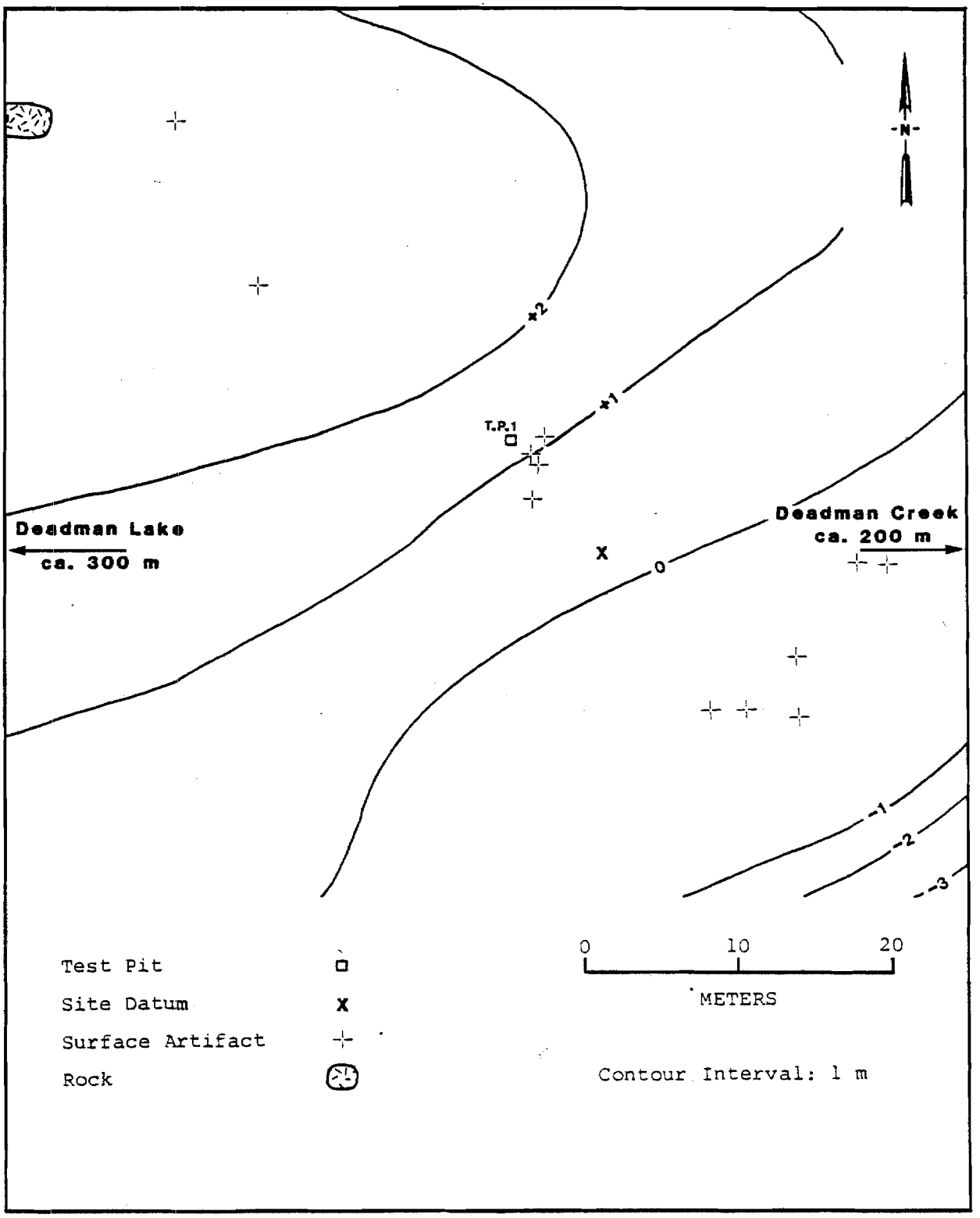


Figure D.340. Site Map, HEA 174

AHRS Number HEA 175; Accession Numbers UA80-253, UA81-200

Area:	South Shore of Butte Lake
Site Map:	Locus A (Upland), Figure D.341
	Locus A (Lowland), Figure D.342
	Locus B, Figure D.343
Site Location Map:	Figure E.68
USGS Map:	Healy A-2, Figure E.12
Site Location:	Appendix F

Setting:

The site, at an elevation of 1006 m asl (3300 feet), is located at the southwest end of Butte Lake, a ca. 300 ha lake at the divide of a mountain pass, from which the terrain descends to the northeast toward the base of the Alaska Range, and southwest into a long, glacial trough which is part of the Susitna River watershed. The site, consisting of two loci (A and B), is focused around two knolls northwest of the Butte Creek outlet and on a ridgeline running along the west shore of the lake.

Locus A: Locus A is situated approximately 30 m above lake level on two knolls which are part of a north-south trending ridgeline. The higher and more distant knoll from the lake and outlet creek is slightly elliptical with steeper slopes to the northwest and more gradual slopes to the southeast. Approximately 92 m to the southeast lies the second and slightly lower knoll, also sloping gradually southeast toward the creek. The view from both knolls consists of Butte Lake and its margins, the Alaska Range, and, to the southwest, the descending valley slopes and outlet creek. Vegetation on the site consists of dwarf birch and low willow, with a lichen, moss, and heath ground cover. Deflated sandy gravel blowouts interrupt the site vegetation on the tops and slopes of the knolls, predominantly to the southeast toward the lake and creek. The site lies above timberline.

Locus B: Locus B, lying 500 m to the north of and ca. 50 m from the lake shore, is situated on a relatively flat-surfaced ridge sloping gently to the south. Toward the lake the ridge drops sharply; to the north the benched slopes of the valley rise toward the upland hills. Locus A is in clear view to the south. To the north, visibility is similar to that of locus A, although not as extensive. Vegetation on the ridge is similar to that of locus A.

Testing:

The site was defined by surface lithic scatters on the two knolls of locus A and the ridge of locus B, and subsurface lithic material at locus A.

Locus A: The surface material at locus A was concentrated in three scatters on the higher knoll, in two scatters on the lower knoll, and in isolated locations around the knolls. Artifacts collected from the surface scatters consist of 2 modified flakes (UA81-200-2, 370), 2 blades (UA80-253-1; UA81-200-8; Figure D.398b,d), 4 bifaces (UA80-253-2; UA81-200-23, 372, 373; Figure D.398o,f,j,l), 1 basalt side-notched point (UA81-200-1; Figure D.398g), 2 chert flake cores (UA81-200-368, 371; Figure D.398n,m), and 62 waste flakes. Approximately 35 flakes were uncollected. Two test pits were excavated at this locus: test pit 1 on the higher knoll and test pit 2 on the lower knoll. These tests yielded 21 flakes of various raw materials and a chert microblade fragment (UA81-200-43; Figure D.398a).

Locus A was subsequently systematically tested. Five 1 x 1 m test squares were placed on the two knoll tops and the associated lower ground. Three of the test squares were on the knoll tops (two on the higher knoll and one on the lower knoll) and two on the slopes.

Locus B: The surface material at locus B consisted of three basalt flakes which were not collected. Six survey shovel tests were excavated at locus B but none revealed cultural material. This locus was not systematically tested as no subsurface cultural remains were encountered.

Discussion:

Testing at HEA 175 consisted of surface collection and the excavation of two test pits and five test squares at locus A, as well as the excavation of 6 sterile shovel tests at locus B. Locus A will form the basis of this discussion as locus B provided only limited data and was not systematically tested. All of the test squares yielded cultural material. Tables D.424 and D.425 presents the total artifact inventory from the site.

The soil/sediment stratigraphy at this site was anomalous because of its apparent lack of any tephra deposition, the presence of units with two different origins (lacustrine and fluvial), and the extensive disturbance by ground squirrels. Two types of stratigraphic profiles were evident (Figure D.344; Table D.423). An upland stratigraphy, found in N119/E80, N103/E89, and N100/E98, dominated by sand and gravel that appeared to be the result of fluvial deposition and were probably glacial outwash deposits. The lowland stratigraphy, found in N92/E180 and N100/E243, was characterized by sands and silts. A cut near test square N100/E243 showed a series of parallel bedded sands and silts that graded into a well-sorted basal sand and appeared to be lacustrine in origin. Clay-rich deposits were present near locus B and provided further evidence for a previously larger lake.

The upper portions of all the stratigraphic sections were disturbed by bioturbation and/or cryturbation. In the lower section, especially in N100/E243, this disturbance was seen as a homogenized upper sand layer that had a rather abrupt contact with the lower, less disturbed silt and sand sediments. The stratigraphy on the knoll tops was extensively disturbed by rodent activity, which was evidenced by numerous krotovina

and "bedding" caused by interdigitated areas of collapsed borrows and vegetation. The degree of disturbance and relative homogeneity of most of these sediments made it difficult to correlate the stratigraphy from one square to another or even to define good association of artifacts within a square. Arbitary levels were excavated within all soil units. Test squares were excavated to a greater depth than usual because of the unexpected appearance of artifacts in the glacial deposits and to obtain complete stratigraphic profiles to aid in the interpretation of the sediments.

Cultural material was found throughout most of the soil/sediment units at locus A. The subsurface remains recovered from the two test pits and the systematic test squares consisted of 331 flakes, 10 tools, and 3 bones. Tables D.427 and D.428 presents an inventory of the lithics by stratigraphic unit and Table D.426 lists the faunal material. The tools recovered from this locus in a subsurface context were 2 modified flakes (UA81-200-313, 364), 3 blades (UA81-200-43, 128, 332; Figure D.398a, e, c), 2 bifaces (UA81-200-305, 340; Figure D.398k, i), 1 argillite stemmed point (UA81-200-348; Figure D.398h) and 2 argillite flake cores (UA81-200-280, 281; Figure D,398p). The faunal remains consisted of two unidentifiable bone fragments and a metapodial fragment, tentatively identified as caribou (Rangifer tarandus).

The artifacts recovered from this site were manufactured from a variety of raw materials. Argillite (42.4%) was the most common, followed by chert (25.6%), basalt (15.7%), quartzite (8%), chalcedony (6%), rhyolite (2%), and obsidian (0.3%). Chert (55%) was the most common raw material used in the manufacture of tools, followed by argillite (25%), basalt (5%), chalcedony (5%), and rhyolite (5%).

Evaluation:

Located in a narrow valley which forms a major north-south corridor, HEA 175 occupies a strategic location for harvesting caribou and other animals concentrated by natural topographic constrictions. The site location also may suggest fishing and exploitation of waterfowl. The

types of artifacts found indicate repeated use of this area through an extensive period of time because artifact types characteristic of a number of culture periods are represented (that is, blades and stemmed and notched points). The degree of disturbance, and the relative homogeneity of most of the sediments at the site, make it extremely difficult to correlate stratigraphy from one test square to another or even to accurately define artifact association within any particular square. Estimated site size based on the distribution of artifacts is 5,000 square meters (Table D.2).

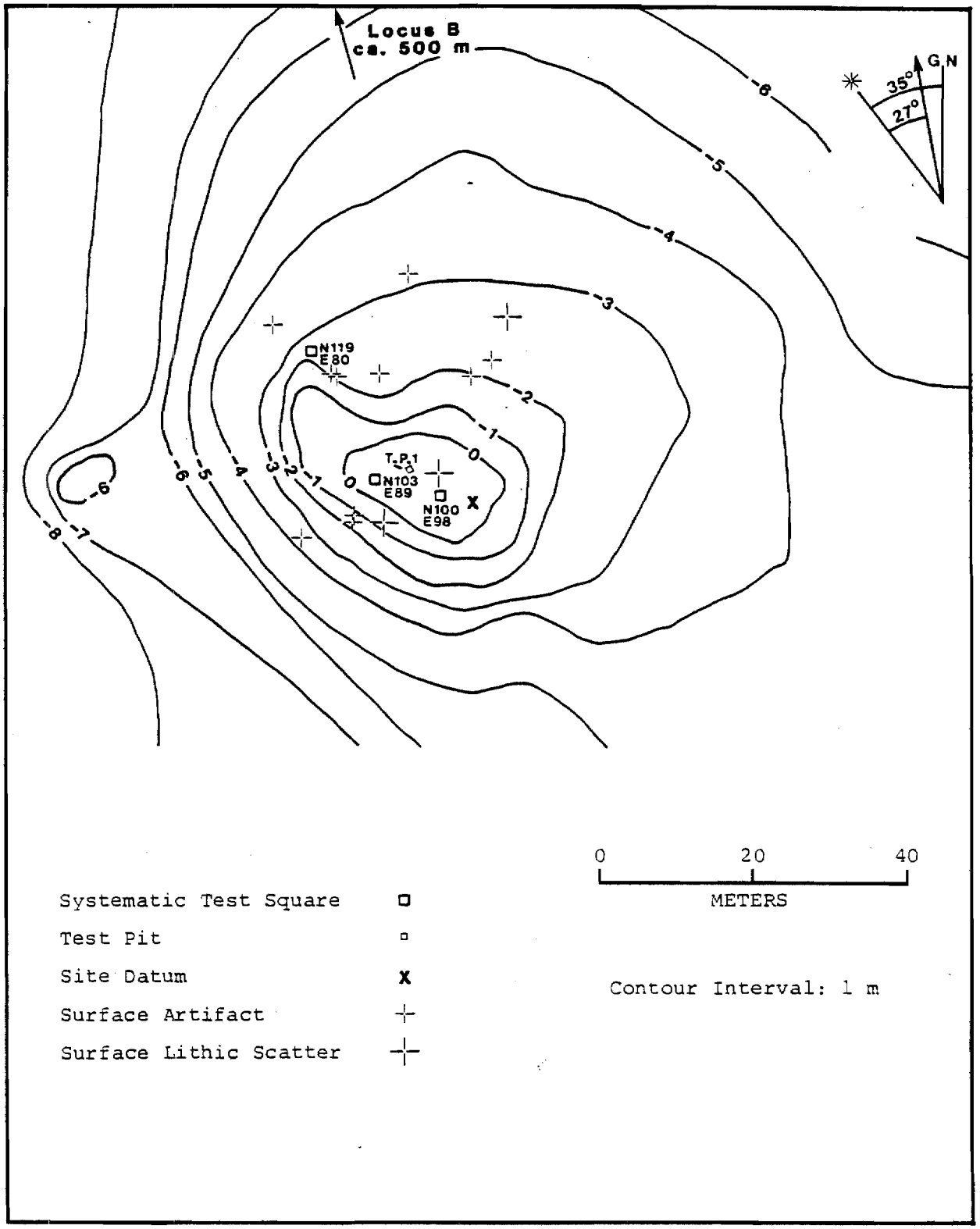


Figure D.341. Site Map, HEA 175 Locus A (Upland)

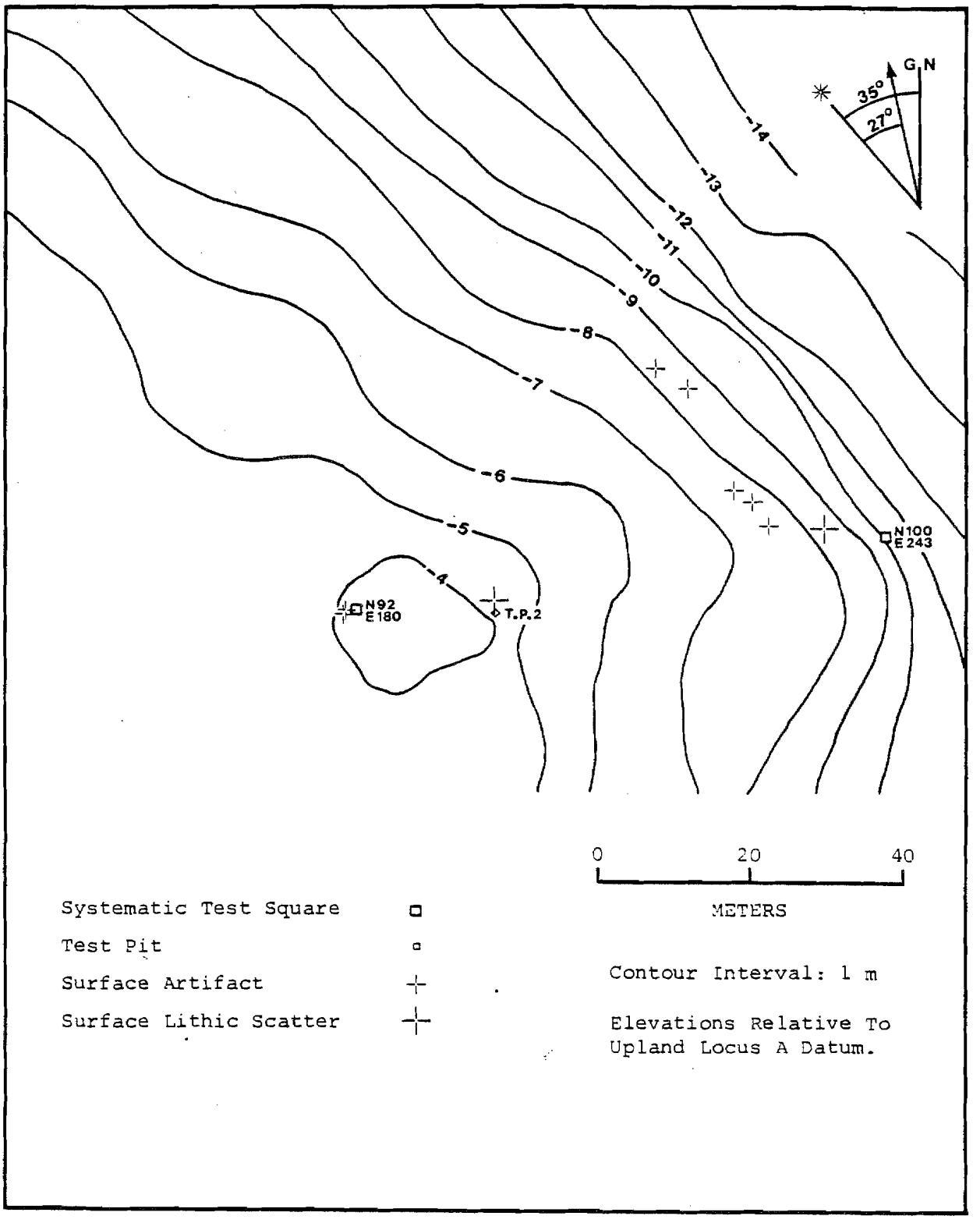


Figure D.342. Site Map, HEA 175 Locus A (Lowland)

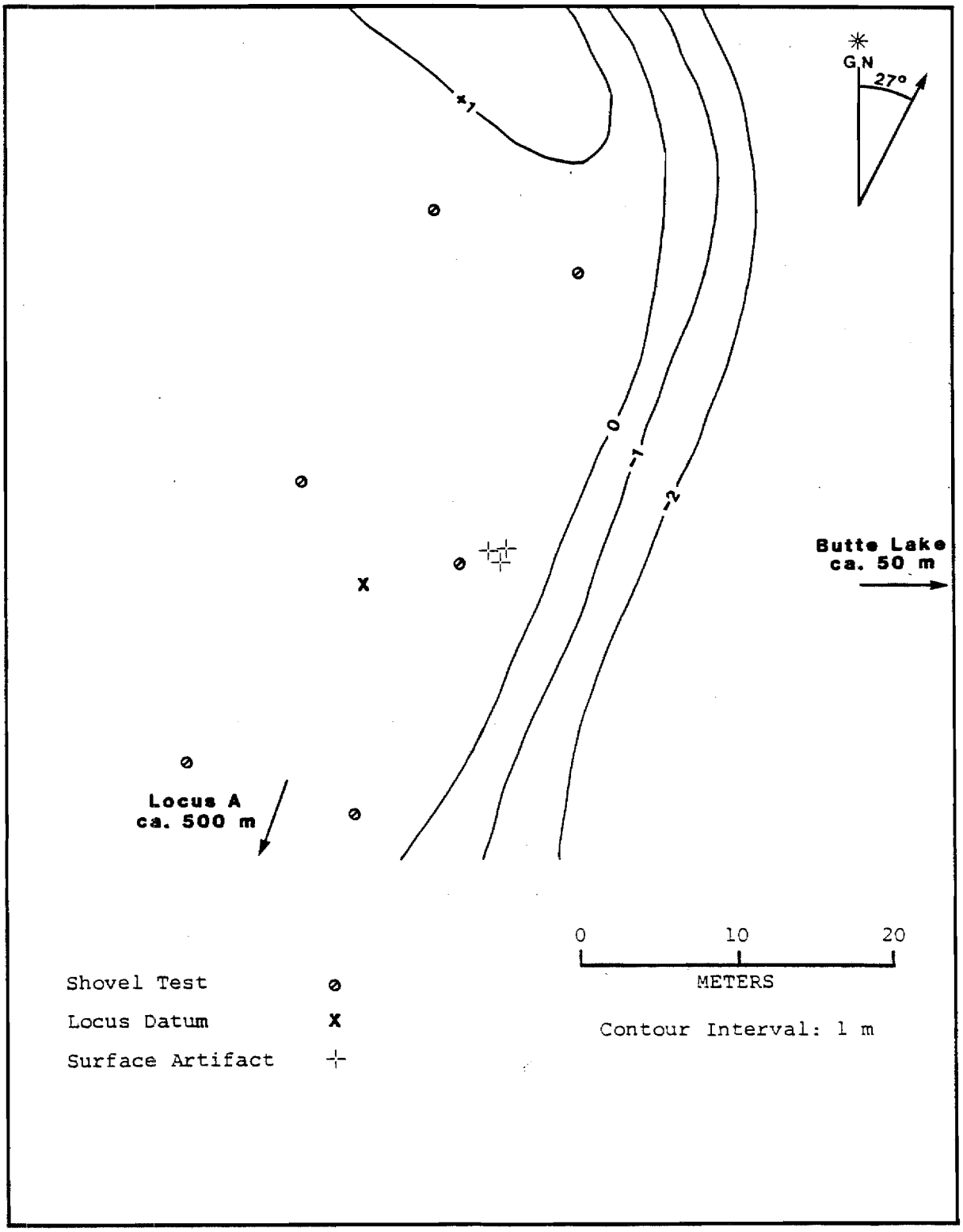


Figure D.343. Site Map, HEA 175 Locus B

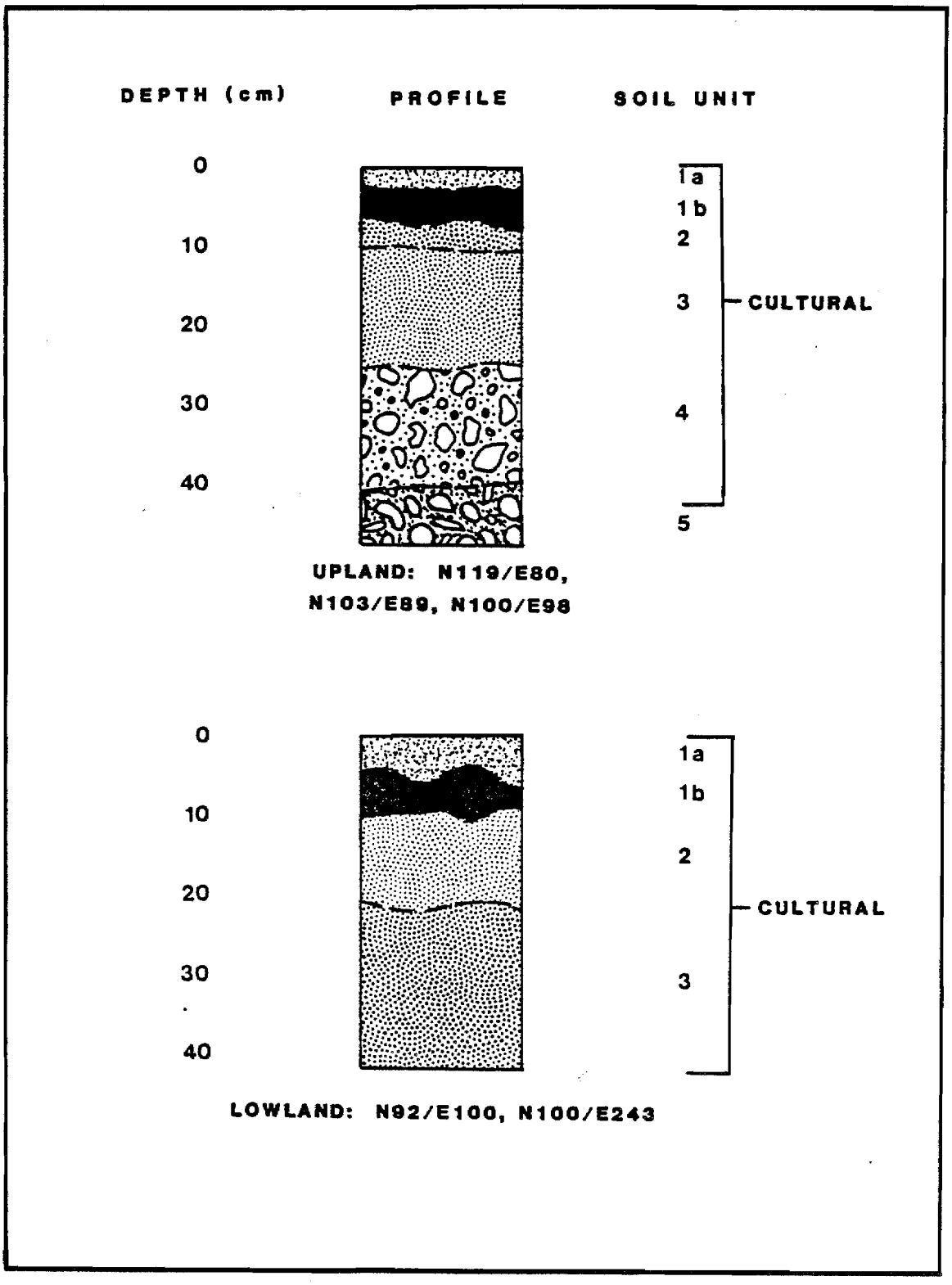


Figure D.344. Composite Profile, HEA 175

Table D.423.

Soil/Sediment Description for Composite Profile, HEA 175

Unit	Description
Upland Profile:	
1a	Organic mat: lichens, roots, and finely divided organics. Both A and O horizons. Variable in thickness and continuous in extent.
1b	Mixed organics, sand, and silt; brown (7.5YR 5/2). Upper contact graditional; lower contact fairly clear but irregular. Mixture of sediments probably a function of rodent activity.
2	Poorly sorted, medium to fine sand; very dark grayish brown (10YR 3/2) to very dark brown (10YR 2/2) depending on organic content. Discontinuous. Contacts vary from clear to indistinct.
3	Medium sand and pebbles; dark reddish brown (5YR 3/3). Gradational contacts. Rodent disturbance continuous throughout.
4	Medium to coarse sand, pebbles, and cobbles; dark brown (10YR 3/3). Gradational contacts.
5	Coarse sand with pebbles and cobbles; light yellowish brown (10YR 6/4). Glacial drift.

Table D.423. (Continued)

Unit	Description
Lowland Profile:	
1a	Organics: lichens, roots, and finely divided organics. Variable in thickness and often grades into unit 1b. Includes both A and O horizons
1b	Organics intermixed with sand and silt. Apparently old, collapsed, infilled rodent borrows. Variable in thickness, often graditional with unit 2. Solifluction evident in N100/E243.
2	Fairly well sorted silty sand with some pebbles; pale olive (5Y 3/3). Contacts clear and undulating. Some bedding may be evident in N100/E243.
3	Fine to medium sand; homogeneous in color. Some lenses of coarse sand within this unit. No bedding apparent.

Table D.424.

Artifact Summary, HEA 175 Locus A

Tools

4	Modified flakes
	3 Chert (UA81-200-2, 313, 364)
	1 Quartzite (UA81-200-370)
5	Blades and fragments
	1 Argillite (UA80-253-1)
	1 Basalt (UA81-200-128)
	3 Chert (UA81-200-8, 43, 332)
6	Bifaces and fragments
	1 Argillite (UA81-200-340)
	1 Chalcedony (UA81-200-305)
	3 Chert (UA80-253-2; UA81-200-372, 373)
	1 Rhyolite (UA81-200-23)
1	Notched point
	1 Basalt (UA81-200-1)
1	Stemmed point
	1 Argillite (UA81-200-348)
4	Flake cores
	2 Argillite (UA81-200-280, 281)
	2 Chert (UA81-200-368, 371)
21	

Table D.424. (Continued)

Lithic Material	
171	Argillite flakes
63	Basalt flakes
24	Chalcedony flakes
95	Chert flakes
1	Obsidian flake
33	Quartzite flakes
6	Rhyolite flakes
1	Pebble
1	Rock fragment
ca. 32	Flakes (uncollected)
ca. 427	
Faunal Material	
3	Bone fragments

Table D.425.

Artifact Summary, HEA 175 Locus B

Lithic Material	
3	Basalt flakes (uncollected)

Table D.426.

Faunal Material by Stratigraphic Unit, HEA 175 Locus A

Unit		Description
2, 3, 4 Sand units (upland)	1	Distal metapodial fragment, burned, probable caribou (Rangifer tarandus)
	1	Unidentifiable bone fragment, unburned, mammal
	1	Unidentifiable bone fragment, burned, mammal

Table D.427.

Artifact Summary by Stratigraphic Unit, HEA 175 Locus A

Unit		Description
Surface (upland and lowland)	35	Argillite flakes
	6	Basalt flakes
	6	Chalcedony flakes
	13	Chert flakes
	1	Quartzite flake
	1	Rhyolite flake
	1	Chert modified flake (UA81-200-2)
	1	Argillite blade fragment (UA80-253-1)
	1	Quartzite modified flake (UA81-200-370)
	1	Chert blade (UA81-200-8)
	3	Chert bifaces (UA80-253-2; UA81-200-372, 373)
	1	Rhyolite biface fragment (UA81-200-23)
	1	Basalt notched point (UA80-200-1)
	2	Chert flake cores (UA81-200-368, 371)
	1	Pebble
	1	Rock fragment
	ca. 32	Flakes (uncollected)
1a Organic mat (upland and lowland)	47	Argillite flakes
	3	Chert flakes
	1	Chert modified flake (UA81-200-364)
	1	Basalt blade (UA81-200-128)

Table D.427. (Continued)

Unit		Description
1a/2, 3, 4 Contact between organic mat and sand units (upland)	1	Basalt flake
	2	Chert flakes
	1	Quartzite flake
2, 3, 4 Sand units (upland)	10	Argillite flakes
	15	Basalt flakes
	14	Chalcedony flakes
	37	Chert flakes
	1	Obsidian flake
	14	Quartzite flakes
	2	Rhyolite flakes
	1	Chert modified flake (UA81-200-313)
	1	Chert blade fragment (UA81-200-332)
	1	Argillite biface fragment (UA81-200-340)
	1	Argillite stemmed point (UA81-200-348)
2, 3, Sand units (lowland)	78	Argillite flakes
	36	Basalt flakes
	3	Chalcedony flakes
	25	Chert flakes
	16	Quartzite flakes
	2	Rhyolite flakes
	1	Chert blade (UA81-200-43)
	1	Chalcedony biface (UA81-200-305)
	2	Argillite flake cores (UA81-200-280, 281)

Table D.427. (Continued)

Unit		Description
4/5	3	Basalt flakes
Contact between	4	Chert flakes
sand and glacial	1	Quartzite flake
drift (upland)	1	Rhyolite flake
5	1	Argillite flake
Glacial drift	2	Basalt flakes
(upland)	1	Chalcedony flake
	11	Chert flakes

Table D.428.

Artifact Summary by Stratigraphic Unit, HEA 175 Locus B

Unit		Description
Surface	3	Basalt flakes (uncollected)

AHRS Number HEA 176; Accession Numbers UA80-254, UA81-202

Area:	East Shore Deadman Lake
Site Map:	Figure D.345
Site Location Map:	Figure E.67
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site consists of two loci (A and B) located at an elevation of ca. 968 m asl (3175 feet) on two low kames at the eastern end of Deadman Lake, southeast of where Deadman Creek enters the lake. Located in kettle and kame topography, the site is in a glacially scoured region of poorly drained muskeg and tundra lowlands dominated by steep valley walls of exposed bedrock and talus slopes. The site lies between two large lakes at the intersection of two major glacial valleys.

Locus A: This locus is situated on top of a 10 m high rounded kame on the easternmost margin of Deadman Lake. This east-west oriented, 30 m long kame forms a discrete knoll and is the highest point of topographic relief in the immediate vicinity of the lake inlet of Deadman Creek. Deadman Creek lies south of locus A and slightly more distant to the east where it follows a southerly course before turning sharply to the northwest and entering Deadman Lake.

Locus B: Locus B is approximately 200 m to the northeast of locus A, at the top of a 150 m long east-west oriented knoll at approximately the same elevation as locus A. The intervening terrain is low and marshy with areas of standing water. Both loci are located at or near the highest elevations of their respective knolls, where erratic boulders are present and wind deflation has created blowouts.

The view from both loci is panoramic encompassing the eastern end of Deadman Lake, the Deadman Creek inlet, and the surrounding low relief terrain for 2-3 km in all directions except to the southwest where

higher terrain limits the view to less than 1 km. Big Lake lies to the southeast and is in view from both loci. The site is above the present tree line with vegetation consisting of tundra and low shrubs including crowberry, lowbush cranberry, and dwarf birch. The ground surface is hummocky with numerous drift exposures. Surrounding terrain is very poorly drained with numerous kettle ponds between low ridges. Alder and willow, along with higher dwarf birch, are present along the margins of Deadman Creek.

Testing:

The site consists of surface and subsurface lithic material at locus A and surface material at locus B. One basalt, 1 argillite and 3 chert flakes were surface collected at locus A during the intial survey. Twenty-four additional flakes were observed on the surface at locus A and three flakes were noted on the surface at locus B during more intensive survey.

Locus A: This locus, covering an area of approximately 15 x (north-south) x 20 m (east-west), consists of two principal clusters of surface flakes exposed in blowouts (Figure D.345; Table D.429). Cluster 1, located 15 m northwest of the locus A datum contained 11 flakes, three of which were collected. Cluster 2, located 11 m northeast of the locus A datum contained 13 flakes. A white chert flake and three gray chert flakes were surface collected from cluster 2. An isolated gray argillite flake was surface collected from the backdirt of a rodent burrow 16.9 m southwest (255 degrees) of the locus A datum. A single fragment of possible thermally altered rock was also observed in the backdirt of this burrow but was not collected.

Test pit 1 was excavated 16 m southwest of the locus A datum in an undisturbed area north of the rodent burrow. Test pit 1 produced a single red chert flake 18 cmbs from within a gray tephra (possible Oshetna) lying below an oxidized tephra and directly over glacial drift. Some small flecks of charcoal were present associated with a darker gray tephra within this unit. Not enough charcoal was present for a

radiometric date. Estimated size for locus A based on the distribution of artifacts is 300 square meters (Table D.2).

Locus B: Locus B is located 200 m northeast (20 degrees) from the locus A datum and consists of isolated surface flakes exposed in blowouts. All observed artifacts at locus B were surface collected. These consisted of a clear chalcedony flake and two basalt flakes. No subsurface testing was done at locus B. Intensive surface survey of the deflated areas at locus B failed to produce any additional artifacts. Estimated size for locus B based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.429.

Artifact Summary, HEA 176

Provenience		Description
Lithic Material		
Surface:		
Locus A	2	Argillite flakes
	1	Basalt flake
	3	Chert flakes
	1	Thermally altered rock (uncollected)
Cluster 1	1	Argillite flake
	1	Basalt flake
	1	Chert flake
	8	Flakes (uncollected)
Cluster 2	4	Chert flakes
	9	Flakes (uncollected)
Locus B	2	Basalt flakes
	1	Chalcedony flake
Subsurface:		
Locus A		
Test pit 1	1	Chert flake

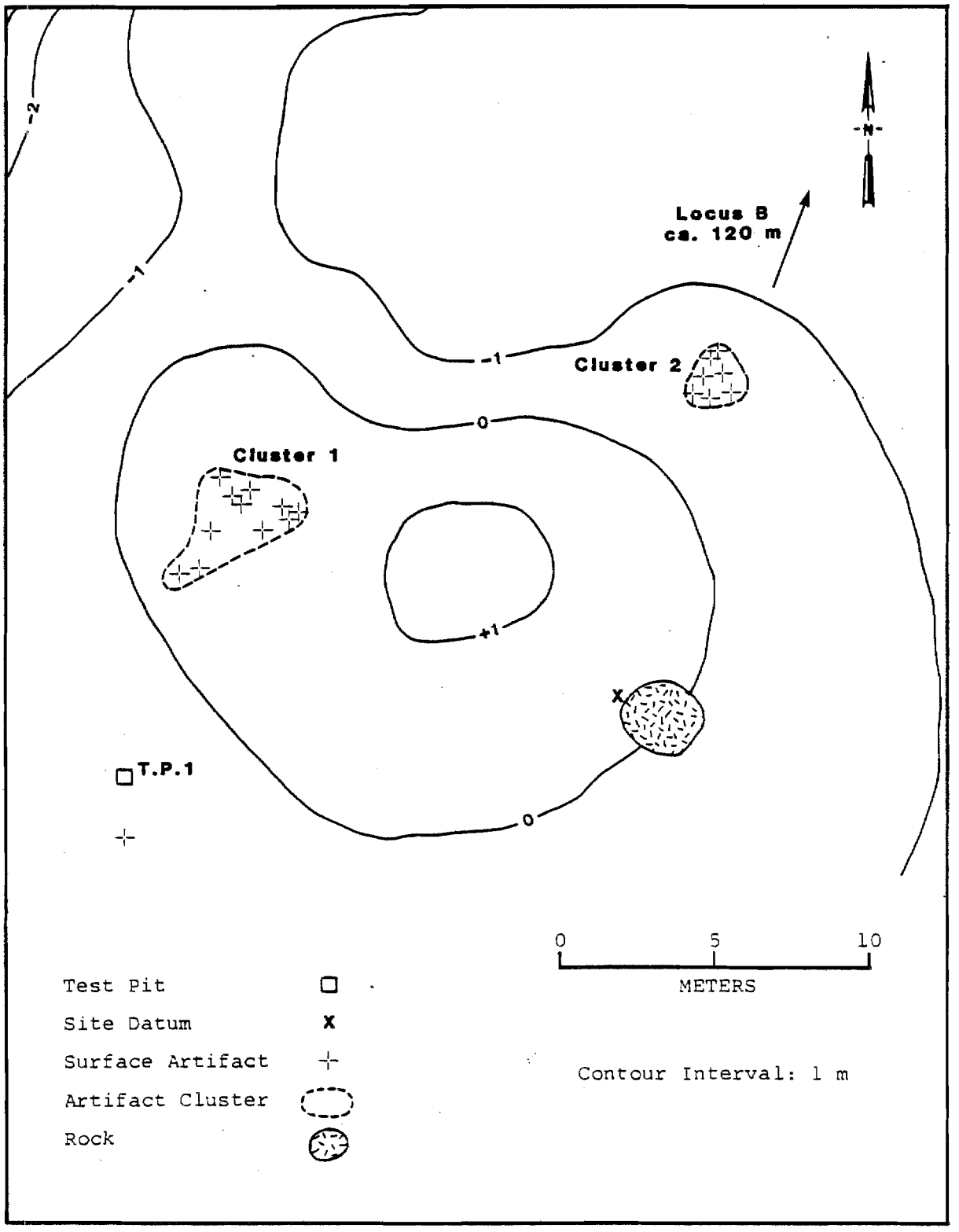


Figure D.345. Site Map, HEA 176

AHRS Number HEA 177; Accession Number UA81-210

Area:	East of Butte Lake
Site Map:	Locus A, Figure D.346
	Locus B, Figure D.347
	Locus C, Figure D.348
Site Location Map:	Figure E.69
USGS Map:	Healy A-2, Figure E.12
Site Location:	Appendix F

Setting:

The site consists of three loci (A, B, and C) on the east side of a northeast-southwest trending lateral moraine east of the Butte Creek outlet from Butte Lake. The 300 m long moraine stands at approximately 1250 m asl (4100 feet), about 30 m above the surrounding terrain containing numerous small kettle lakes, swales, and moraines. To the east, a series of small linear lakes run parallel to the moraine. The top of the moraine offers an unobstructed panoramic view of the large lake plain to the north, Butte Lake to the west, and upland hills to the south and southwest. The entire region is covered with low shrub and lichen tundra, and is above timberline. Gravel exposures are numerous on the moraine.

Testing:

The three loci are approximately 1-3 m below the crest of the moraine, and span a length of about 150 m, immediately southwest of the highest point on the moraine (Figures D.346, D.347, and D.348). Locus A, the central locus, lies in a low area 2 m below a secondary high point on the southwest segment of the moraine. It contained two chert flakes (one of which was collected) and a chert flake core (UA81-210-29; Figure D.399b) in an area of approximately 4 m radius from site datum. Test pit 1 contained one chert rock fragment 3 cmbs in the thin organic mat. Locus B, 115 m northwest of locus A, is downslope from the crest in a shallow saddle. It consists of a chert flake concentration (scatter 1)

5 m in diameter containing about 40 unmodified chert flakes. Five chert flakes lie outside scatter 1 within a radius of 20 m (Table D.430). A chert core fragment (UA81-210-27) was 23 m southeast of the locus B datum. Twenty-four chert flakes and 1 burin spall (UA81-210-30; Figure D.399a) were surface collected from Locus B. Test pit 2, located east of scatter 1, contained no artifacts. Locus C lies 43 m southwest of locus A, on a gradual slope 1 m below the crest. It contained 2 tabular chert flake fragments, one of which was collected. No subsurface testing was conducted at locus C.

Estimated size of locus A based on the distribution of artifacts is 4 square meters. Estimated size of locus B based on the distribution of artifacts is 5 square meters. Estimated size of locus C based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.430.

Artifact Summary, HEA 177

Provenience		Description
Lithic Material		
Surface:		
Locus A	1	Chert flake
	1	Chert flake core (UA81-210-29)
	1	Chert flake (uncollected)
	1	Rock fragment
Locus B	24	Chert flakes
	1	Chert burin spall (UA81-210-30)
	1	Chert flake core (UA81-210-27)
	21	Chert flakes (uncollected)
Locus C	1	Chert flake
	1	Chert flake (uncollected)
Subsurface:		
Locus A		
Test Pit 1	1	Chert rock fragment

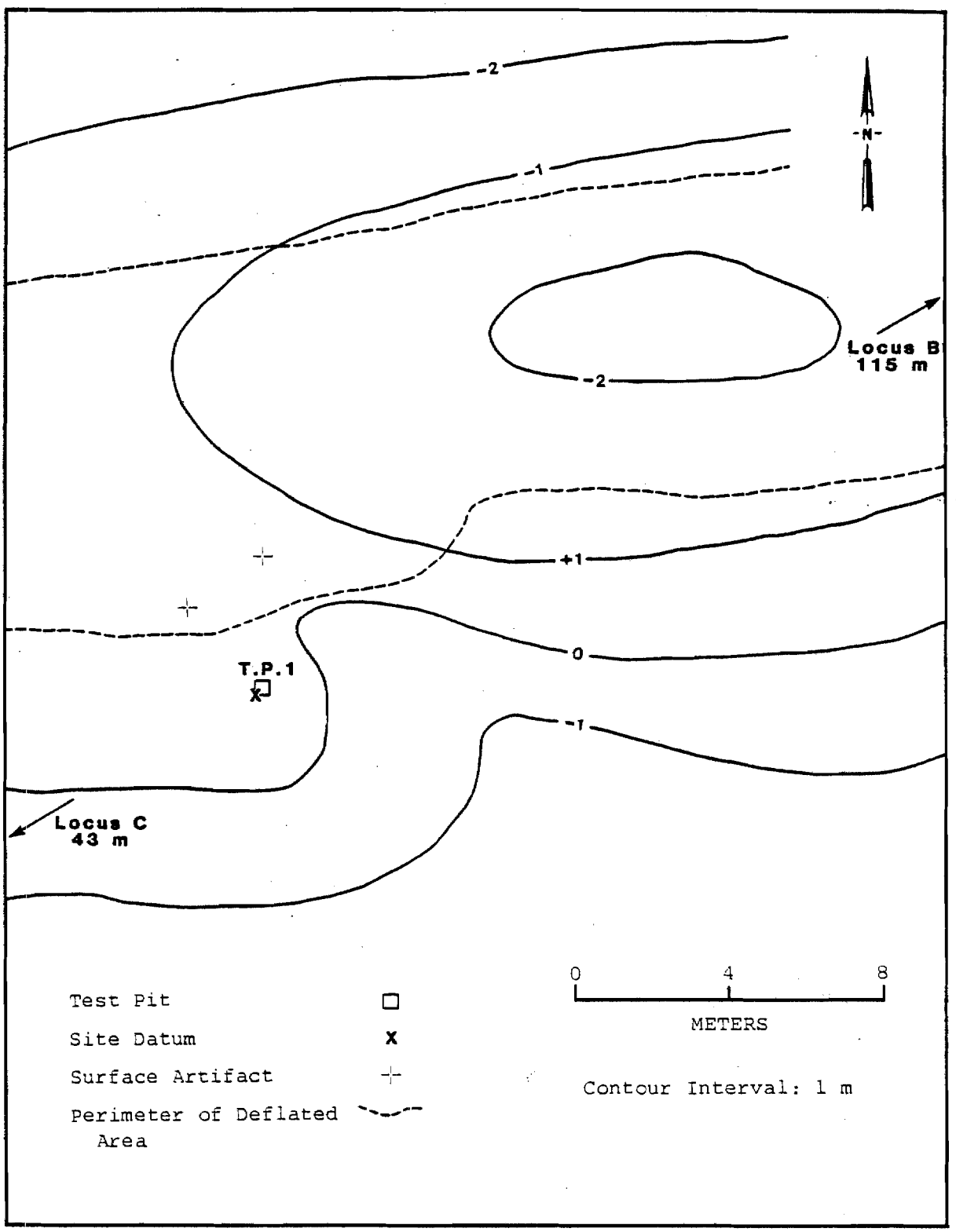


Figure D.346. Site Map, HEA 177 Locus A

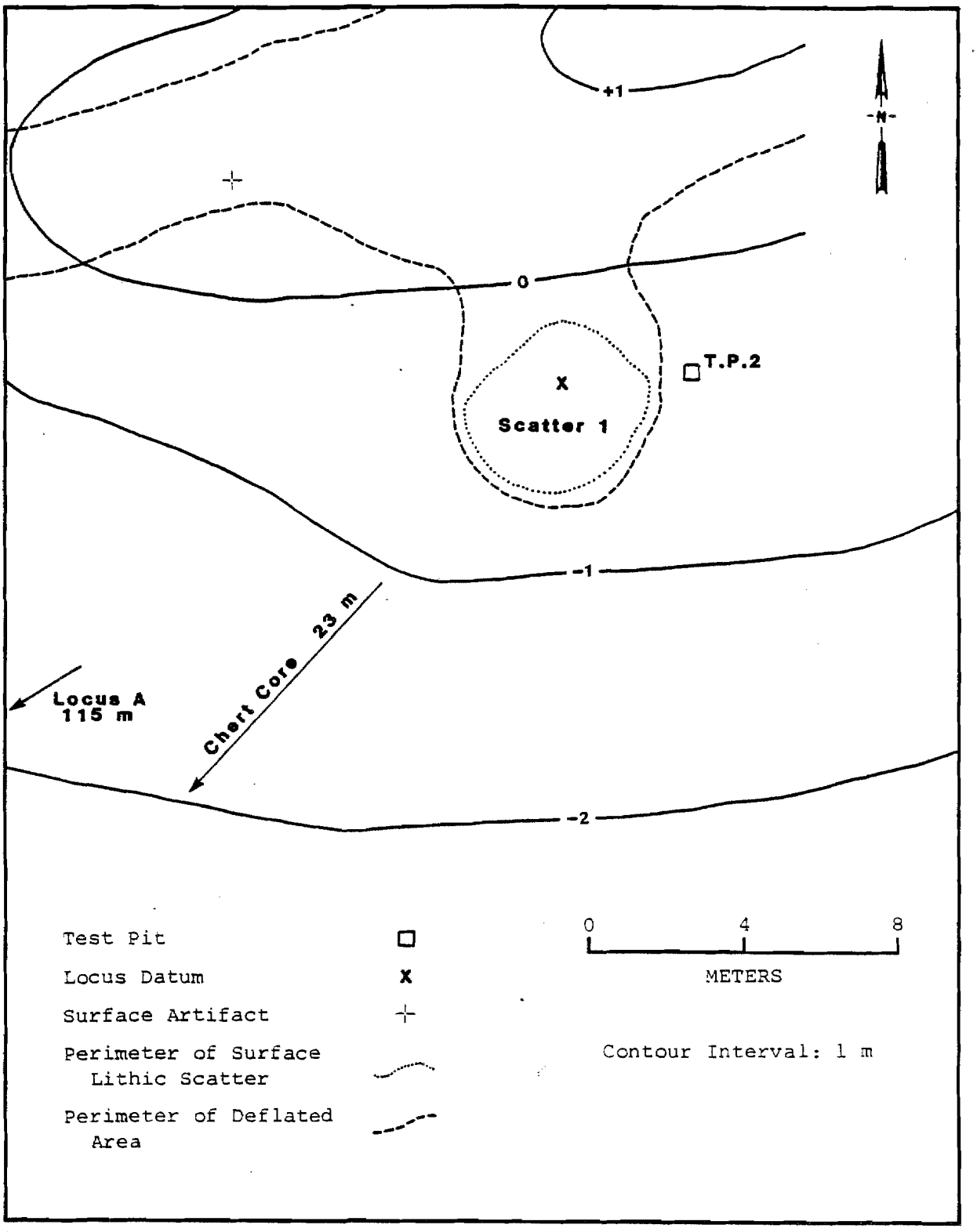


Figure D.347. Site Map, HEA 177 Locus B

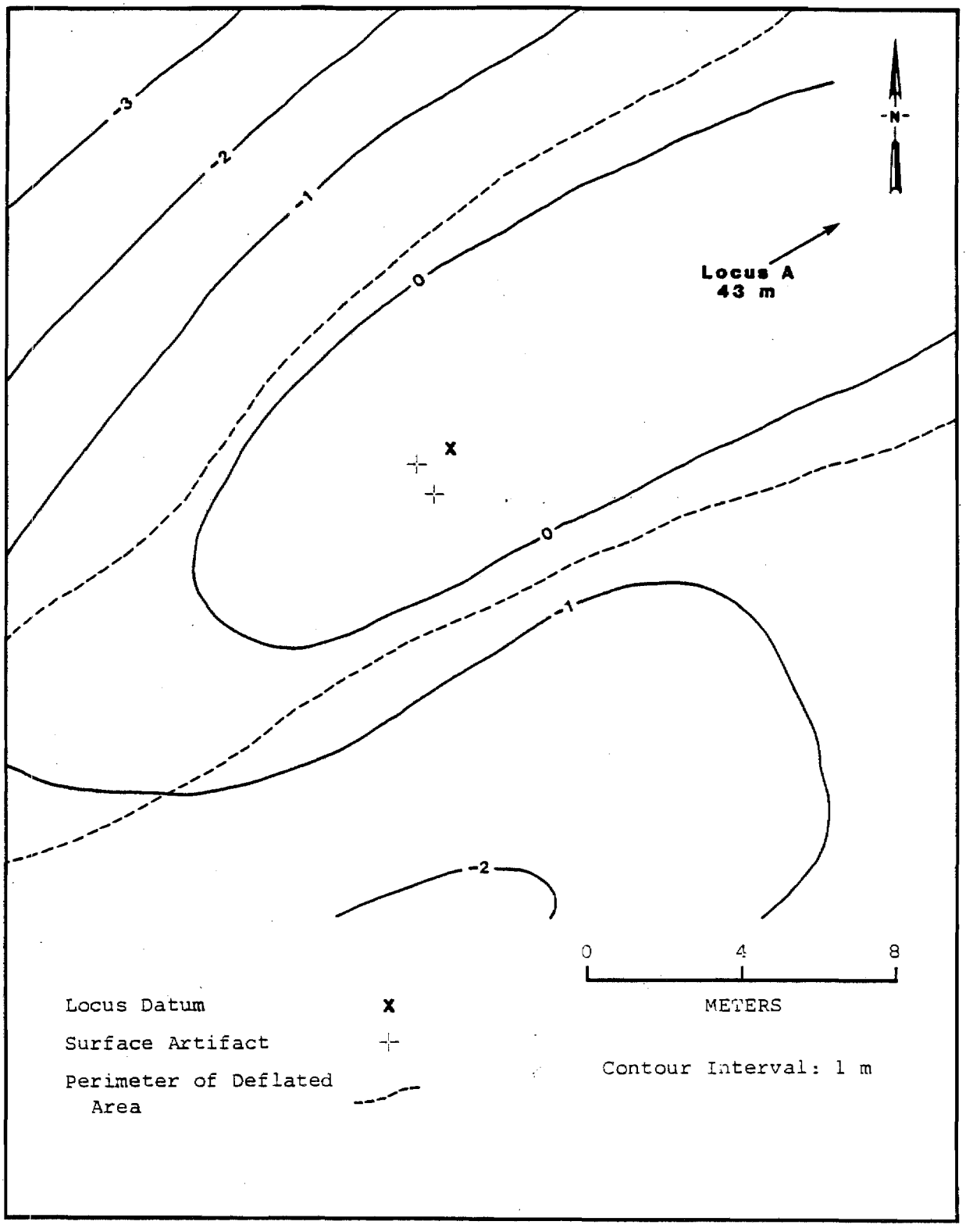


Figure D.348. Site Map, HEA 177 Locus C

AHRS Number HEA 178; Accession Number UA81-211

Area:	Northeast of Butte Lake
Site Map:	Figure D.349
Site Location Map:	Figure E.70
USGS Map:	Healy A-2, Figure E.12
Site Location:	Appendix F

Setting:

The site is located northeast of the north end of Butte Lake. It is situated on an east-west oriented moraine at ca. 1035 m asl (3400 feet), the northern edge of a ca. 2 ha kettle lake. This lake is the northernmost of a series of five such lakes draining north from one to another. An outlet creek flows northeast from the lake adjacent to the site. The moraine is approximately 300 m long and includes three pronounced knolls.

Locus A: This locus is situated at the eastern end of the center knoll, on the top and the southern slope. A gravel blowout approximately 10 x 10 m on the highest flat area on the moraine contains scatter 1 at its southwestern corner. Scatter 2 is located approximately 5 m southwest of scatter 1, comprising a deflated area approximately 6 x 9 m near the top of the south slope of the moraine. The view is panoramic from scatter 1, and predominately to the south from scatter 2, which is also somewhat protected from strong northerly winds. The gravel blowouts are surrounded by dwarf birch, willow, lowbush cranberry, bearberry, and highbush cranberry. The site is above tree line. The crest of the moraine west of locus A is unvegetated and deflated, with a gravel surface.

Locus B: The locus is on the westernmost knoll of the moraine, slightly higher and approximately 100 m west of locus A. The view from this knoll, about 5 m in diameter, is panoramic. Locus B consists of a flake scatter on the southern, eastern, and northeastern slopes of the knoll.

The scatter is within a deflated blowout surrounded by patches of dwarf birch and willow.

Testing:

Locus A: Argillite flakes were found on the surface at scatter 1, four of which were collected (Table D.431). At scatter 2, several small quartzite boulders and hundreds of slivers, fragments, and flakes cover a deflated area and are also found at its vegetated margins. Twenty-three flakes were collected. A 50 x 50 cm test pit (test pit 1) was excavated adjacent to scatter 1 (Figure D.349), but yielded no artifacts. The stratigraphy, consisting of silt and/or tephra with large cobbles throughout, was generally 15 cm thick over a morainal deposit of gray-brown unsorted sandy gravel. A black chert core (UA81-211-29; Figure D.399c) was located 75 m from locus A site datum . The nature of the quartzite lithic scatter with proximity to boulders of parent material suggests that this is a quarry site.

Locus B: A 9 cm long basalt modified (retouched) flake (UA81-211-28) was collected from the surface (scatter 3). In addition, the surface scatter consists of 4 basalt flakes, 2 quartzite flakes, and 1 argillite blade fragment all of which were uncollected (Table D.431). This material is located on the southern, eastern, and northeastern slopes of the knoll between 4 and 10 m from the top.

Estimated site size based on the distribution of artifacts is 18 square meters (Table D.2).

Table D.431.

Artifact Summary, HEA 178

Provenience		Description
Lithic Material		
Surface:		
Locus A		
Scatter 1	4	Argillite flakes
	5	Argillite flakes (uncollected)
Scatter 2	23	Quartzite flakes
Isolated Find	1	Chert flake core (UA81-221-29)
Locus B		
Scatter 3	1	Basalt modified flake (UA81-211-28)
	4	Basalt flakes (uncollected)
	2	Quartzite flakes (uncollected)
	1	Argillite blade fragment (uncollected)

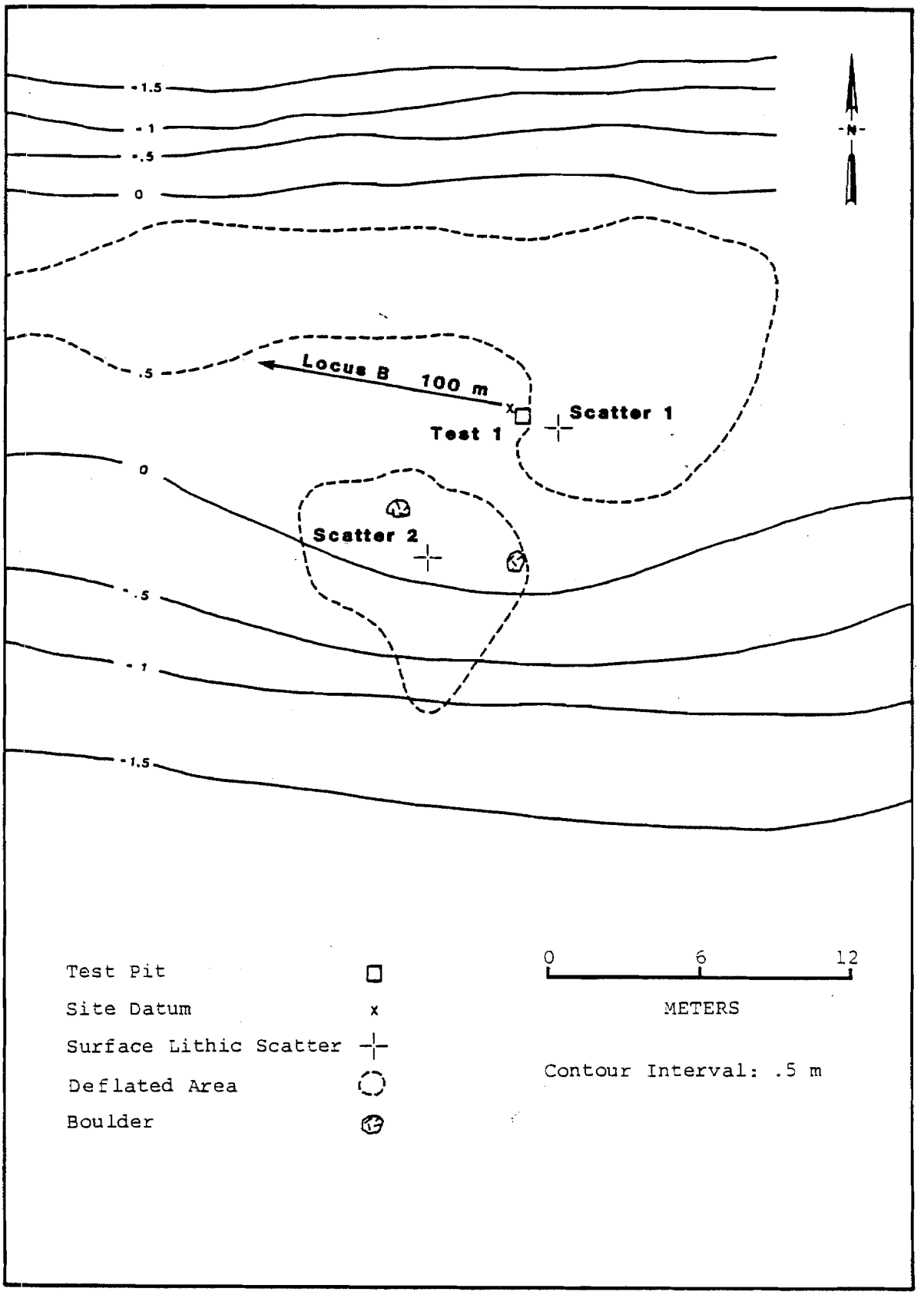


Figure D.349. Site Map, HEA 178, Locus A

AHRS Number HEA 179; Accession Number UA81-219

Area:	Northeast of Butte Lake
Site Map:	Figure D.350
Site Location Map:	Figure E.70
USGS Map:	Healy A-2, Figure E.12
Site Location:	Appendix F

Setting:

The site lies north of the Denali Highway, southeast of the intersection of Canyon Creek with the highway. It is situated on the lower terrace of a northwest-southeast oriented moraine which is one of several moraines in the vicinity. This terrace is approximately 40 x 20 m and is about 30 m above the valley floor to the north. There is a small, ice-stagnation lake (3 ha) southwest of the site which is presently the closest water source to the site. The immediate site environment has been recently altered by the construction of a pull-off or rest area, which borders the west side of the lake and the western edge of the terrace on which the site is located. There is modern refuse and camp site disturbance associated with this construction.

The view from the site is unobstructed to the northwest, north, and east, overlooking the extensive southern drainage of the Alaska Range, including Mt. Deborah and Mt. Hess to the north-northeast of the site. Located at about 914 m asl (3000 feet), the site lies just above tree line, with the upper extent of the spruce forest present on the valley floor just below the site. Site specific vegetation is composed of high, mixed shrub growth with thin soil development on the terrace.

Testing:

The site consists of one black basalt flake found on the surface in a blowout exposure in the approximate center of the terrace. There is modern disturbance within 3 meters of the flake in the form of a campfire pit with rusted cans, wire, and paper. Test pit 1, excavated 10 cm south of the flake, did not reveal any subsurface cultural material (Table D.432). The humus layer and soil/sediment deposition on the site terrace are thin, and glacial drift was encountered in test pit 1 less than 10 cmbs. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D 432.

Artifact Summary, HEA 179

Provenience		Description
Lithic Material		
Surface:	1	Basalt flake

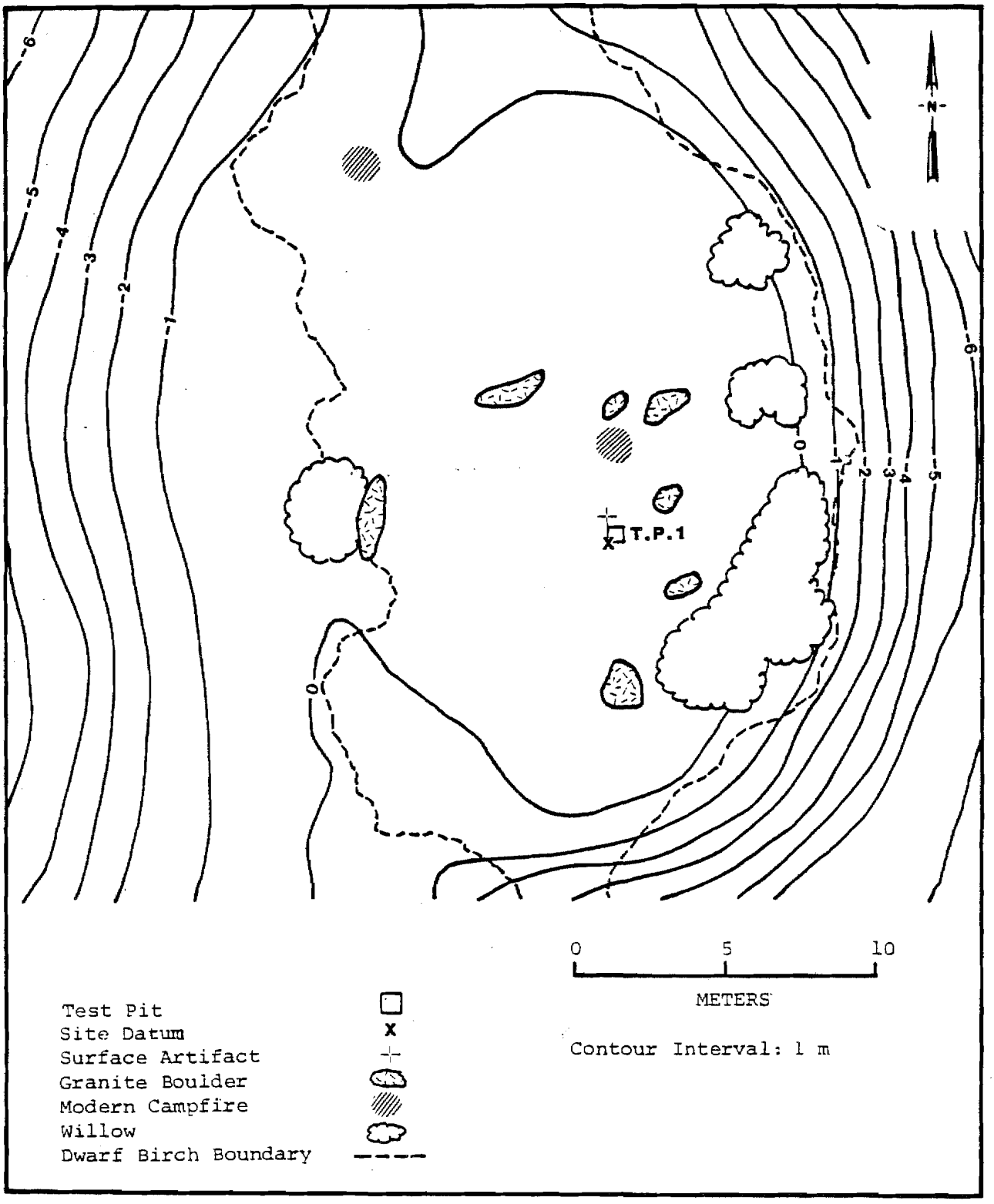


Figure D.350. Site Map, HEA 179

AHRS Number HEA 180; Accession Number UA81-257

Area:	Southwest of Deadman Lake Outlet
Site Map:	Figure D.351
Site Location Map:	Figure E.58
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site is situated on top of a knoll at ca. 975 m asl (3200 feet), southwest of the outlet of Deadman Lake and north of the confluence of Deadman Creek with a northern tributary. The knoll is approximately 45 m above and to the west of the tributary of Deadman Creek as it flows southward. A low saddle and a small knoll connected with it extend from the southwest slope of the knoll containing the site. The knoll on which the site was found is the dominant landform for the region between Deadman Creek and its tributary. The panoramic view from the fairly level surface of the 50 (north-south) x 75 m (east-west) knoll includes the rolling terrain which borders the tributary, a large body of water to the north into which the meandering tributary flows, and the high, 1524 m asl (5000 feet) mountains which comprise the valley walls of the tributary. The southwest portion of Deadman Lake is visible to the east. The southwestward course of Deadman Creek is obstructed from view by the series of knolls to the south which are 30-40 m lower in elevation. Four other sites are visible from the knoll: HEA 181 to north at the outlet of broad body of water in the course of the tributary, TLM 098 and TLM 099 on the knolls overlooking the confluence of the tributary with Deadman Creek, and TLM 117 on the west side of the tributary stream across from TLM 098. Vegetation in the region consists of mosses, lichen, several species of berries, and shrub birch. On the surface of the site, exposed angular pebbles predominate with sporadic occurrences of lichen, moss, and some clumps of grass. The higher portions of the surrounding terrain contain exposed surfaces which enhance the lookout potential of the region as well as aid in the finding of surface lithic scatters.

Testing:

HEA 180 consists of two surface lithic scatters on the southwest and northern portions of the knolltop (Figure D.351). Scatter 1 is a diffuse collection of 14 flakes (seven of which were uncollected) encompassing an area of 33 (north-south) x 17 m (east-west) on the southwest edge of the knoll overlooking the tributary stream. Scatter 2 on the north side of the knoll is smaller, 10 (north-south) x 13 m (east-west), in extent but contains a more concentrated assemblage of over 50 flakes and tools (Table D.433). Scatter 2 is located approximately 40 m northeast of scatter 1. Test pit 1 near scatter 2 datum revealed only a thin organic mat of 6 cm overlying sand and rock. Two gray chert flakes were found in the organic mat during excavation of test pit 1. The site is notable for the variety of raw materials present consisting of argillite, basalt, chert, obsidian, quartz crystal, and rhyolite. Artifacts include blades of chalcedony (UA81-257-13; Figure D.399d) and chert (UA81-257-28 and 30; Figure D.399e,g), a brown chalcedony burin spall (UA81-257-31; Figure D.399f), five chert modified flakes (UA81-257-11, 17, 18, 19, 23; Figure D.399h,j) and a quartz modified flake (UA81-257-10; Figure D.399i). Seven surface flakes were left in scatter 1 and 27 in scatter 2. Estimated site size based on the distribution of artifacts is 1,003 square meters (Table D.2).

Table D.433.

Artifact Summary, HEA 180

Provenience		Description
Lithic Material		
Surface:		
Scatter 1	2	Argillite flakes
	1	Basalt flake
	1	Chalcedony flake
	3	Chert flakes
	7	Flakes (uncollected)
Scatter 2	3	Argillite flakes
	2	Chalcedony flakes
	7	Chert flakes
	1	Rhyolite flake
	1	Argillite modified flake (UA81-257-22)
	1	Basalt modified flake (UA81-257-32)
	5	Chert modified flakes (UA81-257-11, 17, 18, 19, 23)
	1	Quartz modified flake (UA81-257-10)
	1	Chalcedony blade (UA81-257-13)
	2	Chert blades (UA81-257-28, 30)
	1	Chalcedony burin spall (UA81-257-31)
	27	Flakes (uncollected)

Table D.433. (Contincued)

Provenience		Description
Subsurface:		
Scatter 2		
Test Pit 1	2	Chert flakes

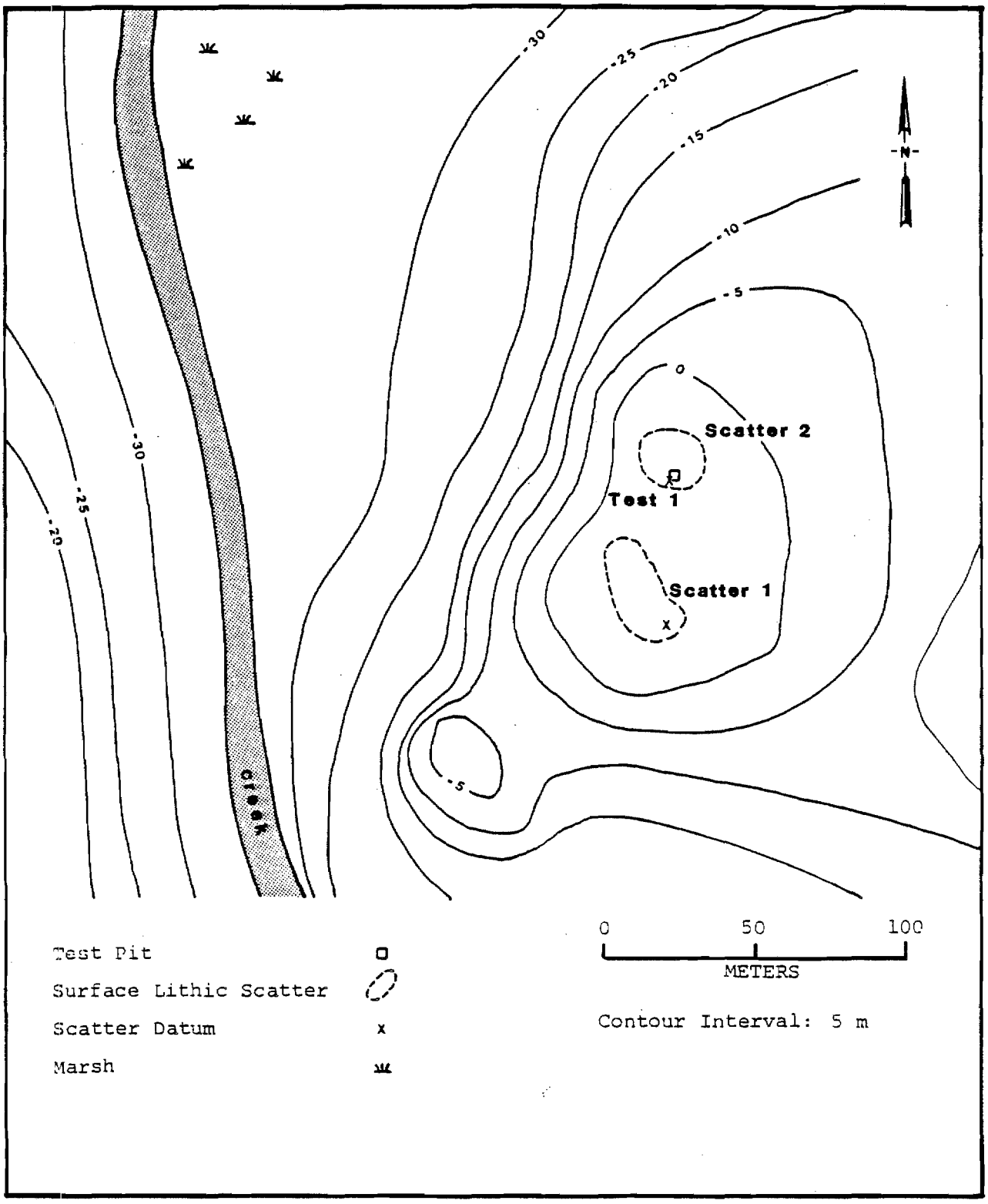


Figure D.351. Site Map, HEA 180

AHRS Number HEA 181; Accession Number UA81-258

Area:	Northwest of Deadman Lake Outlet
Site Map:	Figure D.352
Site Location Map:	Figure E.71
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site is located northwest of Deadman Lake, at the outlet of a 25 ha lake which is at the southern end of a glacial valley. The site is situated on the western end of a beaded esker bordered on the north, west, and south by the outlet creek. The section of the esker on which the site occurs rises ca. 2 m above the site to the east, and includes a lower ledge west of the site as well. The site is contained within a 20 x 3 m area, approximately 8 m above the surrounding high brush plain, at ca. 937 m asl (altimeter: 3074 feet). Visibility is most extensive to the north, encompassing the small lake and the valley walls. The surrounding terrain is comprised of a series of morainal hills, the closest of which are visible from the site. The valley wall to the west is in view as a uniformly steep slope. Vegetation at the site consists of lowbush cranberry, crowberry, blueberry, bearberry, mosses, lichens, and dwarf birch. Large boulders and gravel exposures interrupt the surface vegetation around the site. High brush, including birch, willow, and alder, and muskeg characterize the surrounding vegetation. The site is above timberline.

Testing:

An intensive surface survey was conducted on the wind-deflated portions of the esker. A scatter of basalt waste flakes within a 6 x 6 m gravel exposure on the relatively flat surface of the esker was encountered. Seven flakes were observed, six of which were collected (Table D.434). No further surface material was noted. Test pit 1, placed 3 m west of

the scatter, yielded one chert flake at 15 cmbs in a coarse red-brown silt. This may constitute a tephra horizon, although the matrix appeared to be highly mixed with sand and gravel. No charcoal was present in the test. Three survey shovel tests were excavated within 30 m east of the site, none of which yielded cultural material. A grid shovel testing program was implemented to locate subsurface material and to assist in determining the areal extent of HEA 181. Thirty-five grid shovel tests were excavated. Only one of these grid shovel tests yielded subsurface artifacts. Shovel test 1 contained one basalt flake in the oxidized Watana tephra unit. Observed site size based on the distribution of artifacts is 34 square meters (Table D.2).

Table D.434.

Artifact Summary, HEA 181

Provenience		Description
Lithic Material		
Surface:	6	Basalt flakes
	1	Basalt flake (uncollected)
Subsurface:		
Test pit 1	1	Chert flake
Shovel test 1	1	Basalt flake

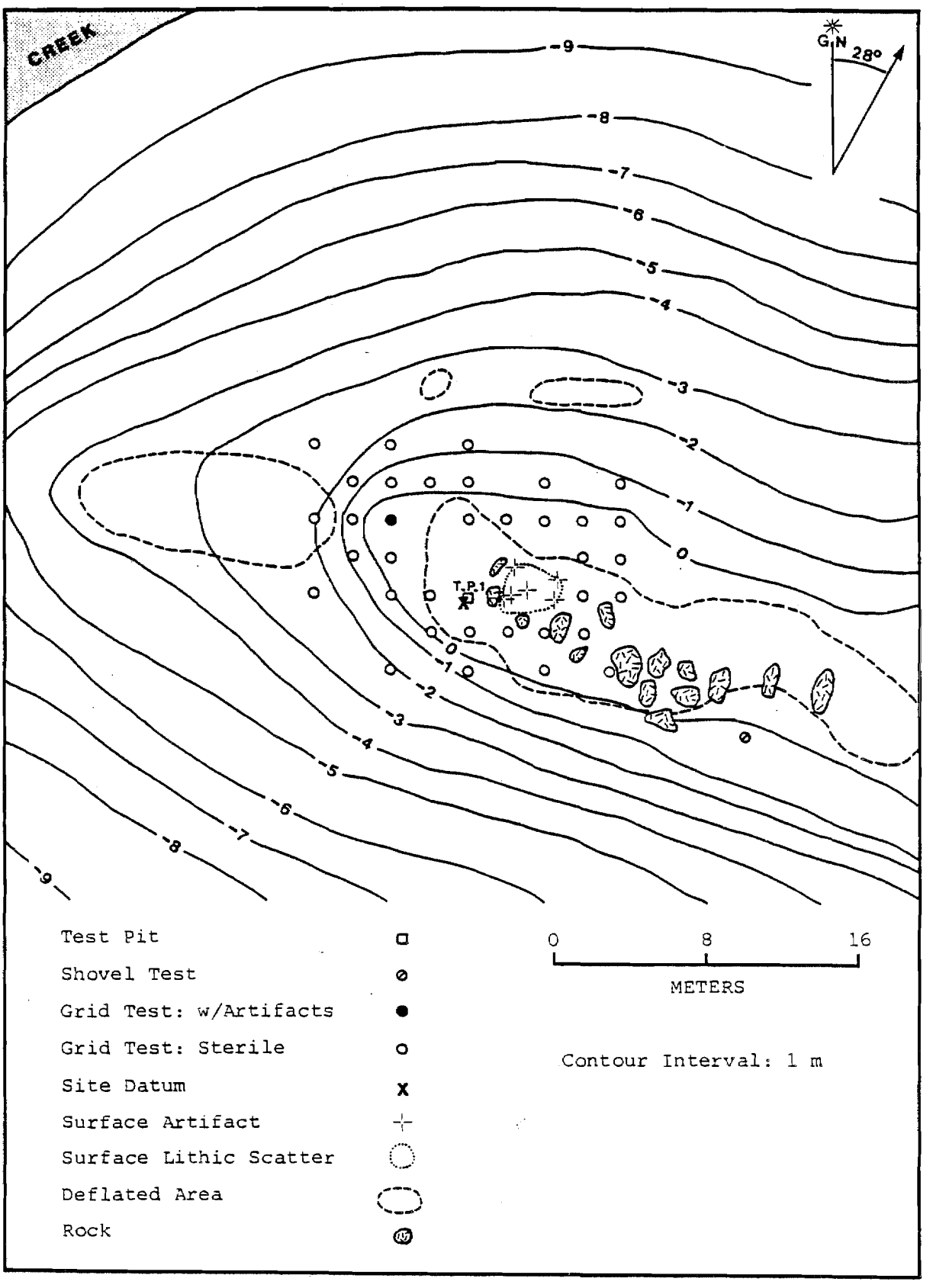


Figure D.352. Site Map, HEA 181

AHRS Number HEA 182; Accession Number UA81-259

Area:	Northwest of Deadman Lake Outlet
Site Map:	Figure D.353
Site Location Map:	Figure E.71
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site is located northwest of Deadman Lake at 947 m asl (altimeter: 3106 feet), on the top of a glacially formed knoll near a wide, meandering, south-flowing creek. This creek drains a glacial valley west of Deadman Mountain. A small tributary to the creek drains the mountains to the east, and flows past the site to the north and west. HEA 182 is situated on a gravel surface which extends north-south along the western edge of the knoll. Slopes to the south, west, and north of the site descend uniformly about 20 degrees to the marshy plain approximately 8 m below. To the east the terrain ascends gradually to the steeper slopes of Deadman and other mountains. Visibility is good in all directions, although it is best toward the south. The knoll constitutes the highest relief on the valley floor, at least within the immediate area. In addition to the gravel exposed by deflation of the site, the surface of the knoll is covered with lichens, mosses, blueberry, Labrador tea, lowbush cranberry, bearberry, crowberry, and dwarf birch, and interrupted by partially exposed boulders. In the marshy plain surrounding the site and along drainage channels the vegetation is high brush, comprising dwarf birch, willow, and alder. The site location is above timberline.

Testing:

The site constitutes a surface lithic scatter on the gravel deflated area at the west end of the knoll (Figure D.353). A rhyolite side-notched point fragment (UA81-259-1; Figure D.399k), two basalt flakes, and a quartz biface fragment (UA81-259-4) were collected from

the surface (Table D.435). They were located within 28 m (north-south) of each other. No further surface material was observed. Test pit 1 was dug approximately midway along the exposure, on a flat, vegetated spot of the knoll. No cultural material was recovered.

A grid shovel testing program was undertaken to assist in determining site size and the distribution of cultural materials, 32 grid shovel tests were excavated. Sixteen of these were at the north end of the site where several surface artifacts were observed, and 16 were placed at the south end of the site for the same reason. No artifacts were recovered in these shovel tests, nor observed on the surface when the shovel testing was being done. Observed site size based on the distribution of artifacts is 16 square meters (Table D.2).

Table D.435.

Artifact Summary, HEA 182

Provenience		Description
Lithic Material		
Surface:	2	Basalt flakes
	1	Quartz biface fragment (UA81-259-4)
	1	Rhyolite notched point fragment (UA81-259-1)

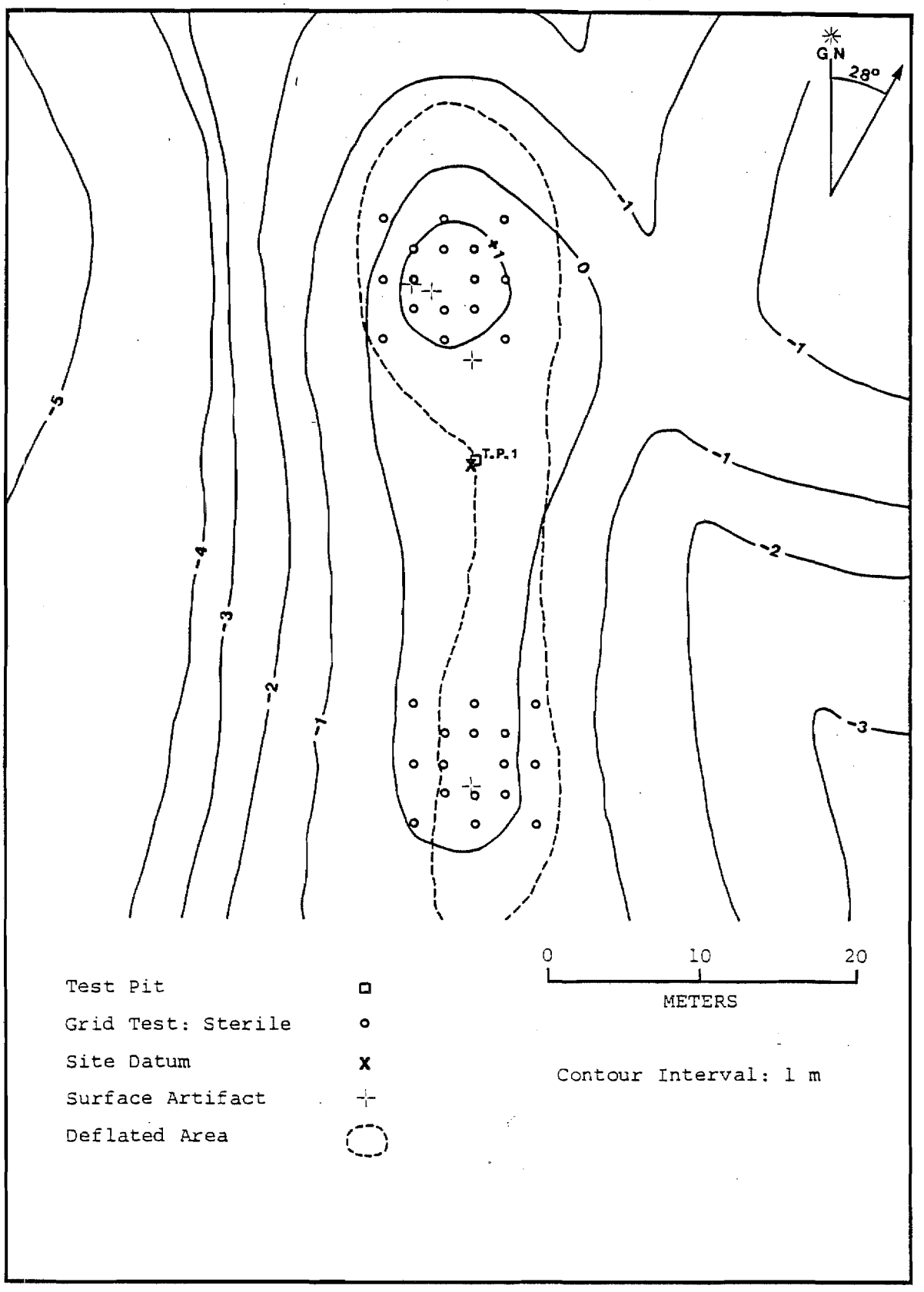


Figure D.353. Site Map, HEA 182

AHRS Number HEA 183; Accession Number UA81-281

Area:	West of Deadman Lake Outlet
Site Map:	Figure D.354
Site Location Map:	Figure E.58
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site, located near the outlet stream which drains Deadman Lake, lies on a small, 15 x 20 m, low knoll at an elevation of ca. 1067 m asl (3500 feet). The lower slopes of Deadman Mountain ascend north of the deflated portion of the knoll which contains the site. To the west a small lake is present at the base of a north-south ridge system which reaches an elevation of 1076 m asl (3530 feet). Two smaller lakes are located on top of this ridge system. The site itself is approximately 30 m above Deadman Lake in an area of undulating terrain which extends from the base of Deadman Mountain to the unnamed creek which drains into Deadman Creek from the west. The hills to the east of the site rise to an elevation of 1057 m asl (3467 feet). Due to its elevation above the lake, most of Deadman Lake, as well as the outlet stream, is clearly visible from the site. Also in view are parts of the valley to the north which forms a pass between Monahan Flats (north of the Denali Highway) and the Susitna River valley and the southern portion of that valley towards the Susitna River. Vegetation on the site consists of dwarf birch, berries, lichen, and moss. However, portions of the knoll are deflated, with little or no vegetation present.

Testing:

The only artifact found at the site was one gray chert flake located and collected on the surface (Figure D.354; Table D.436). Due to the rocky terrain, no subsurface tests were placed on the site. Visual survey of the entire windblown area did not produce any additional cultural material. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.436.

Artifact Summary, HEA 183

Provenience		Description
Lithic Material		
Surface:	1	Chert flake

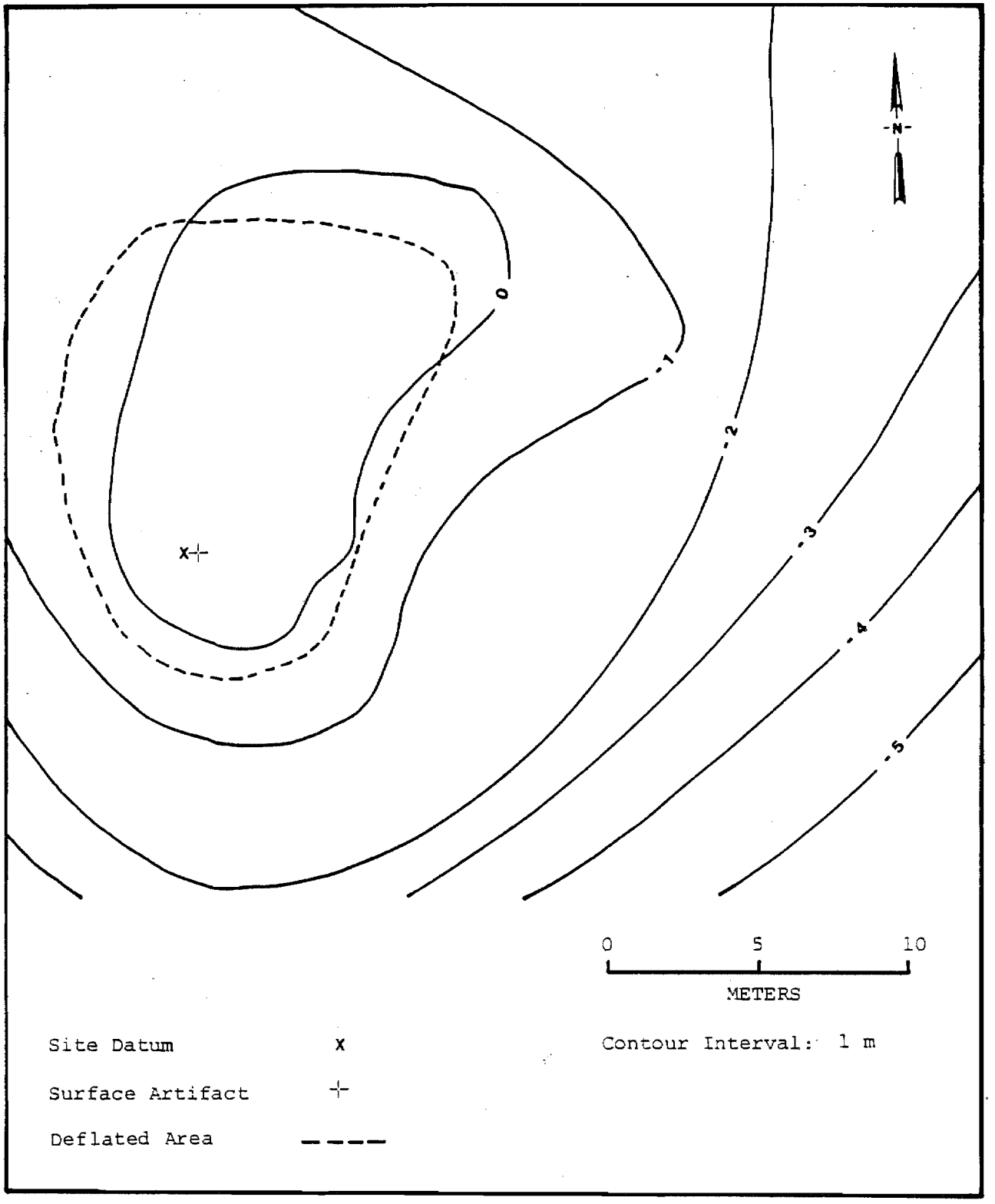


Figure D.354. Site Map, HEA 183

AHRS Number HEA 184; Accession Number UA81-280

Area:	Northwest of Deadman Lake Outlet
Site Map:	Figure D.355
Site Location Map:	Figure E.58
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site is located on the eastern shore of a small lake northwest of the outlet stream which drains Deadman Lake. The blowout on which the site rests measures ca. 30 x 40 m and lies at an elevation of ca. 930 m asl (3100 feet). This large deflated area is situated 2 m higher in elevation than the lake on a well-drained, 2-degree slope. The lake itself is at the base of a north-south trending ridge system which rises steeply to an elevation ca. 1059 m asl (3530 feet). Several areas around the lake are many meters higher in elevation than the site locale. The ridge system appears to be continuous from north of the site at the foothills of Deadman Mountain to the south where the unnamed creek flows into Deadman Creek. Northeast of the site two large lakes, Deadman Lake and Big Lake, are present. East of the site the terrain drops ca. 50 m to Deadman Lake, and its outlet stream. The view from the site includes the small lake to the west, two-thirds of Deadman Lake, and a portion of its outlet stream to the south. Also visible is a portion of the pass to the north which connects Monahan Flats with the Susitna River valley to the south. A portion of a pass to the south is also visible for ca. 6 km. Vegetation directly on the site (blowout) is sparse. However, within 1 m of the site dwarf birch, berry species, lichen, and moss are present. Grass species are found in the shallows of the lake.

Testing:

A surface survey of the deflated area produced two chert flakes which articulate to produce a 9 cm long modified flake (UA81-280-1, 2) (Table D.437). A 40 x 40 cm test (test pit 1) was excavated 1 m southwest of where the flakes were found. No cultural material was recovered from this test; nor were any tephras recognizable. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.437.

Artifact Summary, HEA 184

Provenience		Description
Lithic Material		
Surface:	2	Argillite modified flake fragments (UA81-280-1 articulates with 2)

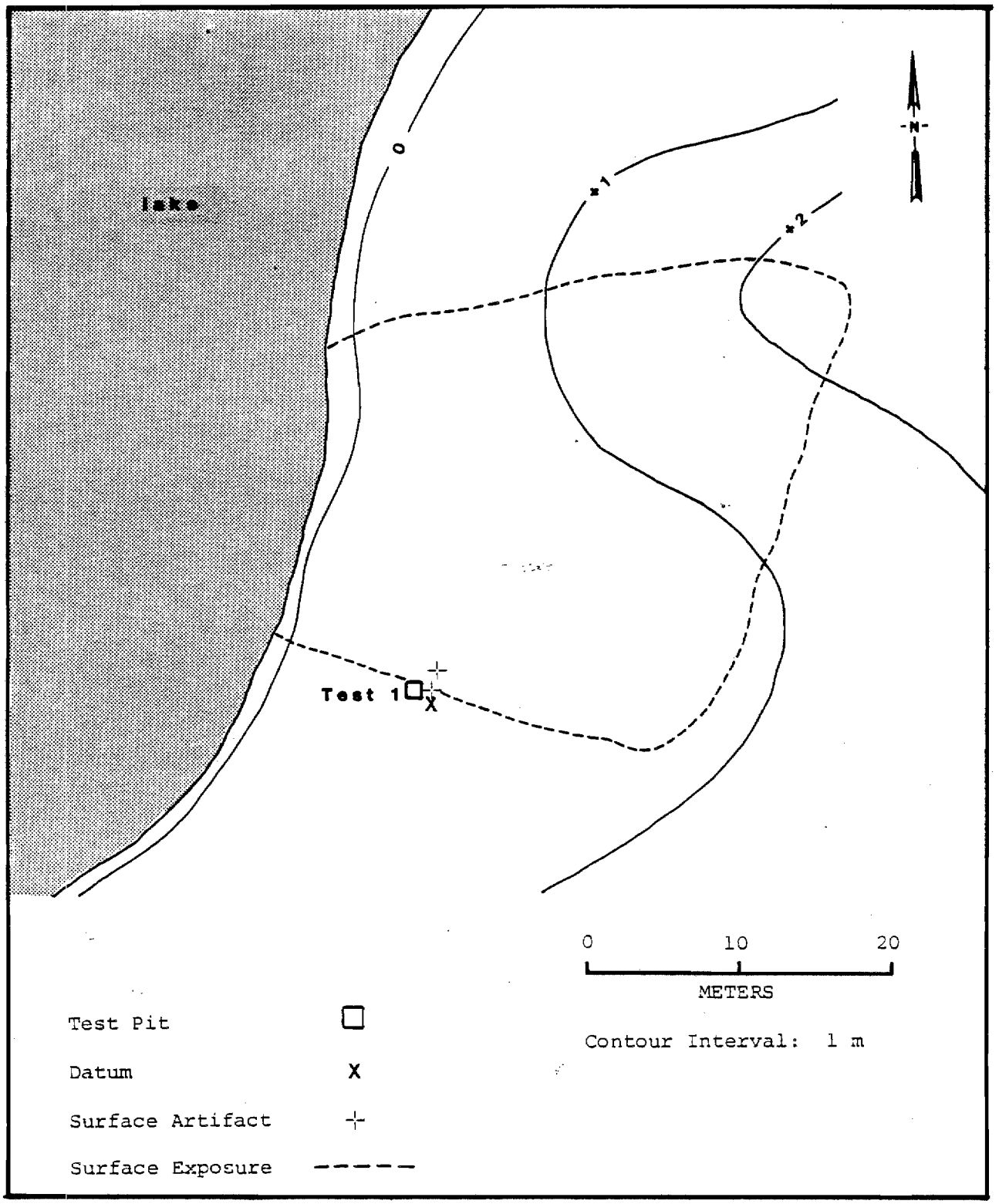


Figure D.355. Site Map, HEA 184

AHRS Number HEA 185; Accession Number UA81-282

Area:	North of Deadman Lake Outlet
Site Map:	Figure D.356
Site Location Map:	Figure E.58
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site is located on an east-west trending ridge on the west side of Deadman Lake ca. 70 m above the lake at an elevation of ca. 1005 m asl (3300 feet). The ridge is the first and lowest of a series of ridges on the south side of Deadman Mountain. The site is located on the eastern one-third of the ridge. To the south the ridge descends at a slope of more than 30 degrees to a flat marsh which extends for several hundred meters before rising to low, rolling terrain. To the north the ridge dips several meters before rising to the next ridge which is ca. 50 m higher. The terrain continues to rise to the north up to the crest of Deadman Mountain at ca. 1524 m asl (5000 feet). Hills within 5 km of the site to the east, west, and south do not exceed 1066 m asl (3500 feet). Deadman Lake directly below and to the east, three smaller lakes (two on top of the ridge southwest of the site and one directly to the south of Big Lake), and an unnamed stream draining into Deadman Creek to the south are all visible from the site. A portion of the valley which connects Monahan Flats to the north with Deadman Lake and the Susitna River valley to the south is also in view. The ridge top consists mainly of fractured and decomposing bedrock. Little or no vegetation exists on top of the ridge; however, north of the ridge and on the slopes dwarf birch, mosses, and lichen form the ground cover.

Testing:

Surface survey of the entire exposed portion of the ridge top located two areas containing lithic material, an isolated artifact and scatter 1 (Figure D.356). Due to the rocky nature of the ridge top, no subsurface

tests were excavated. Datum was established adjacent to the gray chert modified flake (UA81-282-1). Scatter 1, approximately 27 m southeast of the datum, consisted of 4 basalt flakes, 1 gray chert flake, 1 large chert flake core fragment (UA282-8; Figure D.399m) and 1 brown chert "thumb-nail" scraper (UA81-282-3; Figure D.3991). Estimated site size based on the distribution of artifacts is 8 square meters (Table D.2).

Table D.438.

Artifact Summary, HEA 185

Provenience		Description
Lithic Material		
Surface:		
Cluster 1	1	Chert modified flake (UA81-282-1)
Cluster 2	4	Basalt flakes
	1	Chert flake
	1	Chert scraper (UA81-282-3)
	1	Chert flake core fragment (UA81-282-8)

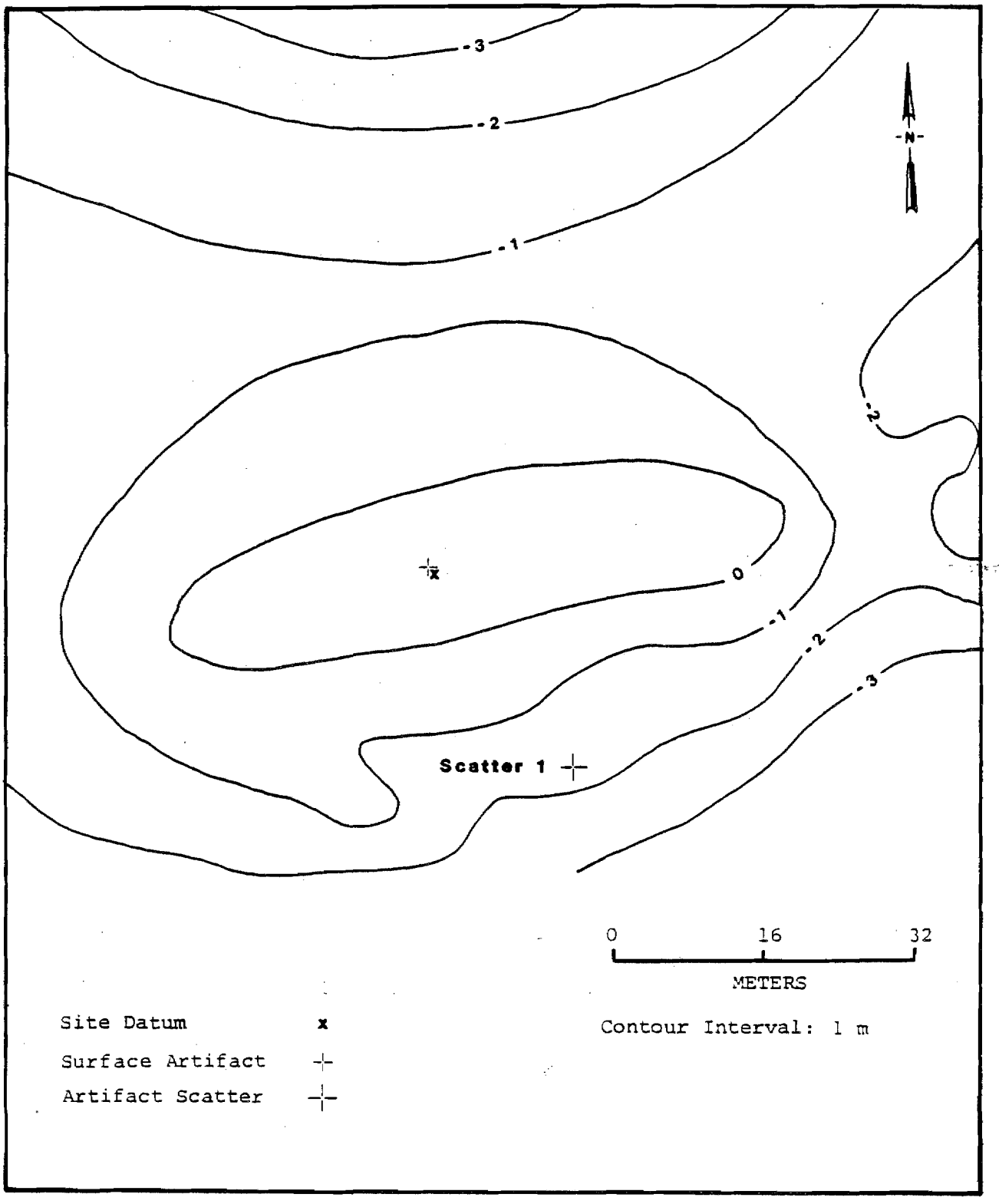


Figure D.356. Site Map, HEA 185

AHRS Number HEA 186; Accession Number UA81-279

Area:	East of Deadman Lake
Site Map:	Figure D.357
Site Location Map:	Figure E.72
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

HEA 186 is situated on a knoll at an elevation of ca. 1050 m asl (3445 feet) east of Deadman Creek, in the broad valley of the creek northeast of Deadman Lake. The knoll is the highest point within a kilometer wide area consisting of treeless, undulating lowlands. The site is located primarily on the eastern half of the east-west oriented knoll with dimensions of 125 (east-west) x 40 m (north-south) for the relatively level upper surface. The view to the north-northwest includes a braided section of Deadman Creek flowing through rolling lowlands in a broad valley. To the east are several small lakes in a narrow valley. Southward are other, lower east-west oriented ridges. West of the site is Deadman Creek flowing southward opposite a wide canyon on the east side of Deadman Mountain. The region surrounding the knoll with the site is more than 50 m lower, thereby enhancing the lookout prospect of the site. The site is above tree line, and the surrounding terrain is covered with shrub birch, grasses, and berries. Only a 5 m square on the top of the knoll is thickly vegetated with grasses with the remainder covered with sporadic occurrences of bearberry amidst the dominant exposed gravel surface.

Testing:

A large surface lithic scatter occupying a 30 m wide area was found during surface survey of the knoll (Figure D.357). Thirty artifacts, predominantly chert and basalt waste flakes, were found, 18 of which were collected. Four patinated gray chert biface fragments (UA81-279-4, 11, 14, 17; Figure D.400c,b,d,a) were found within an 8 (north-south) x

10 m (east-west) concentration of surface artifacts. This concentration lies between 20 and 30 m east of the site datum and has yielded two quartzite modified flakes (UA81-279-12, 16) in addition to the four biface fragments. Test pit 1 revealed 1 argillite flake and 1 chert flake on the surface, and 1 black basalt modified flake (UA81-279-3) at 1-2 cmbs. No soil development was visible in test pit 1 and the single subsurface flake may be the result of frost-churning of the exposed glacial drift. Estimated site size based on the distribution of artifacts is 600 square meters (Table D.2).

Table D.439.

Artifact Summary, HEA 186

Provenience		Description
Lithic Material		
Surface:	1	Argillite flake
	1	Basalt flake
	8	Chert flakes
	2	Quartzite modified flakes (UA81-279-12, 16)
	4	Chert biface fragments (UA81-279-4, 11, 14, 17)
	12	Flakes (uncollected)
Subsurface:		
Test Pit 1	1	Basalt modified flake (UA81-279-3)

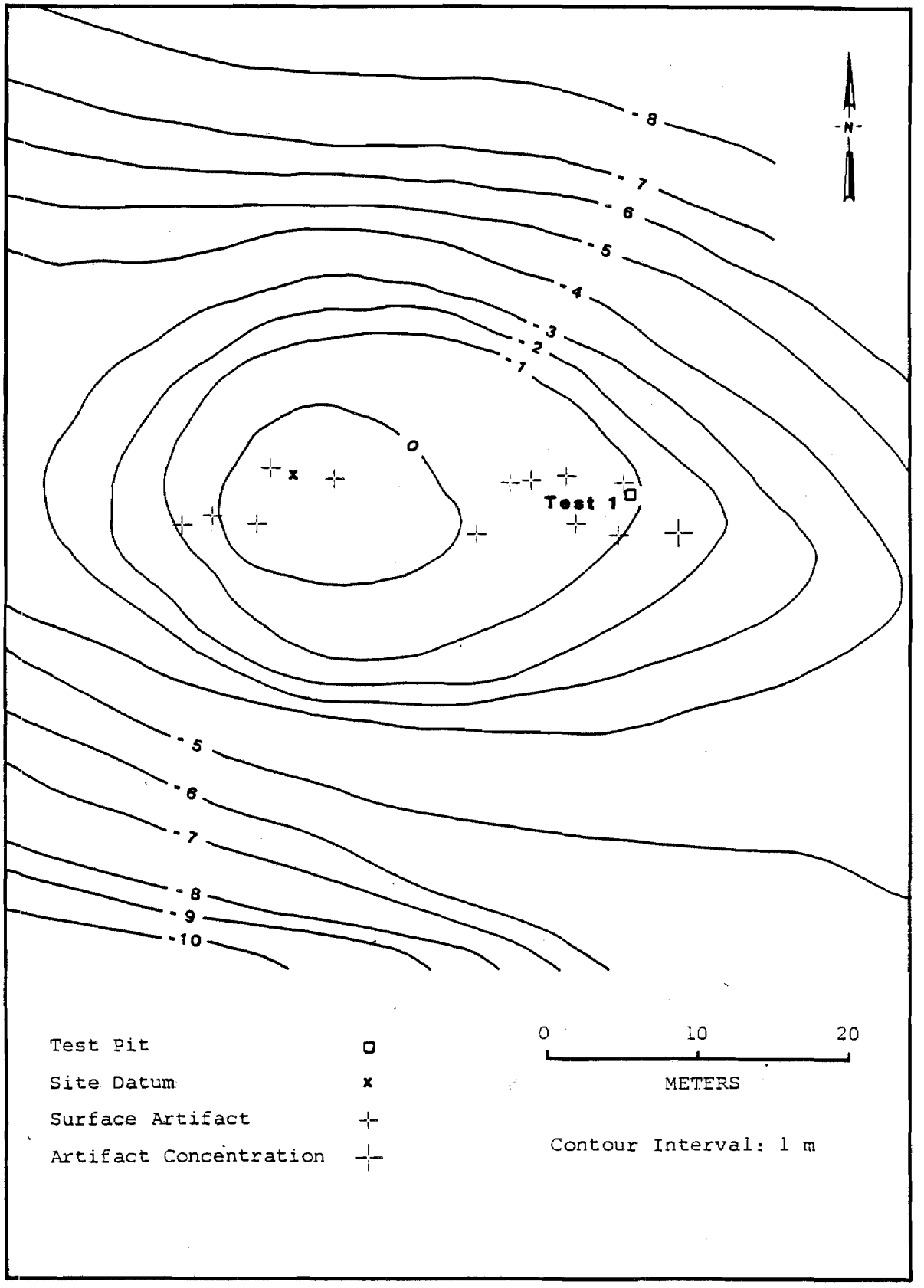


Figure D.357. Site Map, HEA 186

AHRS Number HEA 210; Accession Number UA82-101

Area:	Southeast of the Confluence of Healy Creek with the Nenana River
Site Map:	Figure D.358
Site Location Map:	Figure E.73
USGS Map:	Healy D-4, Figure E.38
Site Location:	Appendix F

Setting:

The site is located at ca. 427 m asl (1400 feet) on an alluvial terrace ca. 30 m above and southeast of the confluence of Healy Creek with the Nenana River. The terrace is 60 m wide and is oriented east-west, becoming oriented northeast-southwest to the south, where it narrows and terminates ca. 2 km distant from the site. The terrace is dissected by a 2 m deep, dry gully south of the site. A terrace 6 m higher than the terrace on which the site is located rises abruptly to the east and southeast of the site. A lower terrace lies to the north and west of the site about 15 m above the current levels of the Nenana River and Healy Creek. The view from the site includes the Healy Creek flood plain and valley wall to the north, the Nenana River flood plain to the northwest, west, and southwest, and the relatively low terrain on the west side of the river, as well as the southward continuation of the terrace sequence to its terminus against the north-facing margin of hilly uplands forming the Healy Creek valley wall. The terrace surface is wind-scoured, but patchy vegetation composed of dwarf birch, forbs, lichens, and a few small spruce occurs. The lower terrace to the north is well vegetated with grasses and shrubs. The north side of Healy Creek and the west side of the Nenana River are forested with spruce and hardwoods.

Testing:

Surface survey was conducted over the terrace surfaces within an area up to 1 km south and southeast from the Healy Creek mouth. The site

consists of two loci with an isolated surface artifact found at each (Table D.440). Locus A consists of a chalcedony flake found on the interior surface of the terrace, ca. 30 m away from the base of the upper terrace. Locus B is ca. 40 m north of locus A on the north edge of the terrace overlooking Healy Creek and consists of a rhyolite modified flake (UA82-101-2). No features or other cultural material were observed. Due to the exposure of alluvial gravels over most of the terrace surface, no subsurface testing was conducted. Estimated site size based on the distribution of artifacts is 8 square meters (Table D.2).

Table D.440.

Artifact Summary, HEA 210

Provenience		Description
Lithic Material		
Surface:		
Locus A	1	Chalcedony flake
Locus B	1	Rhyolite modified flake (UA82-101-2)

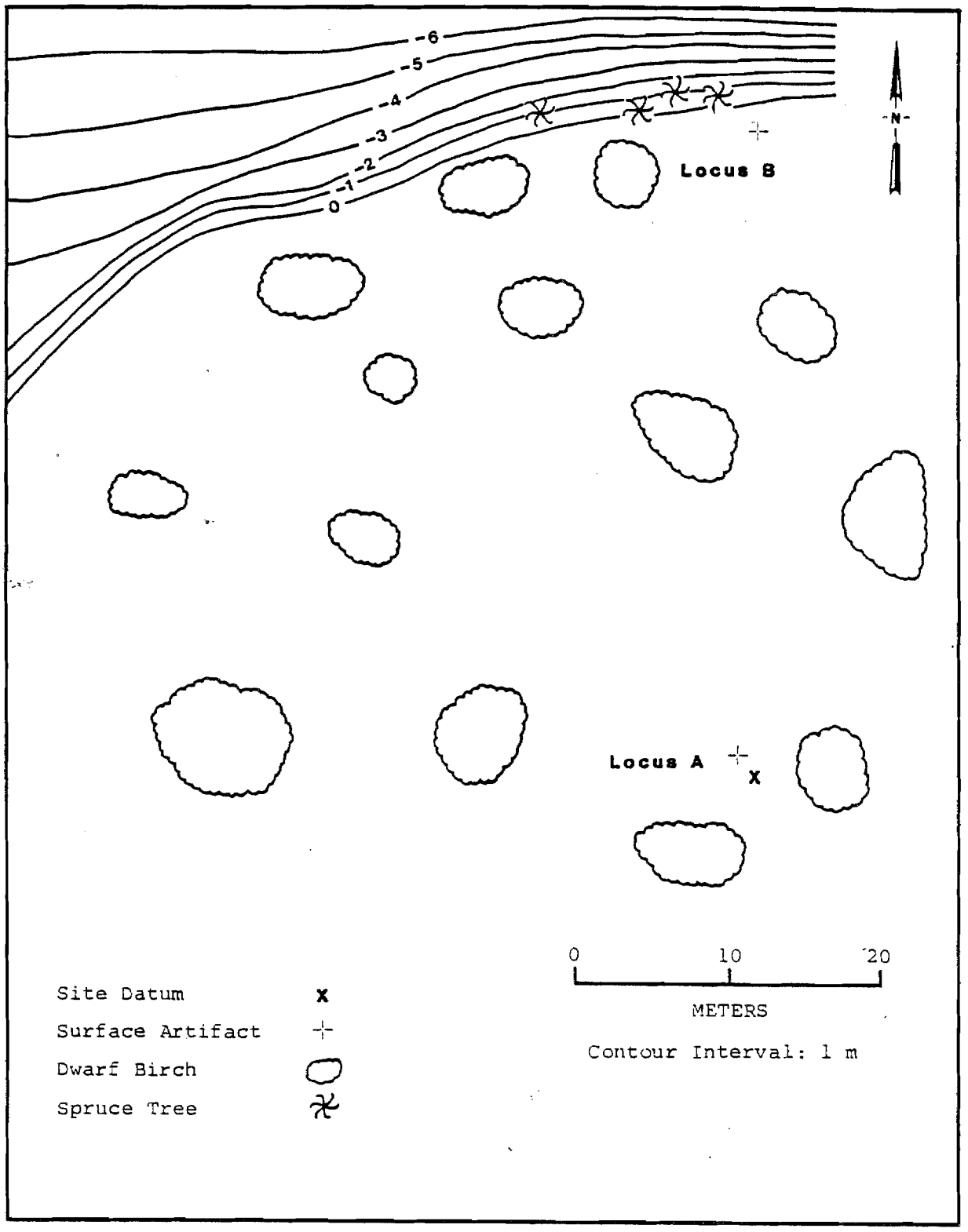


Figure D.358. Site Map, HEA 210

AHRS Number HEA 211; Accession Number UA83-87

Area:	Northwest of Northern Shore of Deadman Lake
Site Map:	Figure D.359
Site Location Map:	Figure E.74
USGS Map:	Healy A-3, Figure E.11
Site Location:	Appendix F

Setting:

The site is situated on the southeast edge of the lower portion of a two-tiered, relict river terrace northwest of the northern shore of Deadman Lake and the confluence of two unnamed tributaries of Deadman Creek. Lying at 953 m asl (altimeter: 3126 feet), the terrace parallels the northwest-southeast axis of the glacial valley, and rises approximately 25 m from the valley floor. The lower lobe of the terrace extends ca. 25 (east-west) x 35 m (north-south), and provides a commanding view of the valley floor and barren, steep slopes mantled in glacial outwash to the east and west. To the northeast, and not visible from the site, is a chain of 8 small lakes, each of them less than 1 ha. The site itself is located on the deflated summit of the terrace lobe. The high brush alpine vegetation includes dwarf birch, lowbush cranberry, bearberry, blueberry, Labrador tea, moss, grasses, and lichen. Alder and willow are present in the drainage to the south of the site.

Testing:

The site consists of a small surface lithic scatter concentrated in a deflated area of 7 x 6 m on the terrace summit (Figure D.359). Six light gray chert flakes (4 clustered in a 10 x 10 cm area) were observed and collected (Table D.441). One unidentified bone fragment of doubtful association with the lithic scatter was also collected. A 40 x 40 cm test pit (test pit 1) was placed in an area of soil deposition 1 m northwest of the flake cluster. In addition to the test pit, eight shovel tests were dug 5 and 10 m to the north, south, east, and west of

site datum. No cultural material was found in any of the subsurface tests.

A grid shovel testing program was undertaken to assist in determining site size and the distributions of cultural materials. Sixteen grid shovel tests were excavated, none of which contained cultural materials. Estimated site size based on the distribution of artifacts is 20 square meters (Table D.2).

Table D.441.

Artifact Summary, HEA 211

Provenience		Description
Lithic Material		
Surface:	6	Chert flakes
Faunal Material		
Surface:	1	Unidentifiable bone fragment, unburned, medium-large mammal

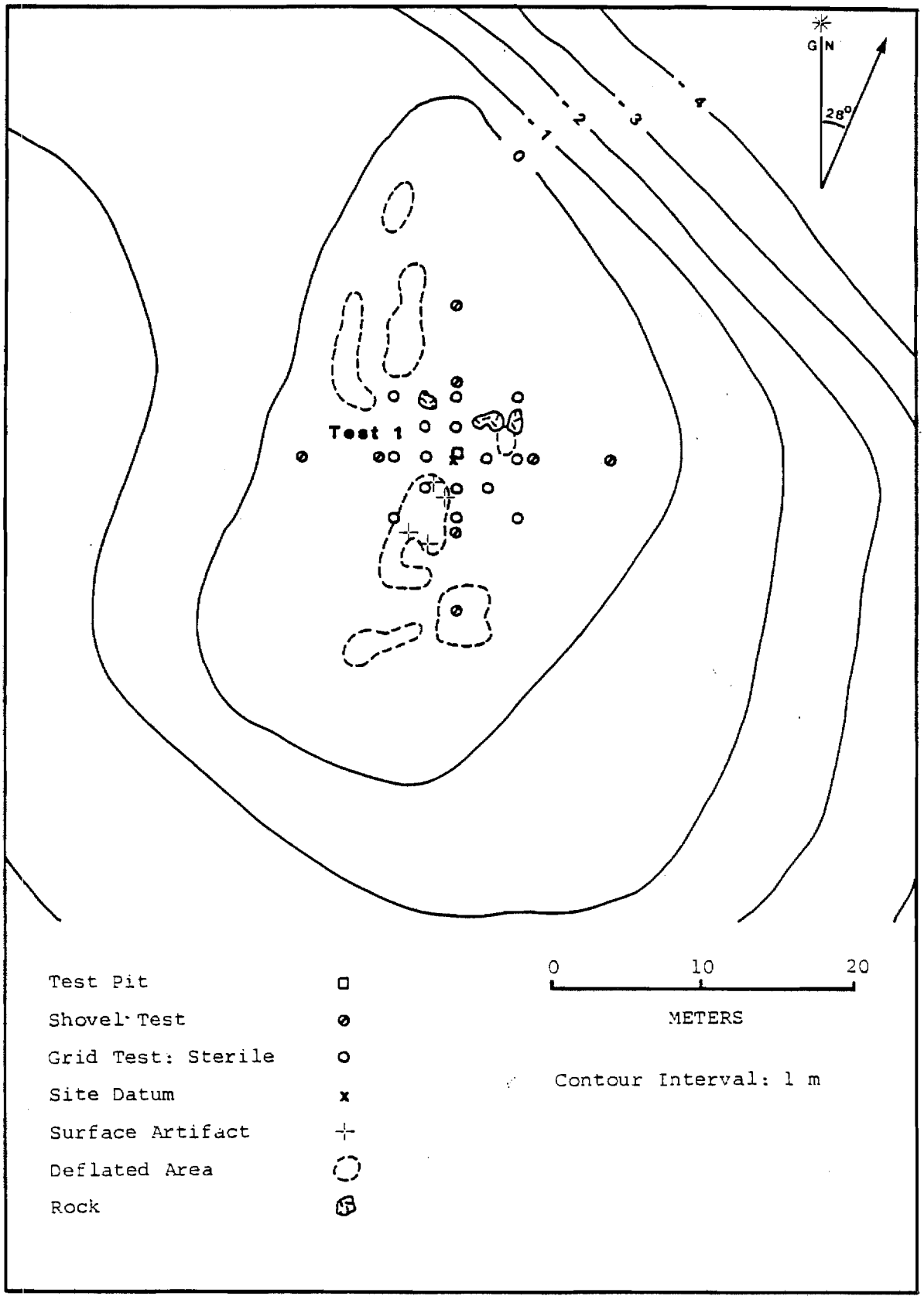


Figure D.359. Site Map, HEA 211

AHRS Number FAI 070

Area:	North of Ferry
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Fairbanks A-5, Figure E.36
Site Location:	Appendix F

Description:

FAI 070 was a former Alaska Railroad station on the south bank of Moose Creek, north of Ferry, Alaska. This section of the railroad was organized by 1921 and was on the timetables by 1922. The station has been abandoned (AHRS files).

AHRS Number FAI 089

Area:	Ferry
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Fairbanks A-5, Figure E.36
Site Location:	Appendix F

Description:

FAI 089 is the Nenana River Bridge of the Alaska Railroad, which spans the Nenana River near the townsite of Ferry. This bridge, built by the American Bridge Company between 1920-1925, is one of the five main steel bridges on the route of the Alaska Railroad between Anchorage and Fairbanks. The bridge is constructed of one 80-foot through plate girder span and two 200-foot steel truss spans, which rest on four concrete piers and abutments. The bridge remains in excellent condition (AHRS files).

AHRS Number FAI 090

Area:	Ferry
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Fairbanks A-5, Figure E.36
Site Location:	Appendix F

Description:

FAI 090, a former ferry station located on the north side of the Nenana River at the townsite of Ferry, was established in late 1918. It was originally known as "Residency 4". Ferry station was important in the operation of ferries across the Nenana River before the construction of a steel bridge between 1920-1925. A new section house was constructed in the early 1930's. In the early 1950's, a section house formerly located at the Julius station was moved to Ferry. Both structures are still standing in Ferry but are in poor condition and have been abandoned. Other structural remains associated with this site include several gasoline care sheds (AHRS files).

AHRS Number FAI 169

Area:	South of Ferry
Location:	Proposed Transmission Route: Healy to Fairbanks
USGS Map:	Fairbanks A-5, Figure E.36
Site Location:	Appendix F

Description:

FAI 169 is the Strand Family cemetery, located south of Ferry. It contains five graves: 3 Native Alaskans, 1 Native American from Washington, and 1 Alaskan miner. Wooden crosses mark all of the graves and three also have concrete slabs. The ashes of Ray Rupp, a pioneer Alaskan miner, are buried about 50 feet from this family plot. The cemetery dates back to the early 1950's. This cemetery represents the role of the family in the development of small towns in Alaska (AHRS files).

AHRS Number FAI 213; Accession Number UA82-102

Area:	Northeast of the Confluence of Birch Creek with the Nenana River
Site Map:	Figure D.360
Site Location Map:	Figure E.75
USGS Map:	Fairbanks A-5, Figure E.36
Site Location:	Appendix F

Setting:

The site is located at ca. 203 m asl (750 feet) on the top of a steep (45-degree), south-facing bluff where the orientation of the bluff edge changes from northwest-southeast to northeast-southwest. Approximately 30 m below the site at the base of the bluff is a 300 m wide abandoned stream channel which is presently well vegetated, with only a small stream flowing along the base of the bluff. A bluff of slightly lower elevation occurs on the opposite side of the channel. The bluff and stream channel system is located on gradually northward sloping terrain of low relief except for some deeply incised drainages, such as that of Windy Creek, which is southeast of the site.

Visibility from the site is excellent to the northwest, where the channel begins to open out onto the Tanana Flats outwash plain, to the west and south with the channel bottom and facing slopes in view. Mountainous uplands forming the south edge of the Tanana Flats are in view several kilometers distant to the south and southeast. Visibility in other directions is restricted by the relatively level, brushy ground on top of the bluff which descends to the Tanana Flats north of the site. A large ca. 30 ha lake is located northeast of the site, and the Nenana River is southwest of the site.

Vegetation at the site consists of scattered spruce and thick stands of young birch, with the major portion of the ground cover formed by lichens, moss, and forbs. The channel has well-developed spruce bog vegetation. Along the edge of the bluff, sands and silts overlying

glacial drift are currently undergoing deflation, which has created a 2 x 5 m unvegetated area at the corner where the site is located. The deflation continues to the northwest and northeast but moderates along relatively straight adjacent bluff edges.

Testing:

The site consists of both surface and subsurface artifactual material. A surface lithic scatter was located in a deflated area (4.5 x 2.5 m) at a corner of the bluff edge. Twenty-nine flakes of various material types were recovered from the surface scatter (Table D.442). One of three shovel tests (shovel test 1) excavated in the site area contained a single basalt flake. Test pit 1 was placed on the northern edge of the deflated area. One rhyolite flake was recovered and a massive charcoal lens with oxidized matrix was located in the test pit. The lens may suggest a hearth feature although no artifactual material was found in association with it. One flake, located on the bluff edge 50 m northwest of the surface scatter, was not collected. Estimated site size based on the distribution of artifacts is 100 square meters (Table D.2).

Table D.442.

Artifact Summary, FAI 213

Provenience		Description
Lithic Material		
Surface:	6	Argillite flakes
	22	Basalt flakes
	1	Chert flake
	1	Flake (uncollected)
Subsurface:		
Shovel Test 1	1	Chert flake
Test Pit 1	1	Rhyolite flake

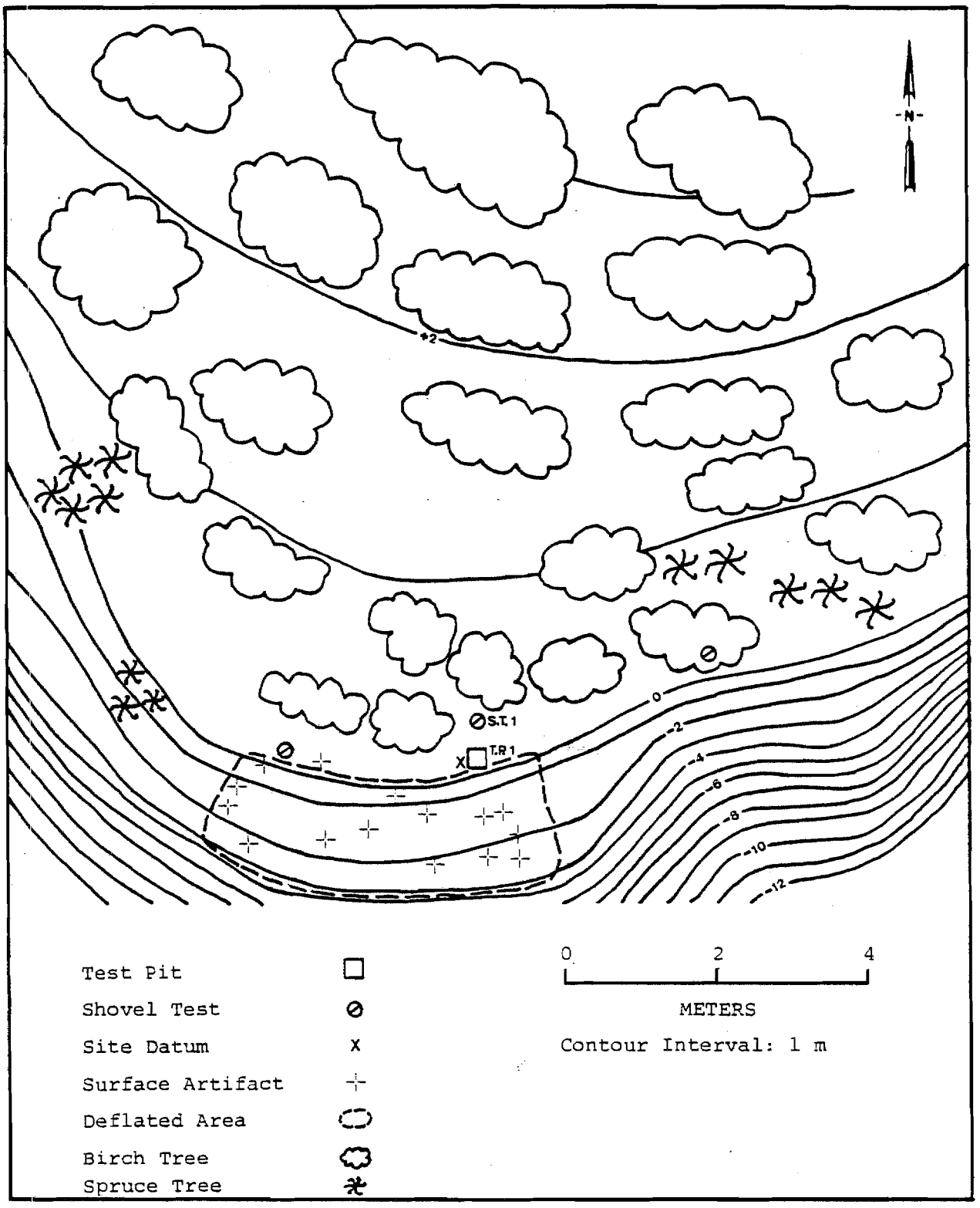


Figure D.360. Site Map, FAI 213

AHRS Number FAI 214; Accession Number UA82-103

Area:	Southwest of the Confluence of Birch Creek with the Nenana River
Site Map:	Figure D.361
Site Location Map:	Figure E.76
USGS Map:	Fairbanks A-5, Figure E.36
Site Location:	Appendix F

Setting:

The site is located at ca. 366 m asl (1200 feet) on the easternmost point of the broad, relatively flat crest of a northeast-southwest trending ridge. To the east and northeast of the site a steep, 30-degree slope abruptly descends ca. 90 m to the Nenana River flood plain. The confluence of Birch Creek and the Nenana River is to the northeast of the site. The steep-walled, Birch Creek drainage lies to the west of the site, defining the west side of the site ridge. The ridge forms part of a system of low mountains which reaches its highest elevation, 554 m asl (1816 feet), to the northwest of the site. The site is located near a communications tower in a recently cleared 60 x 30 m area. Visibility from the site is excellent to the southeast overlooking the Nenana River flood plain, to the east where the valley narrows to a steep-walled corridor, and to the northeast where the flood plain opens out onto the Tanana Flats outwash plain. The steep slopes of hilly uplands forming the east Nenana River valley wall are also in view. Visibility in other directions is limited by the forested ridge crest. Within 8 km of the site, but at least 3 km distant, are several lakes which exceed 10 ha in size.

Vegetation at the site reflects the recent clearing of a communications tower site and includes fireweed, grass, and young trees, with some original ground cover of mosses and small shrubs left intact. Vegetation of the ridge crest and slopes is upland spruce-hardwood forest. Adjacent low, flat areas are characterized by lowland spruce forest, with extensive boggy areas.

Testing:

No surface indication of the site was observed. One obsidian flake was found in a shovel test (shovel test 1), which was expanded into a 40 x 40 cm test pit (test pit 1). Excavation of the test pit yielded four basalt flakes (10-20 cmbs). Another shovel test (shovel test 4), 50 cm west of test pit 1, produced three basalt and three chert flakes, from approximately 13 cmbs (Table D.443). Two other shovel tests were sterile. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.443.

Artifact Summary, FAI 214

Provenience		Description
Lithic Material		
Subsurface:		
Test Pit 1	4	Basalt flakes
	1	Obsidian flake
Shovel Test 4	3	Basalt flakes
	3	Chert flakes

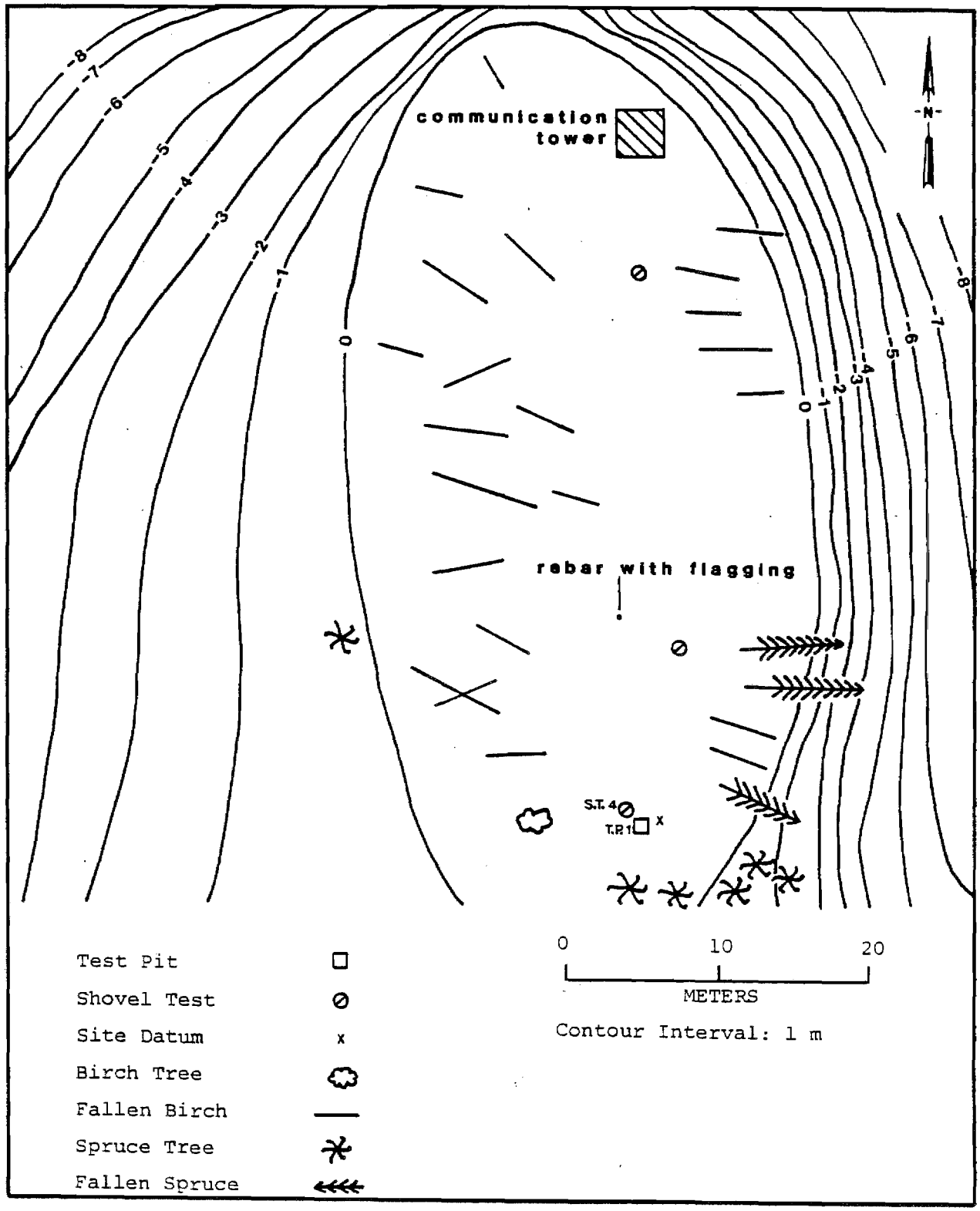


Figure D.361. Site Map, FAI 214

AHRS Number TYO 014

Area:	South of Willow Creek
Location:	Proposed Transmission Route: Willow to Anchorage
USGS Map:	Tyonek D-1, Figure E.42
Site Location:	Appendix F

Description:

TYO 014, located on a small hill on the south side of Willow Creek upstream from its mouth, consists of 10-15 cache pits. This site was reported by Behnke in 1973, and field checked by Reger in 1978 (Reger 1978:7; AHRS files). This site was not visited during the present study.

KEY TO FIGURES

Figure	Site	Accession Number, Description
D.362. a	TLM 016	UA84-143-2, Basalt biface fragment
b	TLM 016	UA83-132-50, Basalt modified flake
c	TLM 016	UA83-132-6, Chert scraper
d	TLM 016	UA83-132-127, Shale retouched tabular fragment
e	TLM 016	UA83-132-43, Basalt cobble fragment
f	TLM 016	UA83-132-45, Basalt flake core fragment
g	TLM 018	UA78-60-1, Basalt triangular point
h	TLM 018	UA80-165-1, Basalt biface fragment
i	TLM 018	UA81-283-149, Obsidian flake core fragment
j	TLM 018	UA84-234-192, Chalcedony blade fragment
k	TLM 018	UA80-165-3, Argillite burin spall
D.363. a	TLM 018	UA84-234-6, 44, Basalt biface fragments
b	TLM 018	UA81-283-2, Argillite flake core fragment
c	TLM 018	UA81-283-3, Argillite flake core
d	TLM 018	UA81-283-13, Diorite tci tho
D.364. a	TLM 021	UA80-68-239, Argillite biface fragment
b	TLM 021	UA80-68-190, Argillite preform
c	TLM 025	UA81-225-3, Argillite microblade fragment
d	TLM 025	UA81-225-6, Argillite microblade fragment
e	TLM 025	UA81-225-4, Argillite microblade core tablet
f	TLM 025	UA80-72-10, Chert microblade core tablet
g	TLM 025	UA81-225-1, Argillite microblade core
h	TLM 025	UA81-225-5, Chert biface
i	TLM 025	UA81-225-9, Hammerstone

KEY TO FIGURES

Figure	Site	Accession Number, Description
j	TLM 026	UA80-73-4, Chert biface
k	TLM 026	UA80-73-1, Chert scraper
D.365. a	TLM 027	UA81-243-249, Argillite blade fragment
b	TLM 027	UA81-243-389, Argillite blade fragment
c	TLM 027	UA81-243-448, Argillite blade fragment
d	TLM 027	UA81-243-226, Argillite blade fragment
e	TLM 027	UA81-243-218, Argillite blade fragment
f	TLM 027	UA81-243-224, Argillite blade
g	TLM 027	UA81-243-219, Argillite blade
h	TLM 027	UA81-243-441, Argillite blade fragment
i	TLM 027	UA81-243-61, Argillite blade
j	TLM 027	UA81-243-231, Argillite blade
k	TLM 027	UA80-74-10, Argillite rejuvenation flake
l	TLM 027	UA81-243-230, Argillite blade core fragment
m	TLM 027	UA81-243-229, Argillite blade core
D.366. a	TLM 027	UA81-243-30, Basalt flake core
b	TLM 027	UA81-243-372, Basalt flake core
c	TLM 027	UA81-243-32, Basalt biface
d	TLM 029	UA84-65-56, Basalt scraper
D.367. a	TLM 030	UA80-77-89, Rhyolite side-notched point base
b	TLM 030	UA83-130-1951, 1949, Rhyolite side-notched point fragments
c	TLM 030	UA83-130-127, Argillite side-notched point

KEY TO FIGURES

Figure	Site	Accession Number, Description
d	TLM 030	UA83-130-1923, Argillite side-notched point
e	TLM 030	UA83-130-130, Argillite stemmed point
f	TLM 030	UA83-130-48, Basalt side-notched point
g	TLM 030	UA83-130-1931, Basalt corner-notched point
h	TLM 030	UA83-130-1932, Basalt corner-notched point
i	TLM 030	UA83-130-351, Basalt corner-notched point
j	TLM 030	UA83-130-1005, Basalt corner-notched point
k	TLM 030	UA83-130-867, Basalt corner-notched point
l	TLM 030	UA83-130-1915, Basalt side-notched point
m	TLM 030	UA83-130-349, Basalt corner-notched point
n	TLM 030	UA83-130-1935, Basalt corner-notched point
o	TLM 030	UA80-77-520, Basalt side-notched point
p	TLM 030	UA83-130-124, Basalt stemmed point
D.368. a	TLM 030	UA83-130-1933, Basalt biface
b	TLM 030	UA83-130-1958, Basalt biface or point preform
c	TLM 030	UA83-130-353, Basalt lanceolate point
d	TLM 030	UA83-130-1956, Basalt preform
e	TLM 030	UA83-130-129, 128, Argillite biface fragments
f	TLM 030	UA83-130-619, Basalt biface
g	TLM 030	UA80-77-327, Basalt side-notched point
D.369. a	TLM 030	UA83-130-1263, Basalt scraper
b	TLM 030	UA83-130-1380, Basalt scraper
c	TLM 030	UA83-130-1941, Basalt scraper
d	TLM 030	UA83-130-1938, Chert scraper
e	TLM 030	UA83-130-1922, Basalt scraper

KEY TO FIGURES

Figure		Site	Accession Number, Description
	f	TLM 030	UA83-130-1421, Chert scraper
	g	TLM 030	UA83-130-1262, Basalt scraper
	h	TLM 030	UA83-130-1921, Chert scraper
	i	TLM 030	UA83-130-1124, Chert scraper
D.370.	a	TLM 030	UA83-130-820, Basalt modified flake
	b	TLM 030	UA83-130-2458, Ochre
	c	TLM 030	UA83-130-1924, Argillite modified flake
	d	TLM 030	UA83-130-1261, Basalt modified flake
	e	TLM 030	UA83-130-352, Basalt modified flake
	f	TLM 030	UA80-77-517, Basalt modified flake
	g	TLM 030	UA83-130-1955, Obsidian modified flake
D.371.	a	TLM 030	UA83-130-1943, Argillite biface
	b	TLM 030	UA83-130-1945, 1946, Argillite biface fragments
	c	TLM 030	UA83-130-1939, 1950, Argillite biface fragments
	d	TLM 030	UA83-130-1942, Argillite biface
	e	TLM 030	UA83-130-1947, Argillite biface
	f	TLM 030	UA83-130-1948, Argillite biface
	g	TLM 030	UA83-130-1944, Argillite modified flake
D.372.	a	TLM 030	UA83-130-1464, Modified cobble
	b	TLM 030	UA83-130-969, Hammerstone
	c	TLM 030	UA83-130-1892, Hammerstone
	d	TLM 030	UA83-130-621, Argillite biface
	e	TLM 030	UA83-130-1926, Modified cobble

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Figure	Site	Accession Number, Description
D.373. a	TLM 031	UA80-78-1, Chert endscraper
b	TLM 032	UA80-79-2, Argillite modified flake
c	TLM 032	UA80-79-1, Chert endscraper
d	TLM 032	UA80-79-8, Argillite scraper
e	TLM 032	UA80-79-12, Chalcedony flake core fragment
f	TLM 032	UA80-79-16, Hammerstone
g	TLM 033	UA80-80-1, Chert modified flake
h	TLM 036	UA80-143-1, Chert scraper
i	TLM 039	UA81-277-30, Chert microblade fragment: dorsal surface
j	TLM 039	UA81-277-30, Chert microblade fragment: modified, ventral surface
k	TLM 039	UA81-277-29, Obsidian microblade
l	TLM 039	UA80-146-11, Chert burin spall
D.374. a	TLM 040	UA84-81-39, 40, Argillite blade fragments
b	TLM 040	UA81-226-50, Obsidian blade fragment
c	TLM 040	UA81-226-65, Obsidian blade fragment
d	TLM 040	UA84-81-71, Argillite blade fragment
e	TLM 040	UA84-81-53, Obsidian blade fragment
f	TLM 040	UA81-226-9, Obsidian blade fragment
g	TLM 040	UA84-81-68, Obsidian blade fragment
h	TLM 040	UA81-226-34, Obsidian blade fragment
i	TLM 040	UA81-226-78, Obsidian blade fragment
j	TLM 040	UA84-81-38, Obsidian blade fragment
k	TLM 040	UA81-226-68, Obsidian blade fragment
l	TLM 040	UA81-226-62, Obsidian blade fragment
m	TLM 040	UA84-81-100, Chert blade fragment
n	TLM 040	UA81-226-33, Argillite blade fragment

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Figure	Site	Accession Number, Description
o	TLM 040	UA81-226-4, Argillite scraper
p	TLM 040	UA84-81-26, Chert scraper
q	TLM 040	UA84-81-17, Chert lanceolate point
r	TLM 040	UA81-226-117; UA84-81-93, Argillite flake core fragments
s	TLM 040	UA81-226-118, Hammerstone
D.375. a	TLM 042 Locus A	UA80-149-2, Argillite biface fragment
b	TLM 042 Locus B	UA81-230-27, Chert side-notched point base
c	TLM 042 Locus B	UA80-149-31, Basalt stemmed point base
d	TLM 042 Locus B	UA80-149-34, Basalt scraper
e	TLM 042 Locus B	UA80-149-28, Basalt biface fragment
f	TLM 044	UA80-151-43, 42, Chert biface fragments
g	TLM 044	UA80-151-1, Obsidian leaf-shaped point
h	TLM 045	UA80-152-37, Quartzite lanceolate point
i	TLM 046	UA81-263-73, Chert lanceolate point base
j	TLM 046	UA80-153-53, Rhyolite lanceolate point base, burinated
k	TLM 046	UA80-153-50, Basalt lanceolate point base
l	TLM 046	UA80-153-55, Chert scraper
D.376. a	TLM 047	UA80-154-5, Argillite microblade fragment
b	TLM 047	UA80-154-4, Chert biface fragment
c	TLM 048	UA81-278-3, Argillite microblade fragment
d	TLM 048	UA81-155-1, Argillite biface

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Figure		Site	Accession Number, Description
	e	TLM 052	UA80-159-1, Chert lanceolate point base
	f	TLM 052	UA80-159-4, Argillite biface
	g	TLM 052	UA80-159-12, Basalt preform fragment
	h	TLM 055	UA81-246-1, Rhyolite scraper
	i	TLM 060	UA81-206-1, Chert biface
	j	TLM 061	UA84-87-15, Argillite biface fragment
	k	TLM 062	UA81-208-1, Chert flake core
	l	TLM 062	UA81-208-2, 3, Chert scraper fragments
	m	TLM 062	UA81-208-75, Basalt biface
	n	TLM 064	UA84-68-5, Argillite lanceolate point base
	o	TLM 064	UA81-220-14, Basalt biface fragment
D.377.	a	TLM 065 Locus A	UA81-222-15, Blue tube bead
	b	TLM 065 Locus A	UA81-222-4, Blue tube bead
	c	TLM 065 Locus A	UA81-222-77, Red-on-clear Cornaline d'Aleppo bead
	d	TLM 065 Locus A	UA81-222-3, Blue wire wound bead
	e	TLM 065 Locus A	UA84-238-45, Metal
	f	TLM 066	UA81-212-5, Chert lanceolate point
	g	TLM 066	UA81-212-3, 4, Chert preform fragments
	h	TLM 066	UA81-212-1, 2, Chert leaf-shaped point fragments

KEY TO FIGURES

Figure	Site	Accession Number, Description
i	TLM 067	UA81-213-3, Chalcedony preform
j	TLM 067	UA81-213-4, Chalcedony preform
k	TLM 067	UA81-213-5, Chert preform
l	TLM 067	UA81-213-18, Chert pebble
m	TLM 068	UA81-214-1, Chert leaf-shaped point
n	TLM 068	UA81-214-7, Basalt scraper
D.378. a	TLM 069	UA81-215-49, Rhyolite preform
b	TLM 069	UA83-131-42, Basalt preform
c	TLM 069	UA81-215-50, Basalt biface fragment
d	TLM 069	UA83-131-51, Basalt blade
e	TLM 069	UA81-215-47, Obsidian scraper
f	TLM 069	UA81-215-488, Chert scraper
g	TLM 069	UA81-215-246, Rhyolite biface fragment
h	TLM 069	UA81-215-290, Chert preform
i	TLM 070	UA81-216-1, Basalt scraper
j	TLM 073	UA84-136-1, Rhyolite biface (point tip)
k	TLM 075	UA81-231-1, Chert rejuvenation flake
l	TLM 076	UA81-232-7, Chalcedony biface (point tip)
D.379. a	TLM 077	UA84-82-1, Argillite biface
b	TLM 089	UA81-247-3, Chert biface fragment
c	TLM 091	UA81-254-4, Basalt lanceolate point
d	TLM 094	UA81-251-5, Basalt biface fragment
e	TLM 097	UA83-224-71, Argillite corner-notched point
f	TLM 097	UA81-252-159, Basalt corner-notched point
g	TLM 097	UA81-252-1, Chert preform
h	TLM 097	UA81-252-115, Basalt scraper
i	TLM 097	UA83-224-73, Chert scraper

KEY TO FIGURES

Figure	Site	Accession Number, Description
j	TLM 097	UA83-224-11, Chert scraper
k	TLM 097	UA81-252-360, Chert scraper
D.380. a	TLM 103	UA81-271-1, Chert biface fragment
b	TLM 106	UA81-265-1, Chert biface fragment
c	TLM 107	UA81-266-2, Argillite biface fragment
d	TLM 107	UA84-105-1, Chert lanceolate point base
e	TLM 107	UA81-266-1, Argillite biface
f	TLM 110	UA81-269-48, Chalcedony biface fragment
g	TLM 113	UA81-272-1, Argillite stemmed point
h	TLM 113	UA81-272-2, Rhyolite biface
i	TLM 115	UA82-95-1, Basalt lanceolate point
j	TLM 118	UA82-58-27, Argillite biface fragment
k	TLM 119	UA84-240-13, Argillite biface fragment
l	TLM 124	UA82-64-1, Basalt leaf-shaped point
D.381. a	TLM 128	UA82-68-15, Obsidian blade
b	TLM 128	UA83-230-245, Basalt biface (point tip)
c	TLM 128	UA83-230-42, Argillite biface (point tip)
d	TLM 128	UA83-230-128, Basalt biface (point tip)
e	TLM 128	UA82-68-85, Chert biface (point tip)
f	TLM 128	UA83-230-43, Argillite biface (point tip)
g	TLM 128	UA83-230-36, Argillite biface
h	TLM 128	UA83-230-24, Argillite triangular point base
i	TLM 128	UA83-230-97, Argillite triangular point
j	TLM 128	UA83-230-25; UA82-68-226, Argillite triangular point fragments
k	TLM 128	UA83-230-104, Argillite preform
l	TLM 128	UA83-230-236, Argillite preform

KEY TO FIGURES

Figure	Site	Accession Number, Description
m	TLM 128	UA82-68-186, Argillite preform
n	TLM 128	UA83-230-41, Chert scraper
o	TLM 128	UA83-230-72, Chert scraper
p	TLM 128	UA82-68-222, Basalt biface fragment
q	TLM 128	UA83-230-190, Basalt triangular point fragment
r	TLM 128	UA82-68-3, 321, Argillite biface fragments
s	TLM 128	UA82-68-187, Argillite flake core
t	TLM 128	UA82-68-189, Argillite flake core
u	TLM 128	UA82-68-246, Argillite flake core
D.382. a	TLM 130	UA82-70-11, Chert scraper
b	TLM 133	UA82-73-1, Chert biface fragment
c	TLM 135	UA82-75-1, Basalt side-notched point
d	TLM 136	UA82-76-1, Basalt scraper
e	TLM 140	UA82-80-6, Basalt biface fragment
f	TLM 141	UA82-81-15, Basalt biface fragment
D.383. a	TLM 143	UA82-83-377, Argillite biface fragment
b	TLM 143	UA82-83-306, Basalt corner-notched point base
c	TLM 143	UA82-83-1, Basalt corner-notched point
d	TLM 143	UA82-83-347, Basalt corner-notched point
e	TLM 143	UA82-83-358, Basalt corner-notched point
f	TLM 143	UA82-83-410, Basalt corner-notched point
g	TLM 143	UA82-83-364, Basalt corner-notched point
h	TLM 143	UA82-83-2, Basalt corner-notched point
i	TLM 143	UA82-83-1220, Chert corner-notched point
j	TLM 143	UA82-83-319, Argillite side-notched point

KEY TO FIGURES

Figure	Site	Accession Number, Description
k	TLM 143	UA82-83-313, Argillite side-notched point
l	TLM 143	UA82-83-403, Argillite biface (point tip)
m	TLM 143	UA82-83-359, Argillite biface fragment
n	TLM 143	UA82-83-357, Argillite biface fragment
o	TLM 143	UA82-83-325, Argillite biface fragments
p	TLM 143	UA82-83-348, Basalt biface fragments
D.384. a	TLM 143	UA82-83-346, Chert scraper fragments
b	TLM 143	UA82-83-365, Basalt scraper
c	TLM 143	UA82-83-352, Basalt scraper
d	TLM 143	UA82-83-340, Basalt scraper
e	TLM 143	UA82-83-361, Argillite scraper
f	TLM 143	UA82-83-327, Argillite scraper
g	TLM 143	UA82-83-356, Argillite scraper
h	TLM 143	UA82-83-309, Argillite scraper
i	TLM 143	UA84-104-12, Argillite scraper
j	TLM 143	UA82-83-733, Argillite biface fragment
k	TLM 143	UA82-83-342, Basalt biface fragment
l	TLM 143	UA82-83-310, Basalt biface fragment
m	TLM 143	UA82-83-339, Chert scraper
n	TLM 143	UA82-83-417, Chert biface fragment
o	TLM 143	UA82-83-398, Basalt biface (point tip)
p	TLM 143	UA82-83-921, Chert biface fragment
q	TLM 143	UA84-104-77, Quartz biface fragment
r	TLM 143	UA82-83-324, Basalt flake core

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Figure	Site	Accession Number, Description
D.385. a	TLM 144	UA82-84-1, Basalt side-notched point
b	TLM 154	UA82-94-4, Argillite lanceolate point
c	TLM 159	UA83-88-27, Chert blade
d	TLM 159	UA83-88-3, Quartzite biface fragment
e	TLM 159	UA83-88-24, Argillite biface fragments
f	TLM 166	UA84-106-4, Basalt preform
g	TLM 169	UA83-95-1, Chert biface
D.386. a	TLM 170	UA83-96-7, Argillite flake core fragment
b	TLM 170	UA83-96-25, Rhyolite flake core fragment
c	TLM 171	UA83-97-1, Chalcedony microblade fragment
d	TLM 173 Locus B	UA84-135-4, Chert blade fragment
e	TLM 173 Locus B	UA84-135-2, Argillite biface fragment
f	TLM 173 Locus C	UA84-135-26, Hammerstone
g	TLM 175	UA83-101-1, Argillite lanceolate point
h	TLM 175	UA84-61-42, Quartzite biface
i	TLM 175	UA84-61-52, Argillite flake core fragment
D.387. a	TLM 180	UA83-106-16, Chert blade fragment
b	TLM 180	UA83-106-359, Chert blade fragment
c	TLM 180	UA83-106-169, Obsidian blade fragment
d	TLM 180	UA83-106-396, Chert blade fragment
e	TLM 180	UA83-106-312, Chert blade fragment
f	TLM 180	UA83-106-310, Chert blade fragment
g	TLM 180	UA83-106-168, Chert blade fragment
h	TLM 180	UA83-106-290, Chert blade fragment

KEY TO FIGURES

Figure	Site	Accession Number, Description
i	TLM 180	UA83-106-17, Chert blade fragment
j	TLM 180	UA83-106-204, Argillite rejuvenation flake
k	TLM 180	UA83-106-89, Argillite rejuvenation flake
l	TLM 180	UA83-106-336, Argillite rejuvenation flake
m	TLM 180	UA83-106-400, Argillite blade core
n	TLM 180	UA83-106-401, Argillite blade core
o	TLM 180	UA83-106-390, Argillite blade core
D.388. a	TLM 184	UA83-110-808, Chert biface fragment
b	TLM 184	UA83-110-448, Chert scraper
c	TLM 184	UA84-56-134, Chert scraper
d	TLM 184	UA84-56-145, Basalt scraper
e	TLM 184	UA83-110-402, Chert scraper
f	TLM 184	UA84-56-71, Obsidian flake core
g	TLM 184	UA84-56-149, Basalt biface fragment
h	TLM 184	UA83-110-792, Hammerstone
i	TLM 184	UA83-110-525, Argillite blade fragment
j	TLM 184	UA83-110-776, Argillite blade fragment
k	TLM 184	UA83-110-800, Chert biface fragment
l	TLM 184	UA83-110-451, Chert biface fragment
m	TLM 184	UA84-56-89, Argillite modified flake
D.389. a	TLM 185 Locus B	UA83-111-1, Chert stemmed point
b	TLM 186	UA83-112-1, Obsidian biface
c	TLM 197	UA83-123-1, Chert flake core
d	TLM 205	UA83-217-1, Chert scraper fragment
e	TLM 196	UA83-122-10, 1, 9, Moose mandible fragments

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Figure	Site	Accession Number, Description
D.390. a	TLM 207	UA84-67-150, Chert microblade fragment
b	TLM 207	UA84-67-25, Chert microblade fragment
c	TLM 207	UA84-67-65, Chalcedony microblade fragment
d	TLM 207	UA84-67-135, Chert microblade fragment
e	TLM 207	UA84-67-136, Chert microblade fragment
f	TLM 207	UA84-67-156, Chert microblade fragment
g	TLM 207	UA84-67-153, Chert microblade fragment
h	TLM 207	UA84-67-123, Chert microblade fragment
i	TLM 207	UA84-67-187, Chert microblade fragments
j	TLM 207	UA84-67-73, Chert microblade fragment
k	TLM 207	UA84-67-43, Chert microblade fragment
l	TLM 207	UA84-67-164, Chert microblade fragment
m	TLM 207	UA84-67-151, Chert microblade fragment
n	TLM 207	UA84-67-48, Chalcedony microblade fragment
o	TLM 207	UA84-67-2, Chert microblade fragment
p	TLM 207	UA84-67-22, Chert microblade fragment
q	TLM 207	UA84-67-215, Chert microblade fragment
r	TLM 207	UA84-67-216, Chert microblade fragment
s	TLM 207	UA84-67-88, Chert microblade fragments
t	TLM 207	UA84-67-134, Chert microblade fragment
u	TLM 207	UA84-67-133, Chert microblade fragment
v	TLM 207	UA84-67-152, Chert microblade fragment
w	TLM 207	UA84-67-5, Chert scraper
x	TLM 207	UA84-67-146, Chert rejuvenation flake
y	TLM 207	UA84-67-132, Chert microblade core

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Figure	Site	Accession Number, Description
D.391. a	TLM 208 Locus A	UA83-220-6, Basalt lanceolate point
b	TLM 208 Locus A	UA83-220-5, Chert preform
c	TLM 208 Locus A	UA83-220-2, Basalt biface fragment
d	TLM 208 Locus A	UA83-220-7, Quartz scraper
e	TLM 208 Locus A	UA83-220-8, Chert flake core
f	TLM 208 Locus A	UA83-220-14, Chert scraper
g	TLM 208 Locus A	UA83-220-4, Obsidian scraper
h	TLM 208 Locus A	UA83-220-3, Obsidian scraper
i	TLM 208 Locus A	UA83-220-1, Obsidian scraper
j	TLM 208 Locus A	UA83-220-13, Chert scraper
k	TLM 208 Locus B	UA83-220-25, Chert flake core
l	TLM 208 Locus C	UA83-220-28, Basalt biface
D.392. a	TLM 217	UA84-59-198, Basalt lanceolate point base
b	TLM 217	UA84-59-197, Rhyolite lanceolate point base
c	TLM 217	UA84-59-223, Rhyolite lanceolate point base

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Figure		Site	Accession Number, Description
	d	TLM 217	UA84-59-22, Chert preform
	e	TLM 217	UA84-59-25, Basalt biface fragment
	f	TLM 217	UA84-59-222, Argillite biface fragment
	g	TLM 217	UA84-59-64, Basalt biface (point tip)
	h	TLM 217	UA84-59-246, Basalt biface fragment
	i	TLM 218	UA83-240-3, Argillite biface fragment
	j	TLM 218	UA83-240-2, Chert flake core
	k	TLM 218	UA83-240-1, Chert flake core
	l	TLM 219	UA83-241-1, Chert burin
	m	TLM 219	UA83-241-2, Chert scraper
D.393.	a	TLM 220	UA84-60-139, Bone, point fragments
	b	TLM 220	UA84-60-148, Modified antler fragment
	c	TLM 220	UA84-60-75, Bone beamer
	d	TLM 220	UA84-60-191, Diorite tci tho
D.394.	a	TLM 222 Locus B	UA84-69-156, Turquoise seed bead
	b	TLM 222 Locus D	UA84-69-46, Copper fragment
	c	TLM 226 Locus B	UA84-73-9, White tube bead
	d	TLM 226 Locus B	UA84-73-13, Tci tho
	e	TLM 230	UA84-79-29, Chert rejuvenation flake
	f	TLM 230	UA84-79-34, Chert flake core fragment
	g	TLM 230	UA84-79-27, Quartzite notched pebble
	h	TLM 230	UA84-79-41, Hammerstone/abrader

KEY TO FIGURES

Figure	Site	Accession Number, Description
D.395. a	TLM 232	UA84-84-50, Hammerstone
b	TLM 232	UA84-84-5, Tci tho
c	TLM 232	UA84-84-17, Modified cobble
D.396. a	TLM 232	UA84-84-33, 32, Modified longbone fragments (awl)
b	TLM 235 Locus C	UA84-90-10, Basalt biface fragment
c	TLM 240	UA84-97-6, White tube bead
d	TLM 240	UA84-97-10, Red-on-white Cornaline d'Aleppo bead
e	TLM 240	UA84-97-13, Blue tube bead
f	TLM 240	UA84-97-14, Blue tube bead
g	TLM 240	UA84-97-39, Creamware
h	TLM 247	UA84-133-1, Hammerstone
i	TLM 251	UA84-244-1, Modified cobble
D.397. a	HEA 174	UA81-201-3, Chert scraper
b	HEA 174	UA81-201-2, Basalt scraper
c	HEA 174	UA81-201-4, Chert scraper
d	HEA 174	UA81-201-1, Quartzite preform
e	HEA 174	UA80-252-2, Basalt modified flake
f	HEA 174	UA81-201-5, Chert scraper
g	HEA 174	UA80-252-1, Tci tho
D.398. a	HEA 175	UA81-200-43, Chert blade fragment
b	HEA 175	UA80-253-1, Argillite blade fragment
c	HEA 175	UA81-200-332, Chert blade fragment
d	HEA 175	UA81-200-8, Chert blade fragment
e	HEA 175	UA81-200-128, Chert blade fragment

KEY TO FIGURES

Figure	Site	Accession Number, Description
f	HEA 175	UA81-200-23, Rhyolite biface
g	HEA 175	UA81-200-1, Basalt side-notched point
h	HEA 175	UA81-200-348, Argillite stemmed point
i	HEA 175	UA81-200-340, Argillite biface fragment
j	HEA 175	UA81-200-372, Chert biface fragment
k	HEA 175	UA81-200-305, Chalcedony biface fragment
l	HEA 175	UA81-200-373, Chert biface fragment
m	HEA 175	UA81-200-371, Chert flake core fragment
n	HEA 175	UA81-200-368, Chert flake core fragment
o	HEA 175	UA80-253-2, Chert biface
p	HEA 175	UA81-200-280, Argillite flake core
D.399. a	HEA 177	UA81-210-30, Chert burin spall
b	HEA 177	UA81-210-29, Chert flake core fragment
c	HEA 178	UA81-211-29, Chert flake core
d	HEA 180	UA81-257-13, Chalcedony blade fragment
e	HEA 180	UA81-257-28, Chert blade fragment
f	HEA 180	UA81-257-31, Chalcedony burin spall
g	HEA 180	UA81-257-30, Chert blade fragment
h	HEA 180	UA81-257-11, Chert modified flake
i	HEA 180	UA81-257-10, Quartz modified flake
j	HEA 180	UA81-257-17, Chert modified flake
k	HEA 182	UA81-259-1, Rhyolite side-notched point
l	HEA 185	UA81-282-3, Chert scraper
m	HEA 185	UA81-282-8, Chert flake core fragment
D.400. a	HEA 186	UA81-279-17, Chert biface fragment
b	HEA 186	UA81-279-11, Chert biface fragment
c	HEA 186	UA81-279-4, Chert biface fragment
d	HEA 186	UA81-279-14, Chert biface fragment

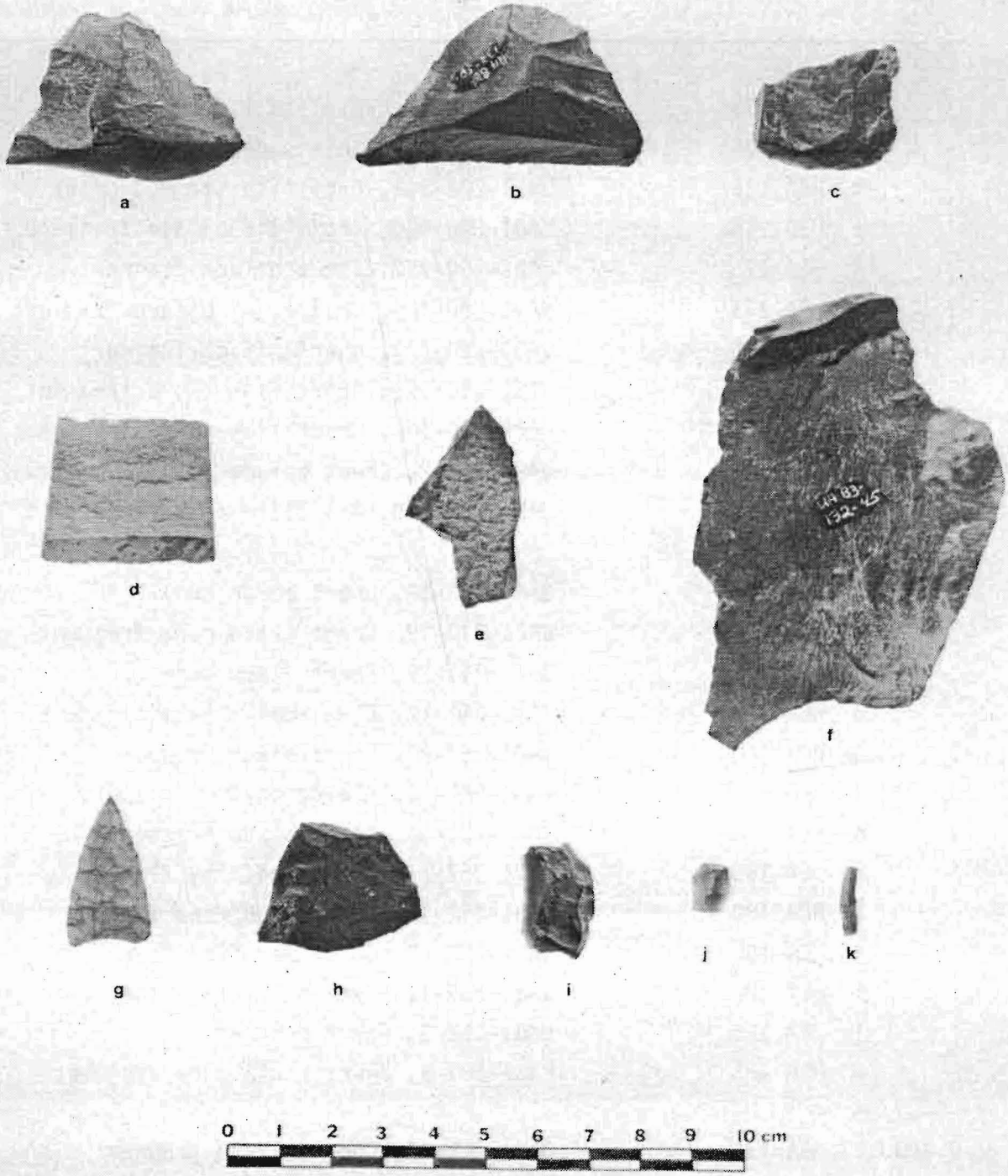


Figure D.362. Artifacts from Sites TLM 016 (a-f) and TLM 018 (g-k)

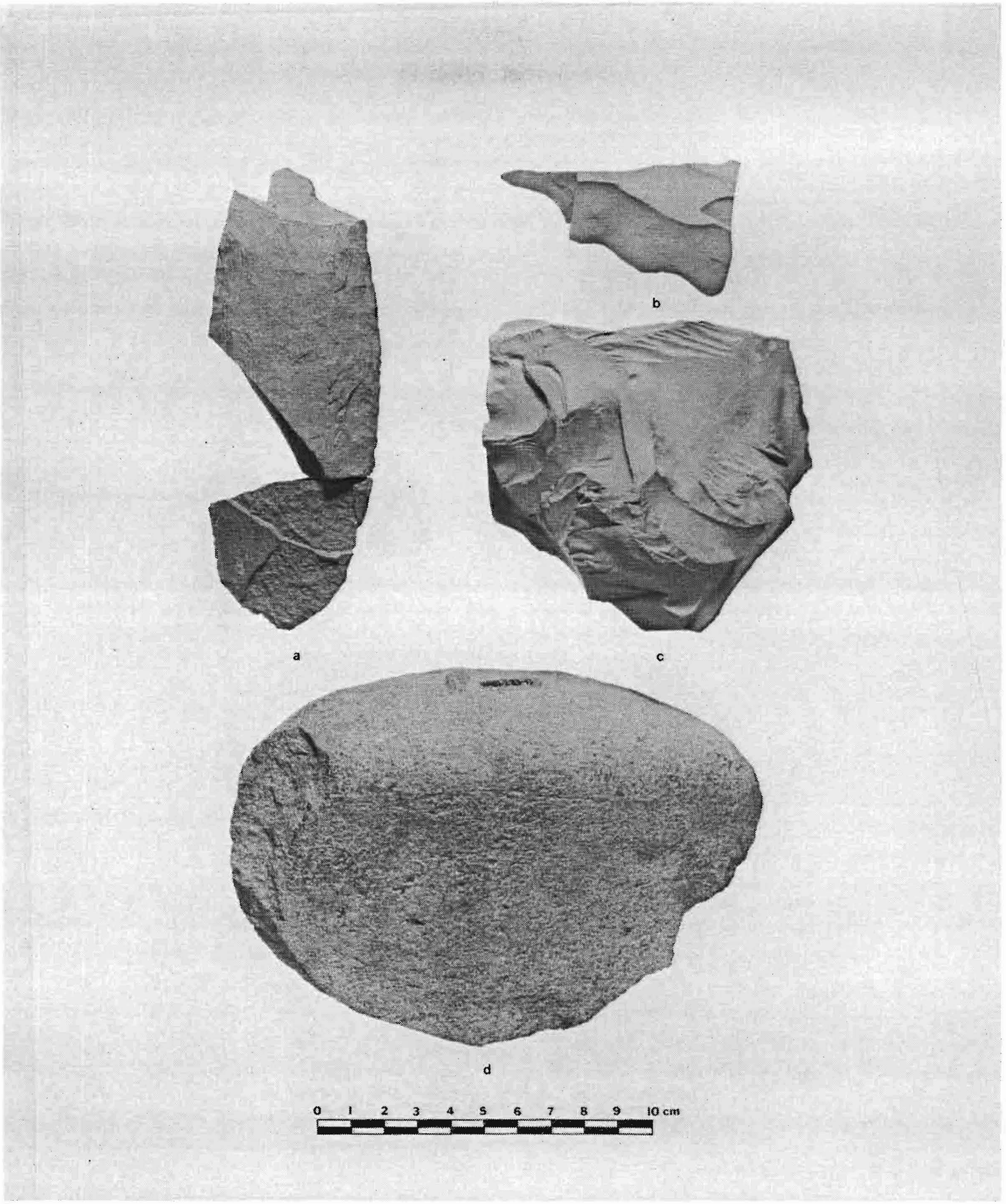


Figure D.363. Artifacts from Site TLM 018

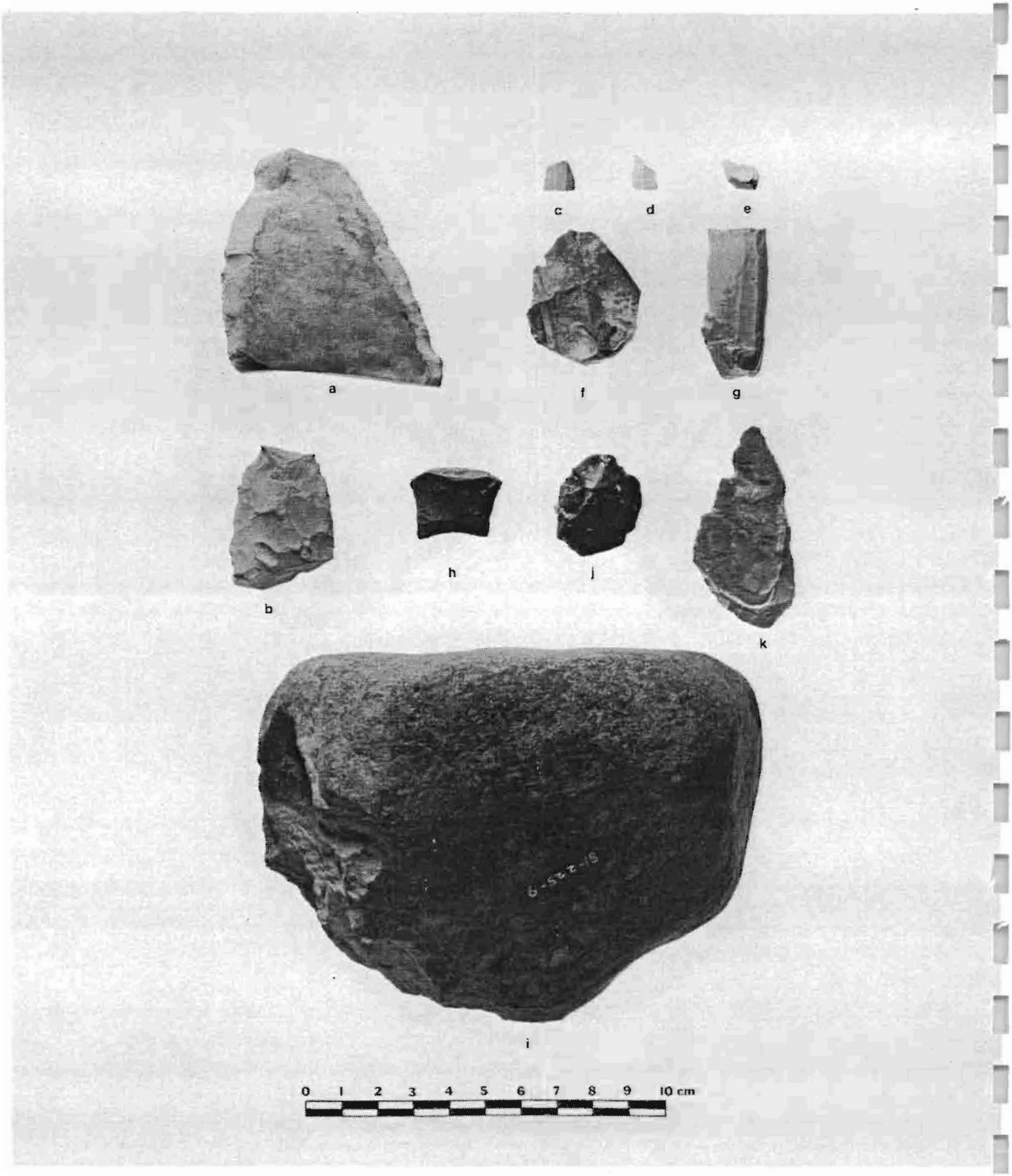


Figure D.364. Artifacts from Sites TLM 021 (a-b), TLM 025 (c-i), and TLM 026 (j-k)

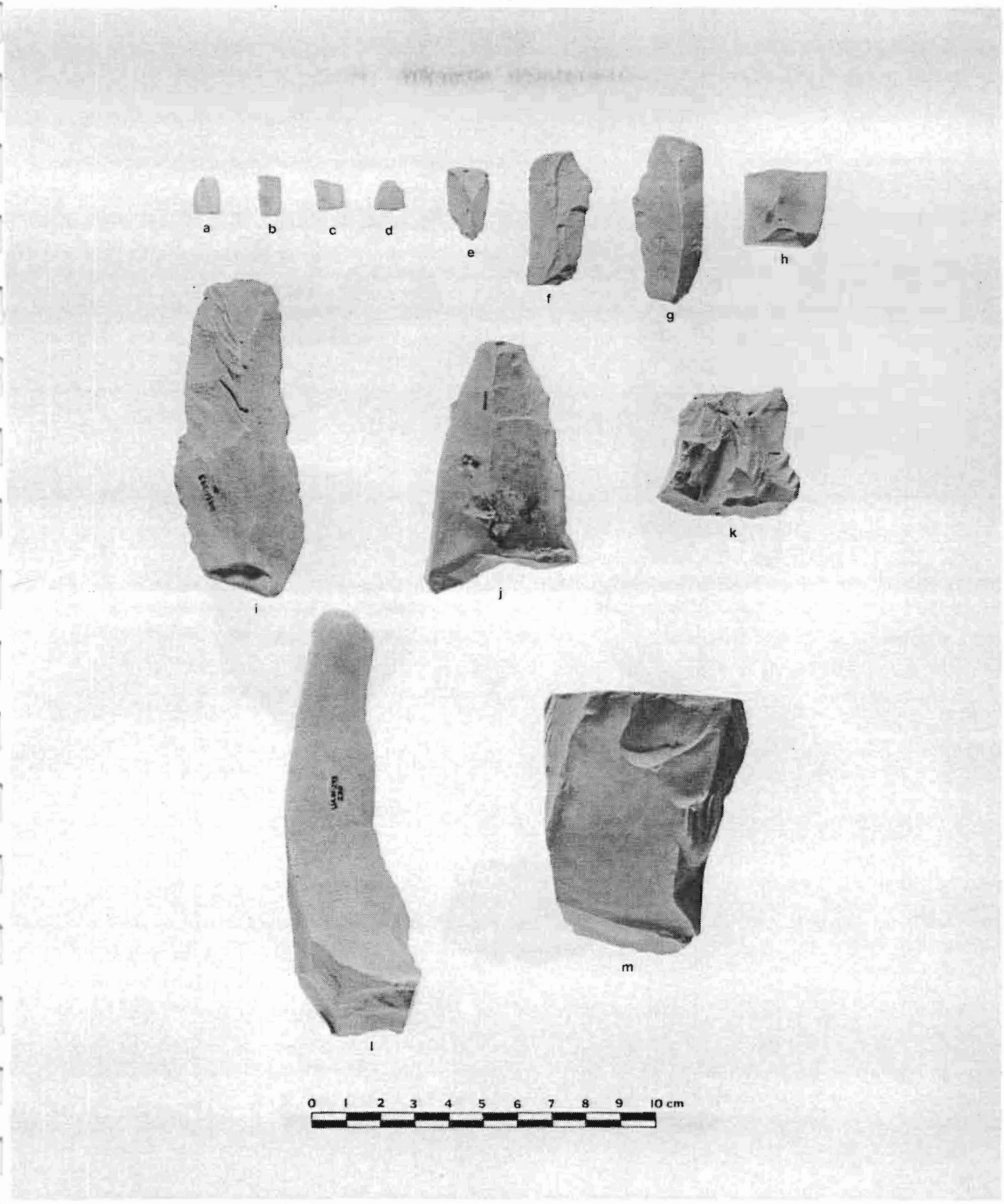


Figure D.365. Artifacts from Site TLM 027

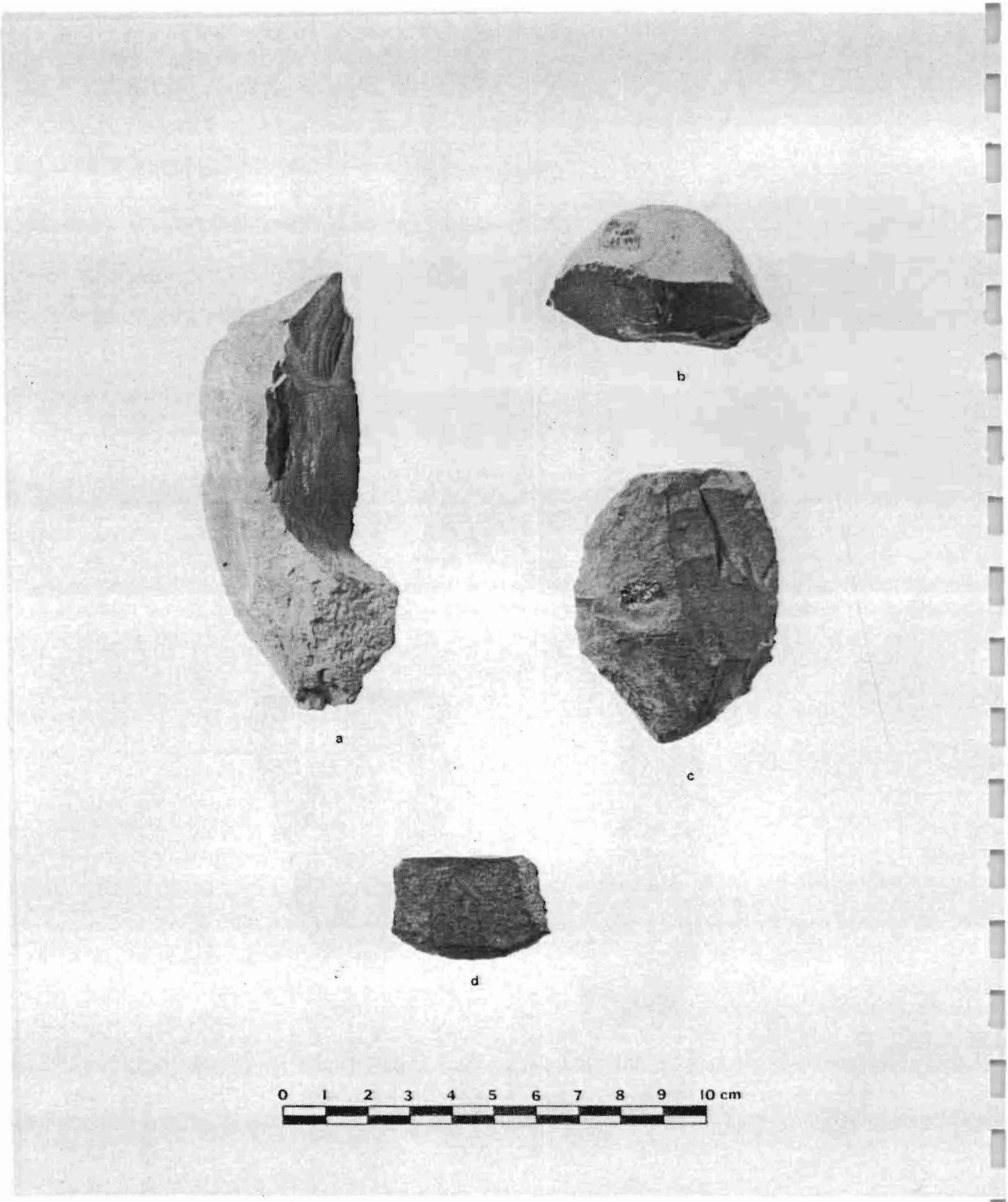


Figure D.366. Artifacts from Site TLM 027

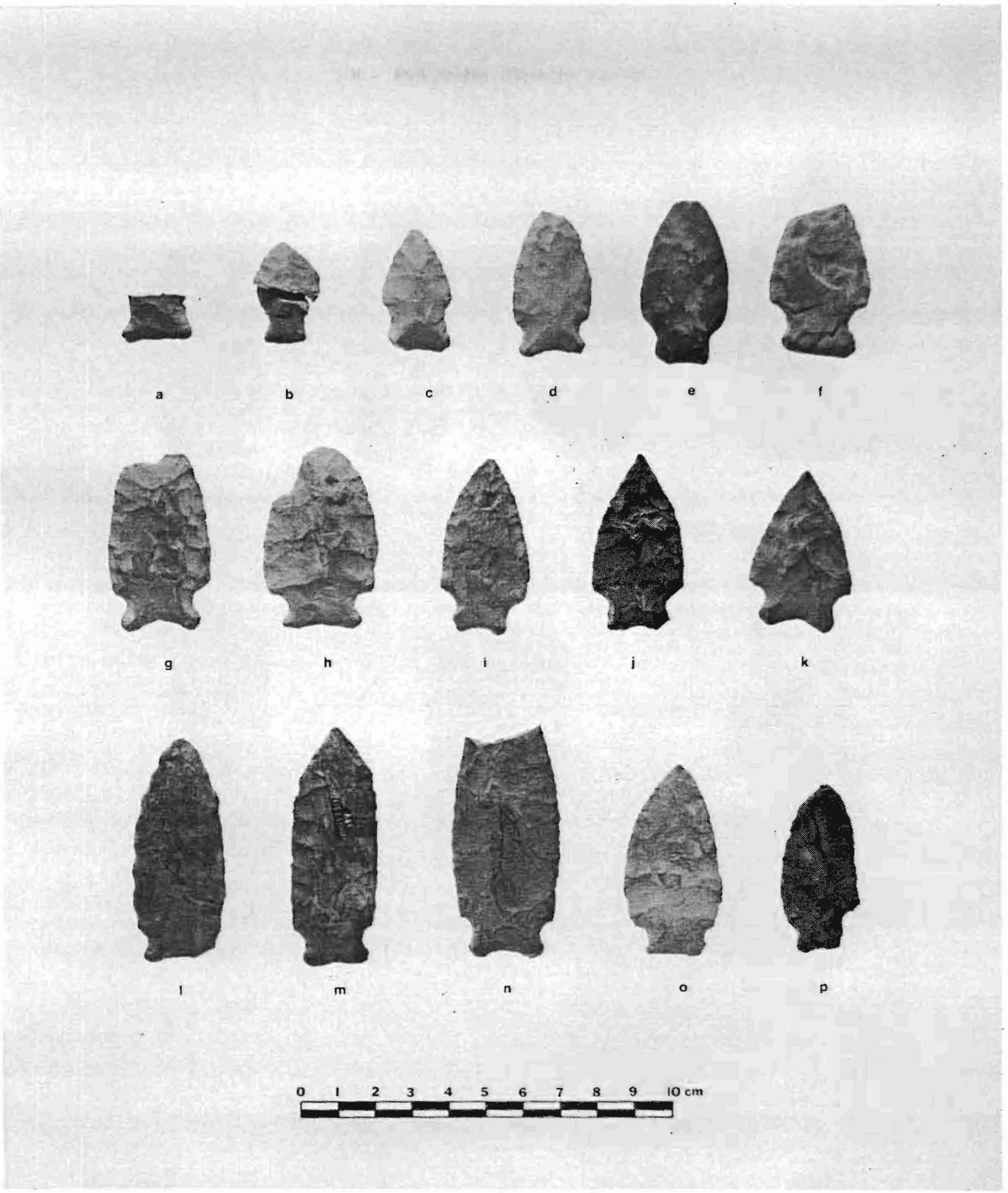


Figure D.367. Artifacts from Site TLM 030

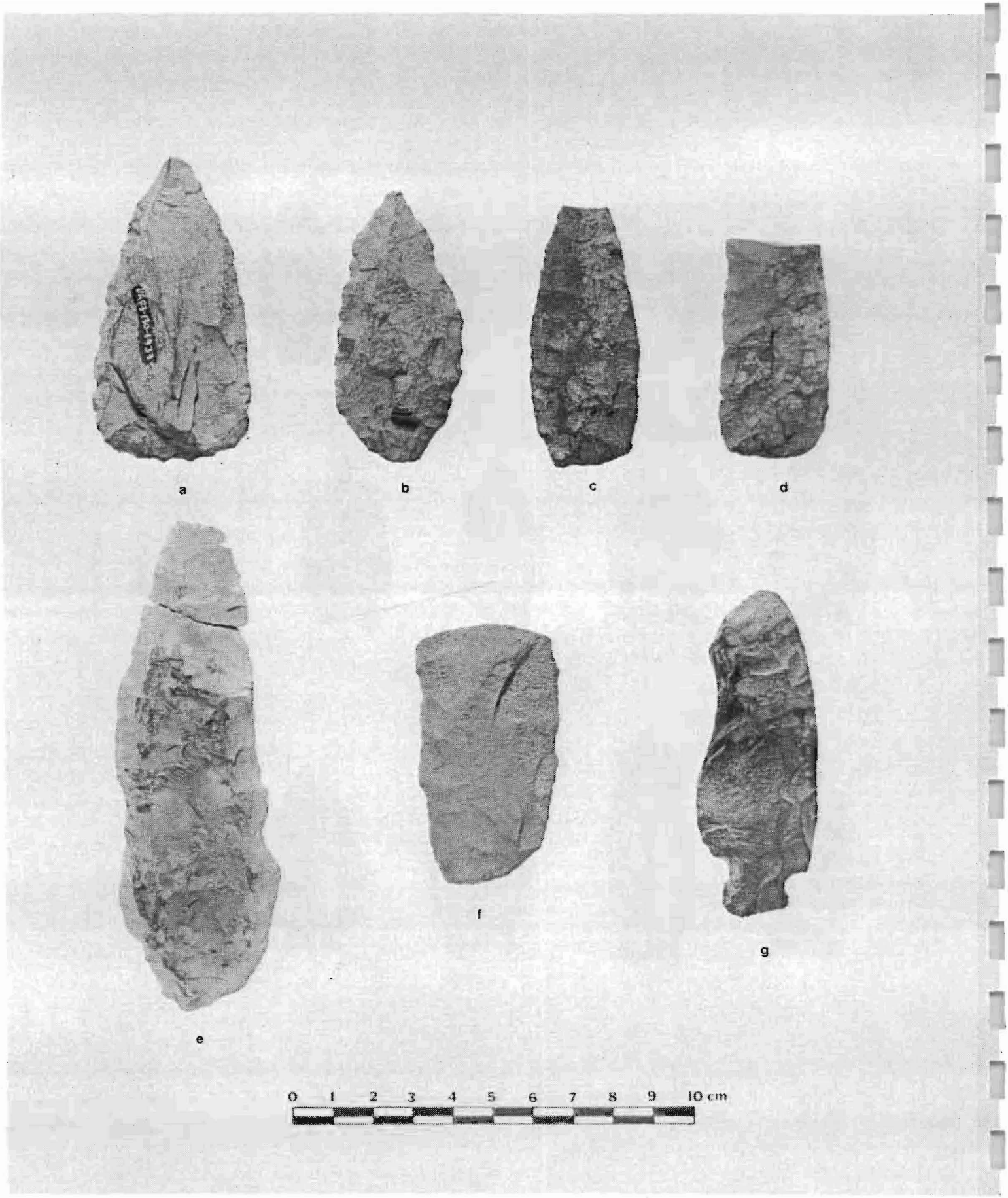


Figure D.368. Artifacts from Site TLM 030

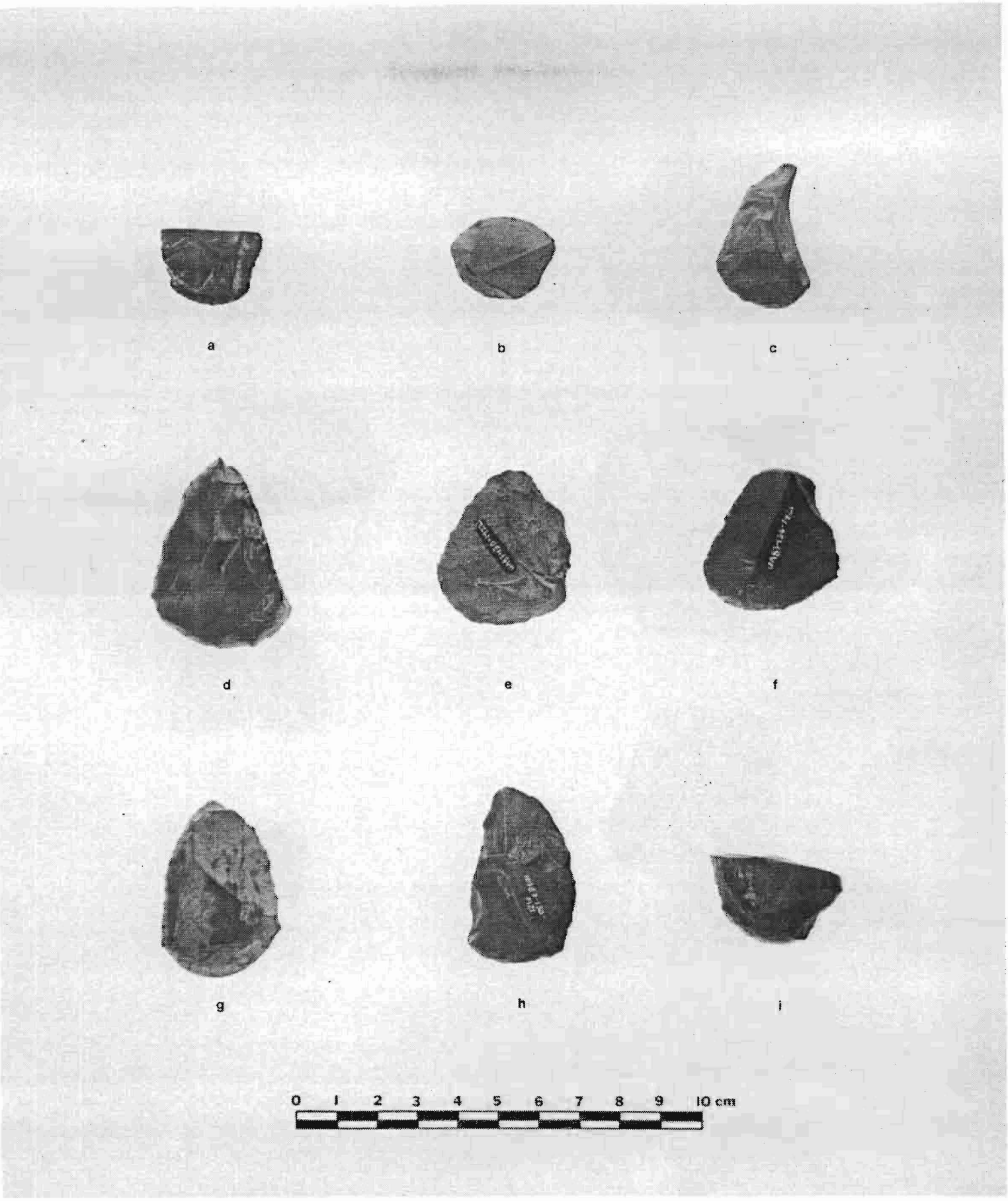


Figure D.369. Artifacts from Site TLM 030

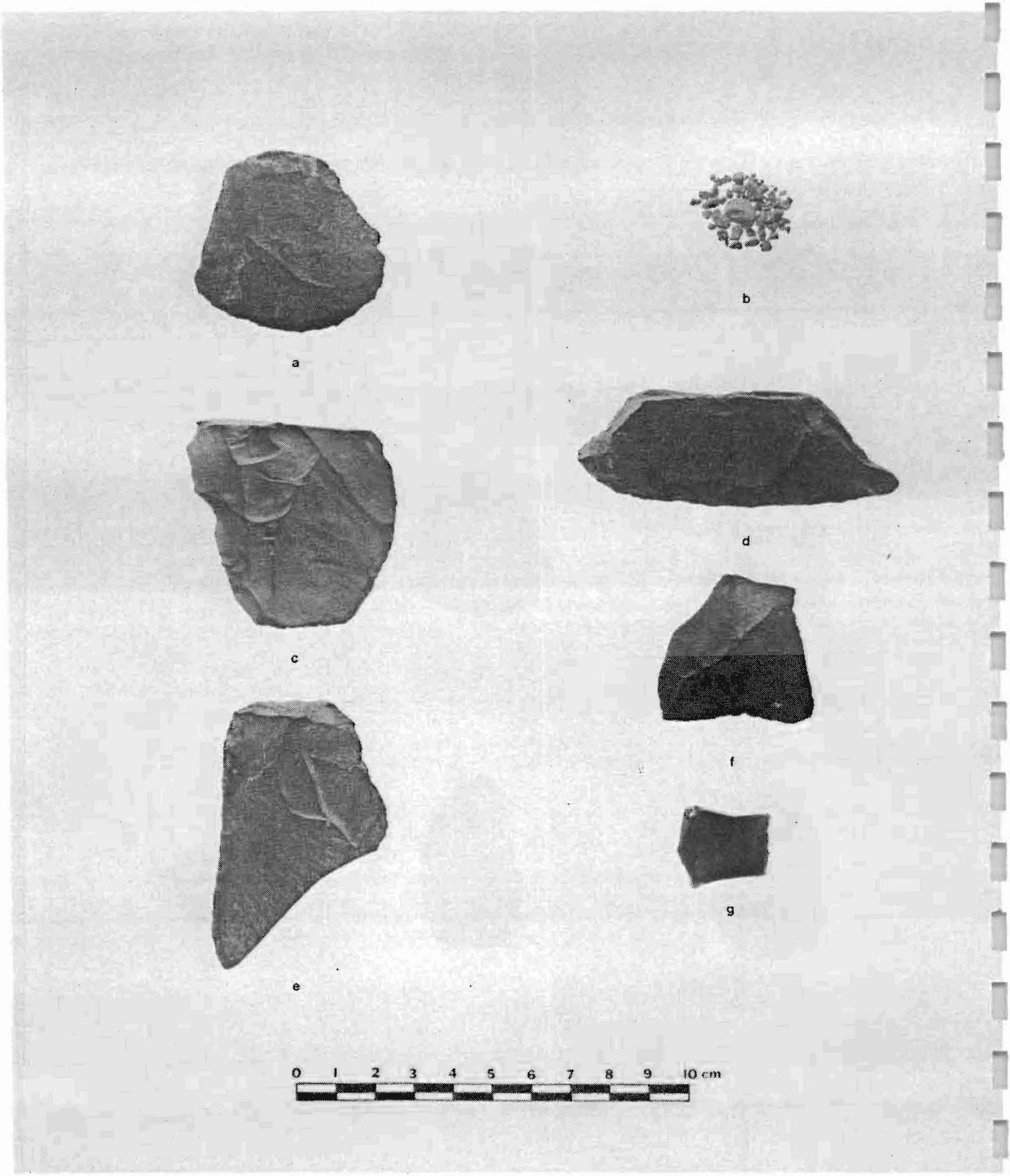


Figure D.370. Artifacts from Site TLM 030

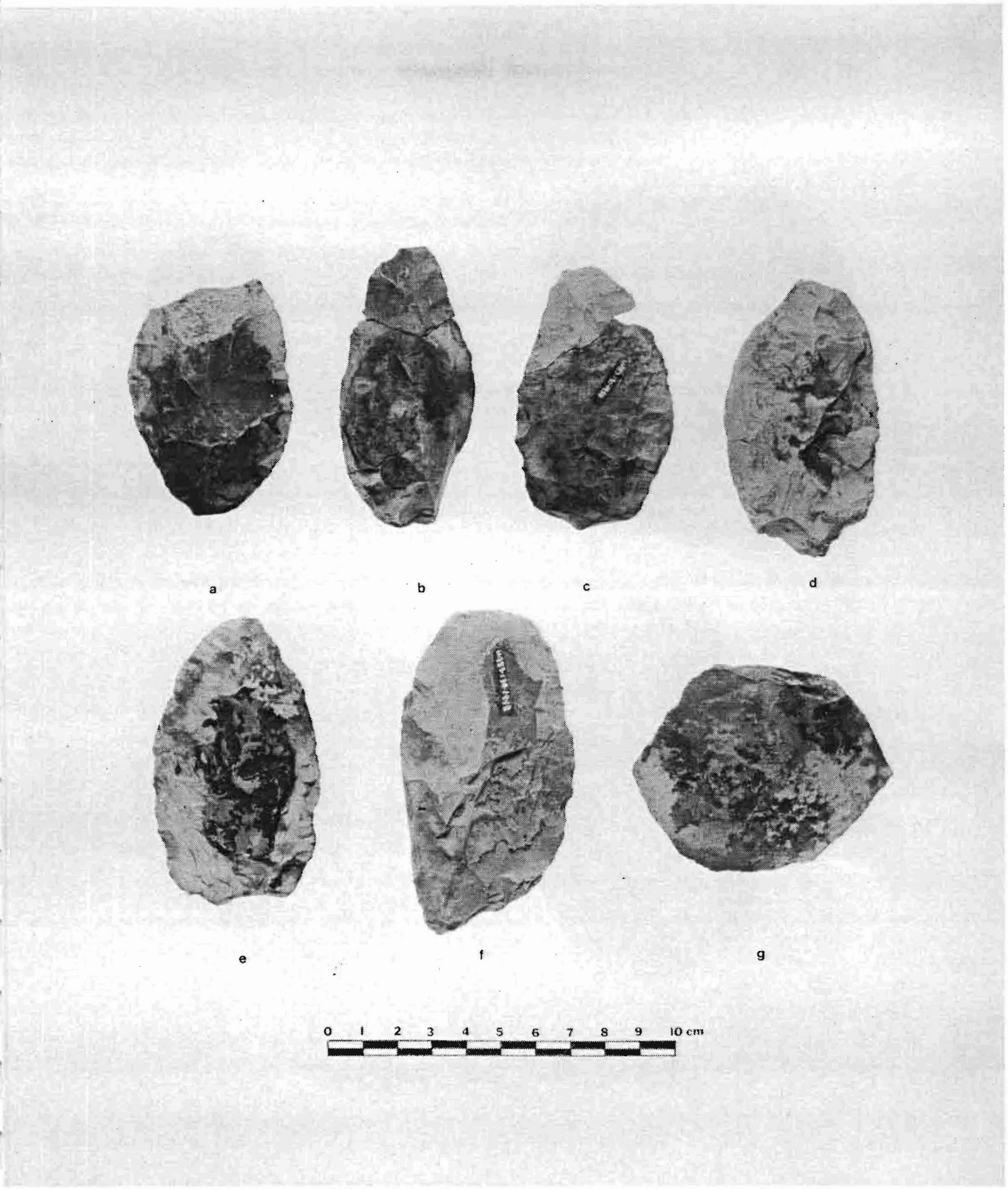


Figure D.371. Artifacts from Site TLM 030

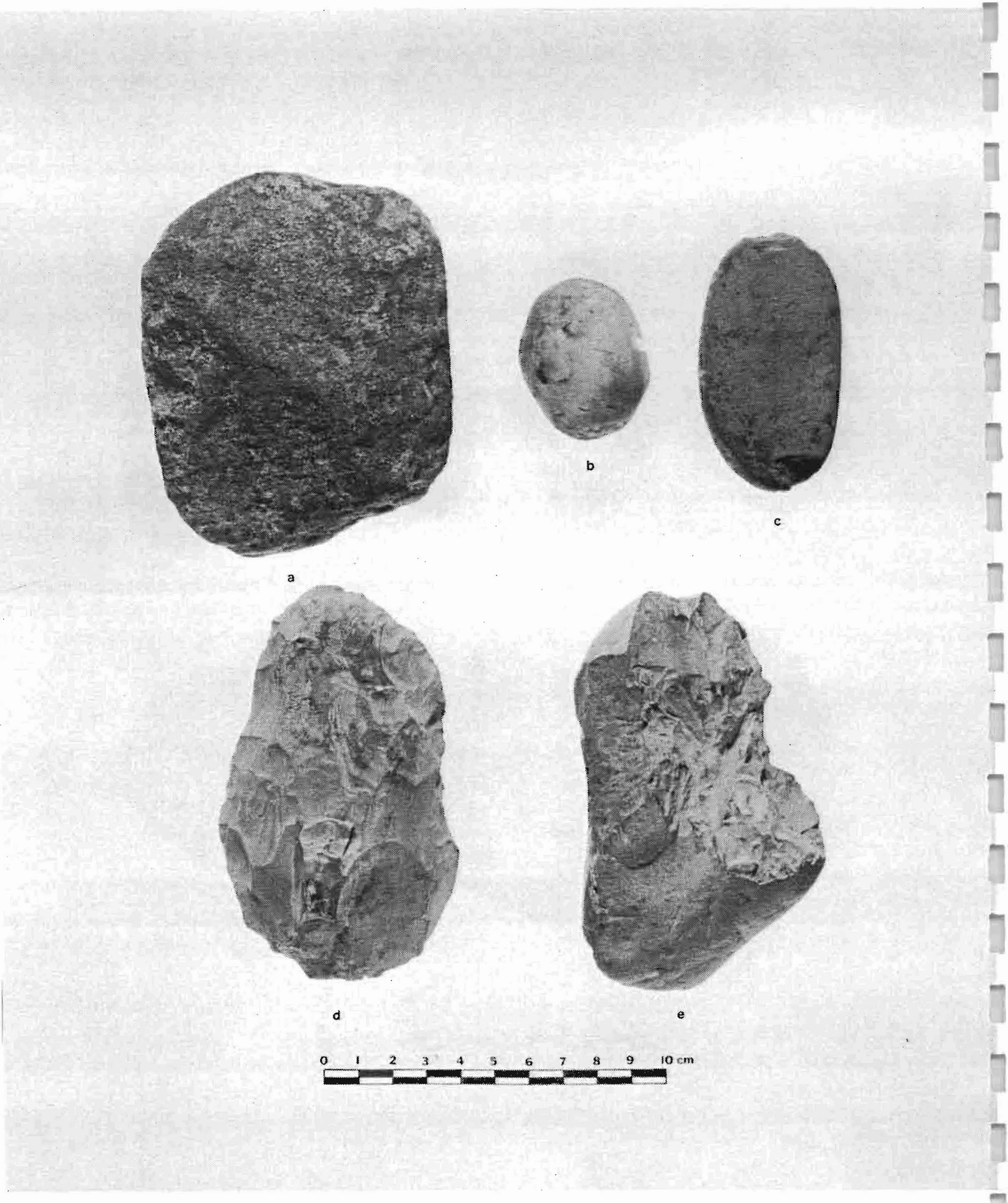


Figure D.372. Artifacts from Site TLM 030

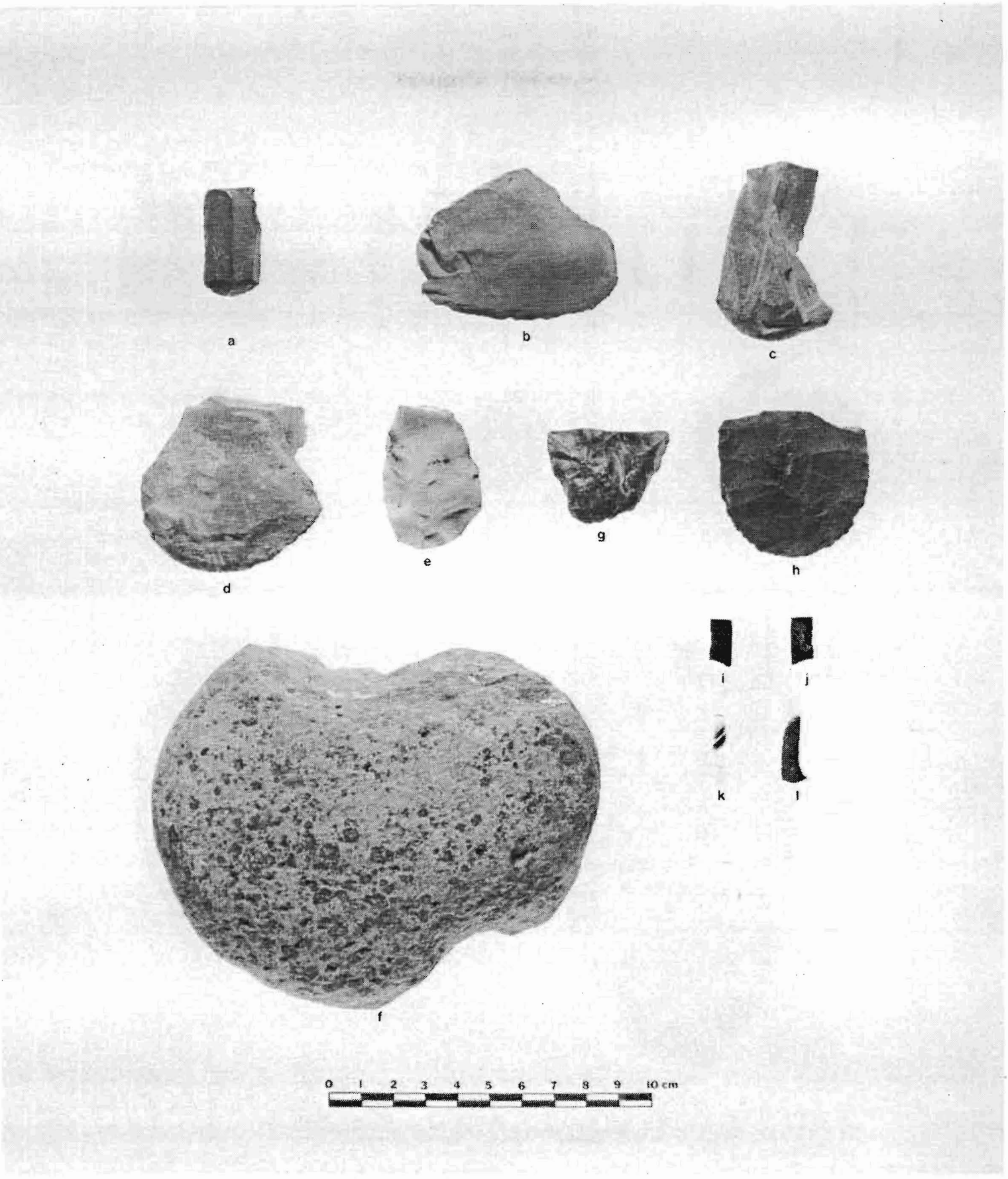


Figure D.373. Artifacts from Sites TLM 031 (a), TLM 032 (b-f), TLM 033 (g), TLM 039 (h), and TLM 039 (i-l)

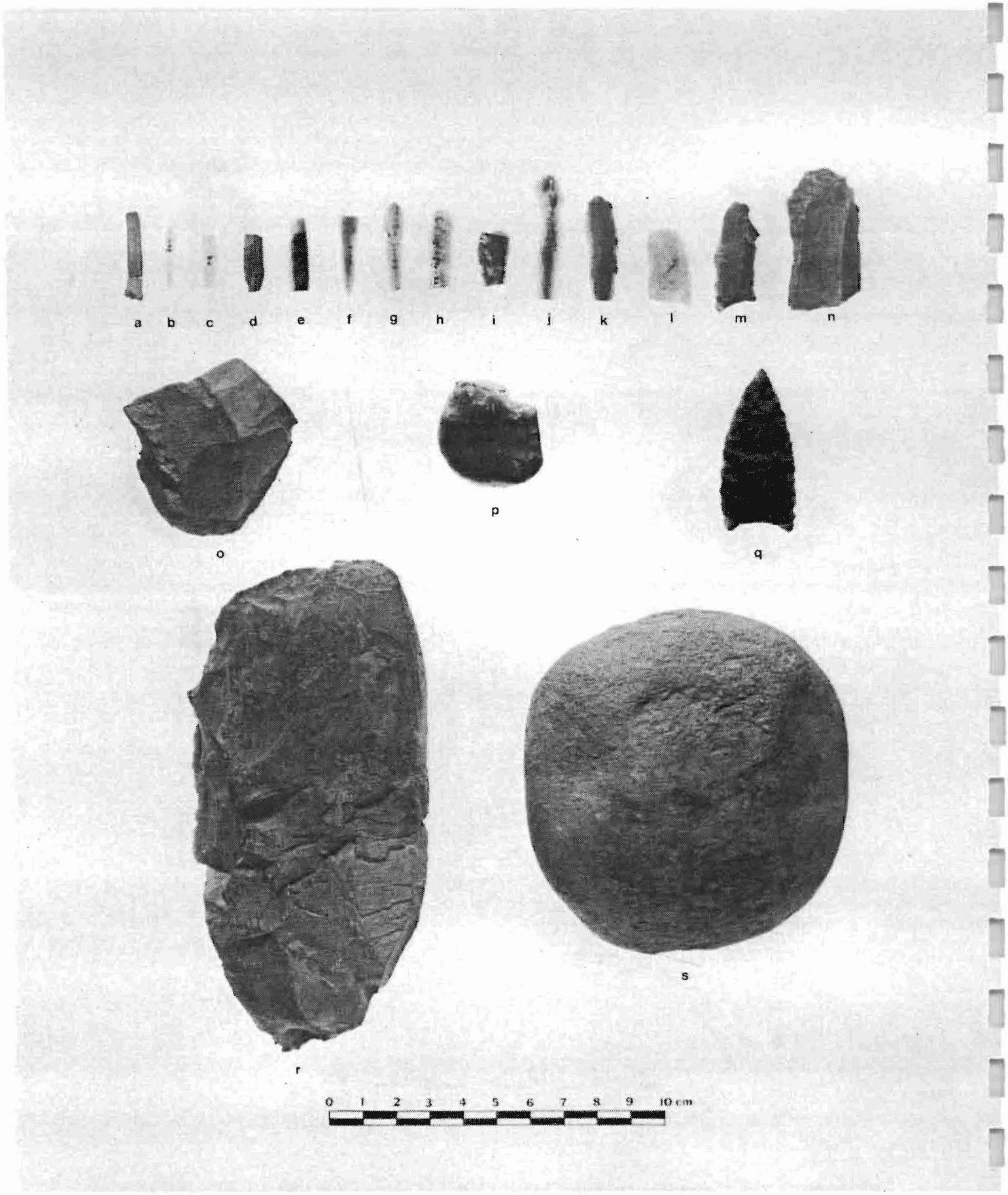


Figure D.374. Artifacts from Site TLM 040

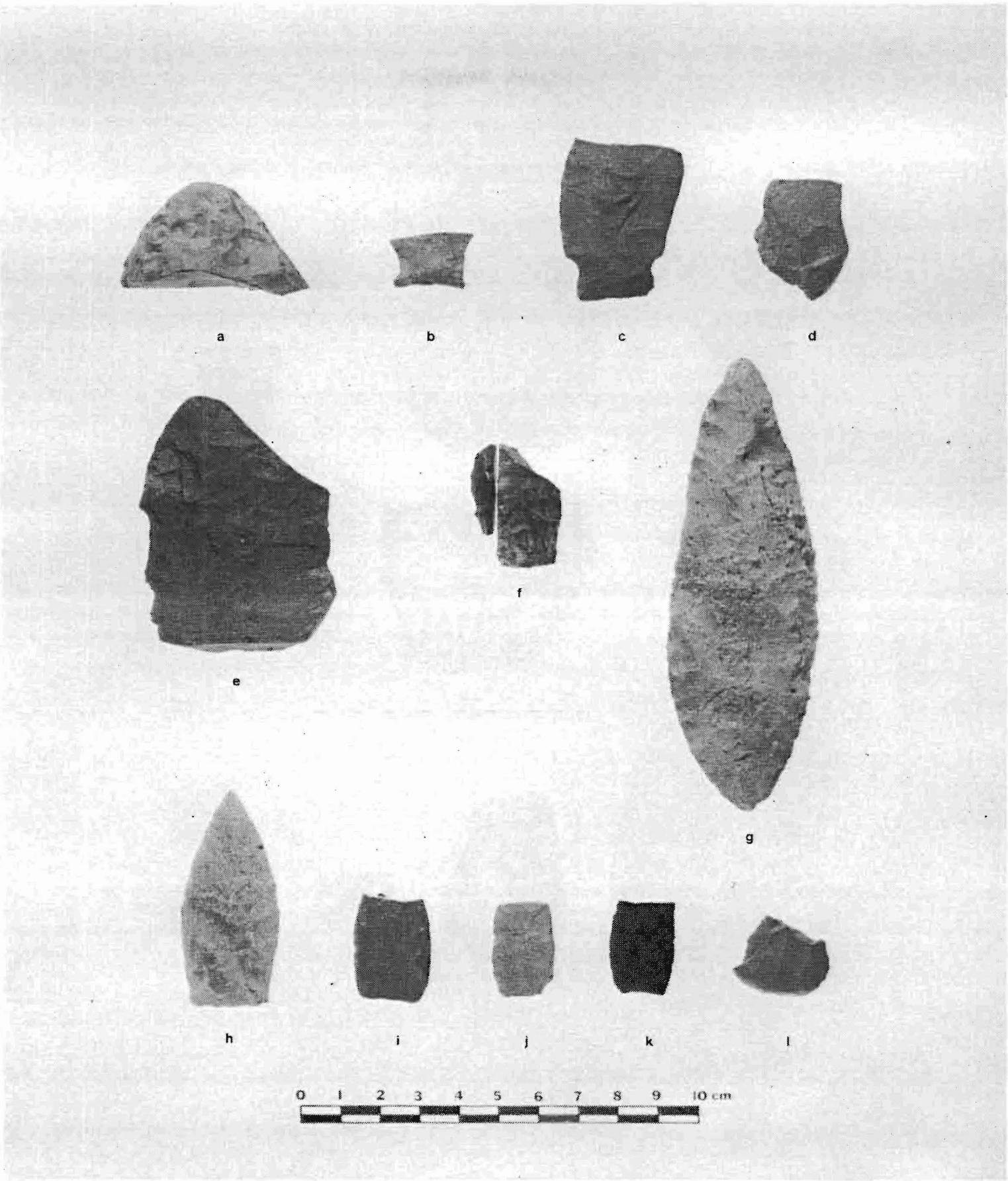


Figure D.375. Artifacts from Sites TLM 042 Locus A (a), TLM 042 Locus B (b-e), TLM 044 (f-g), TLM 045 (h), and TLM 046 (i-l)

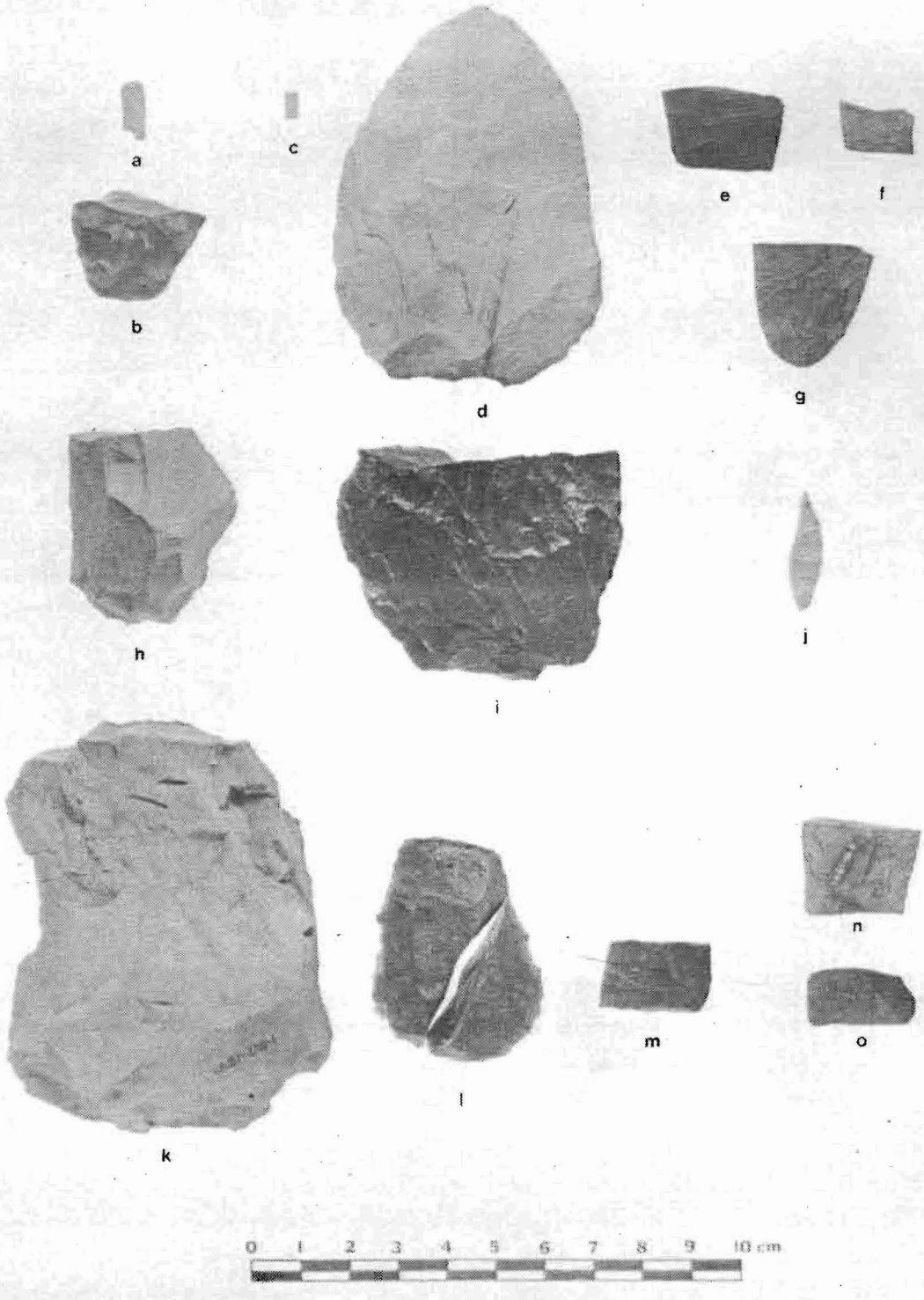


Figure D.376. Artifacts from Sites TLM 047 (a-b), TLM 048 (c-d), TLM 052 (e-g), TLM 055 (h), TLM 060 (i), TLM 061 (j), TLM 062 (k-m), and TLM 064 (n-o)

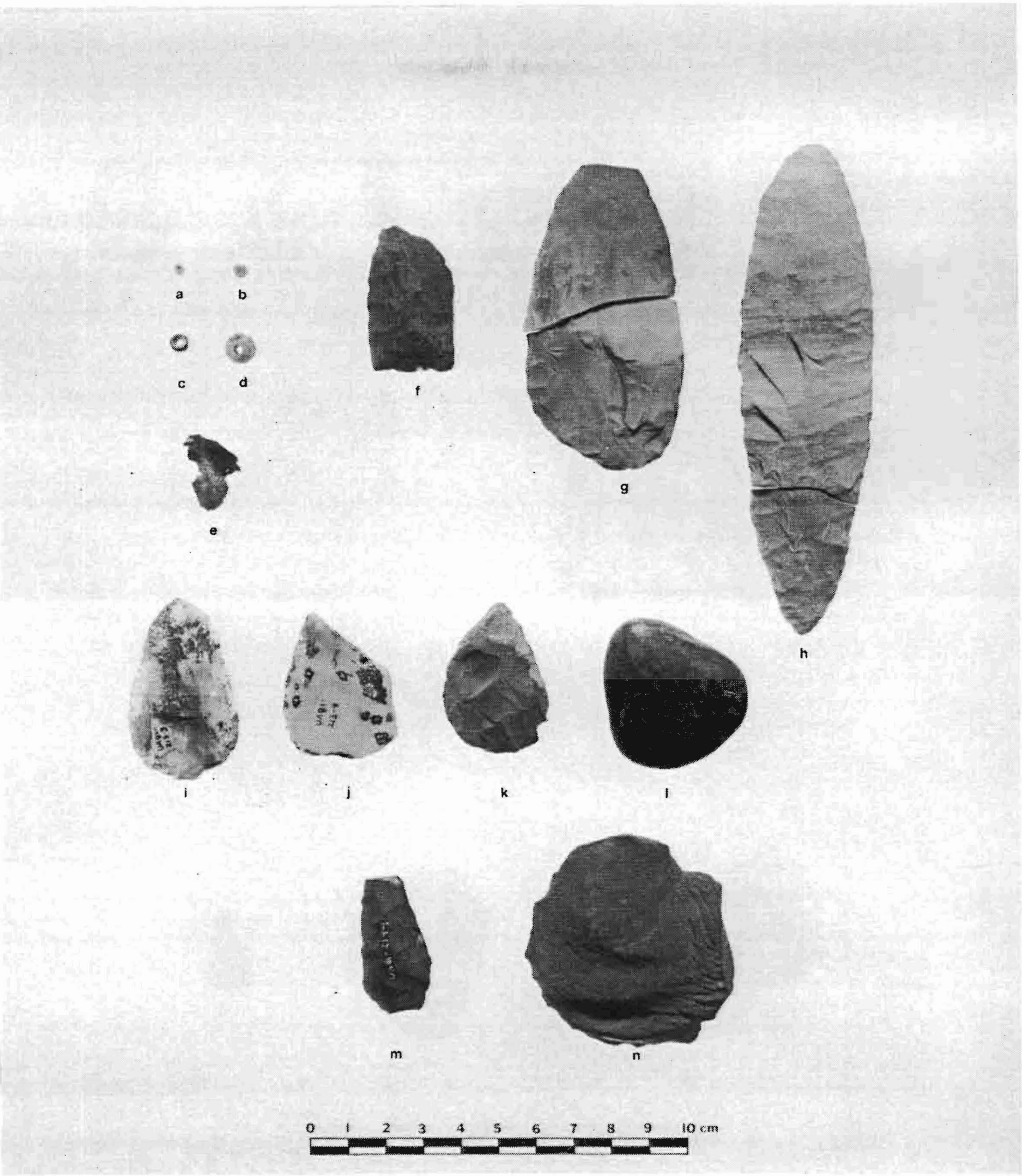


Figure D.377. Artifacts from Sites TLM 065 Locus A (a-e), TLM 066 (f-h), TLM 067 (i-l), and TLM 068 (m-n)

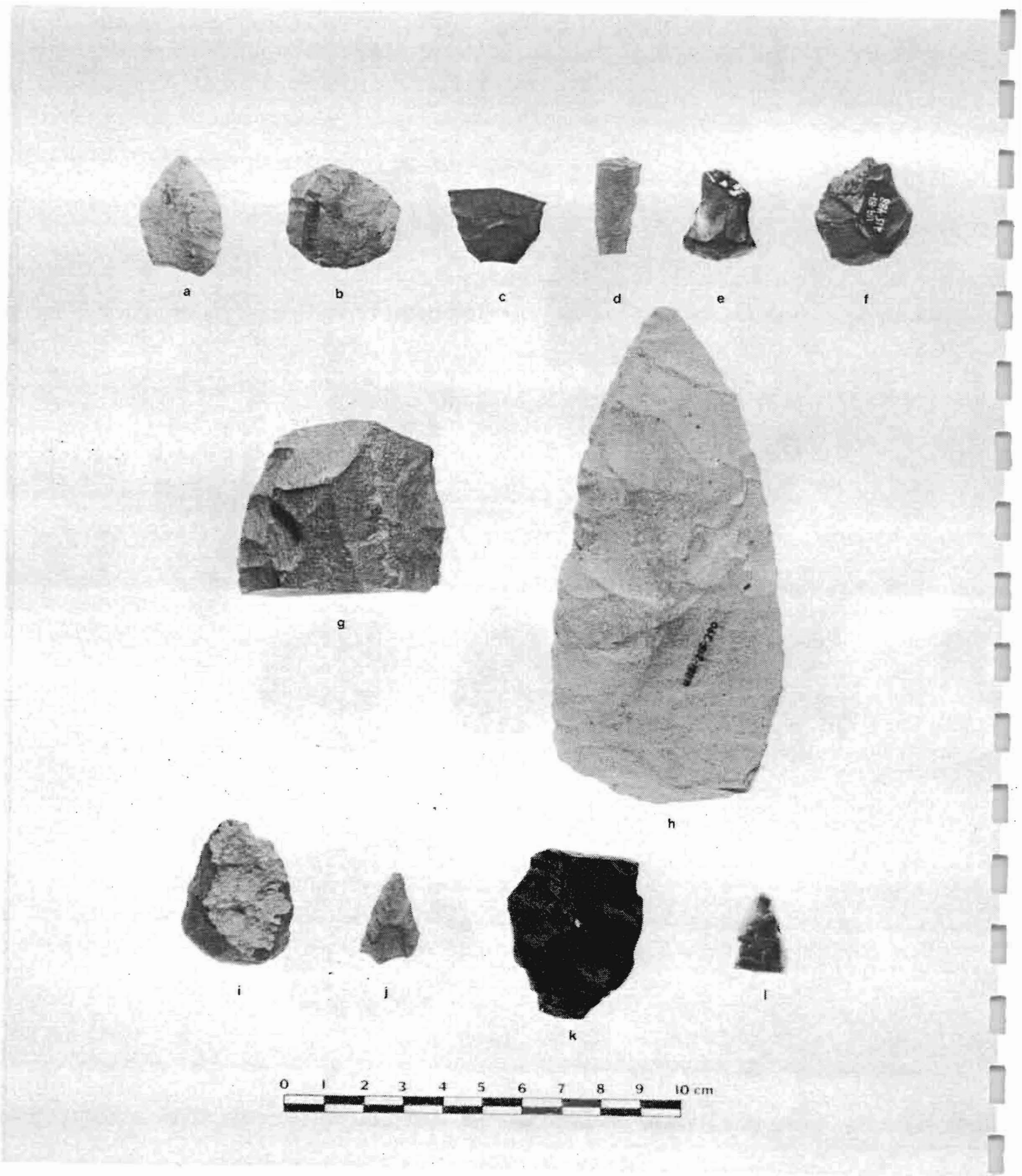


Figure D.378. Artifacts from Sites TLM 069 (a-h), TLM 070 (i), TLM 073 (j), TLM 075 (k), and TLM 076 (l)

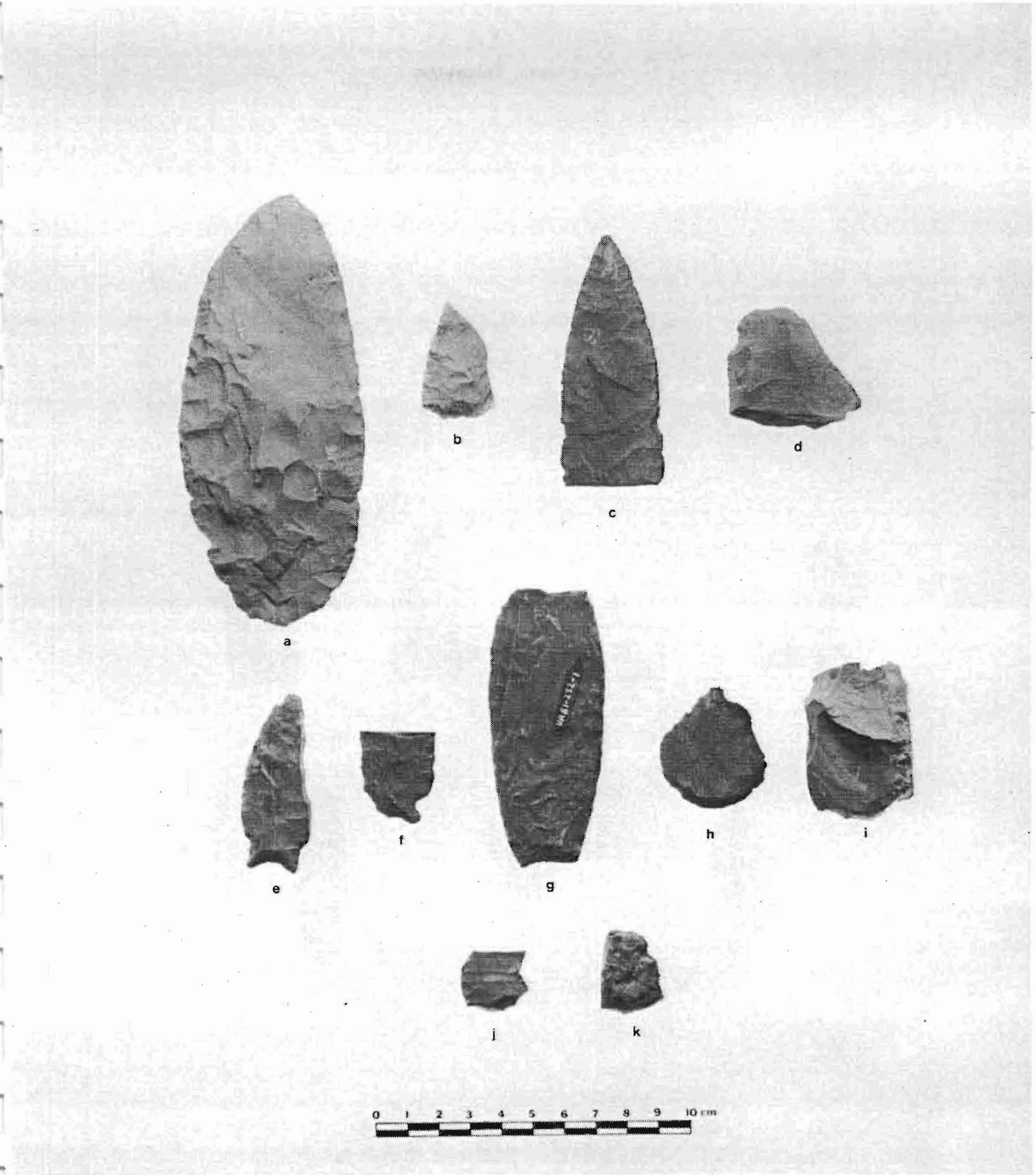


Figure D.379. Artifacts from Sites TLM 077 (a), TLM 089 (b), TLM 091 (c), TLM 094 (d), and TLM 097 (e-k)

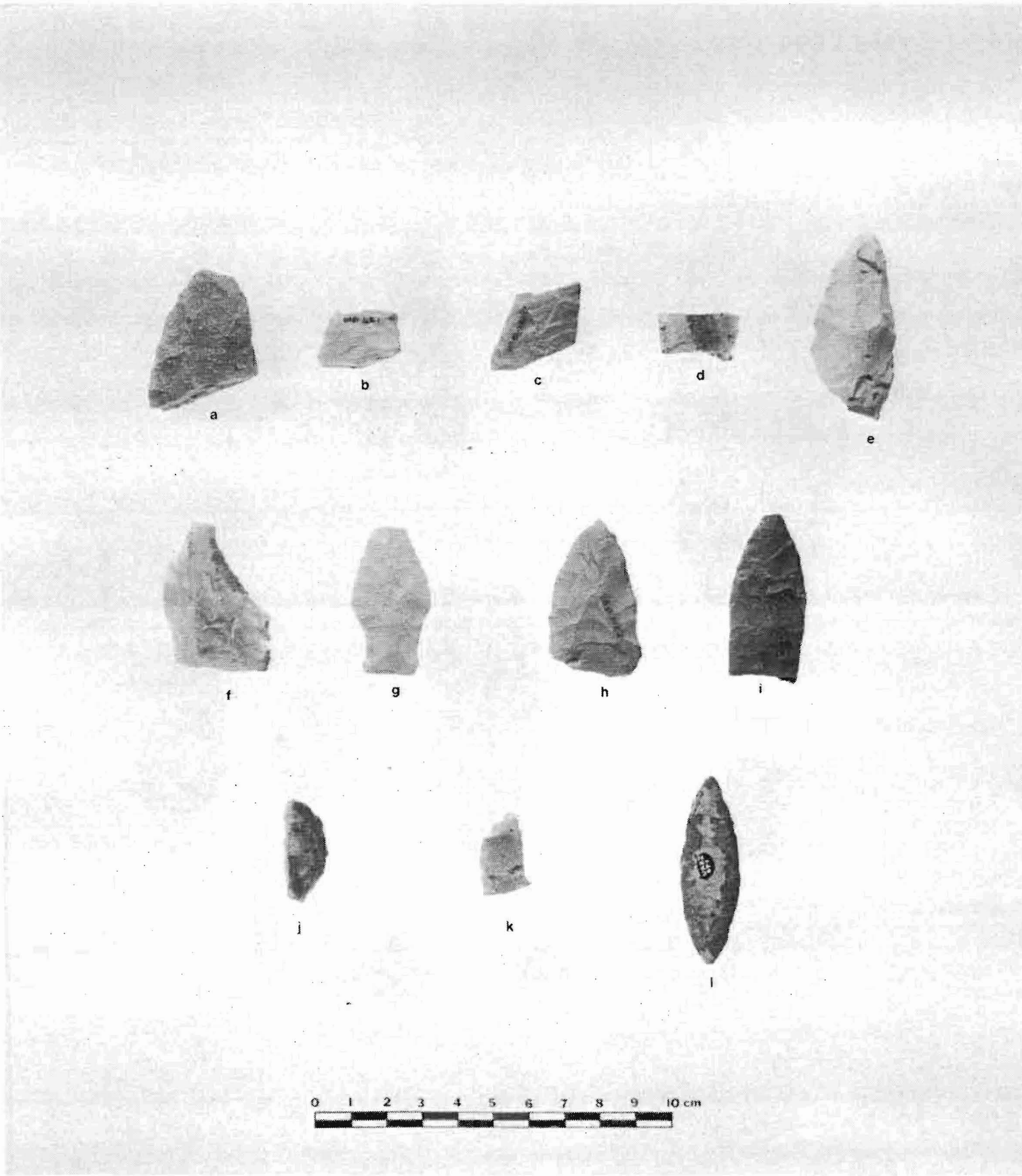


Figure D.380. Artifacts from Sites TLM 103 (a), TLM 106 (b), TLM 107 (c-e), TLM 110 (f), TLM 113 (g-h), TLM 115 (i), TLM 118 (j), TLM 119 (k), and TLM 124 (l)

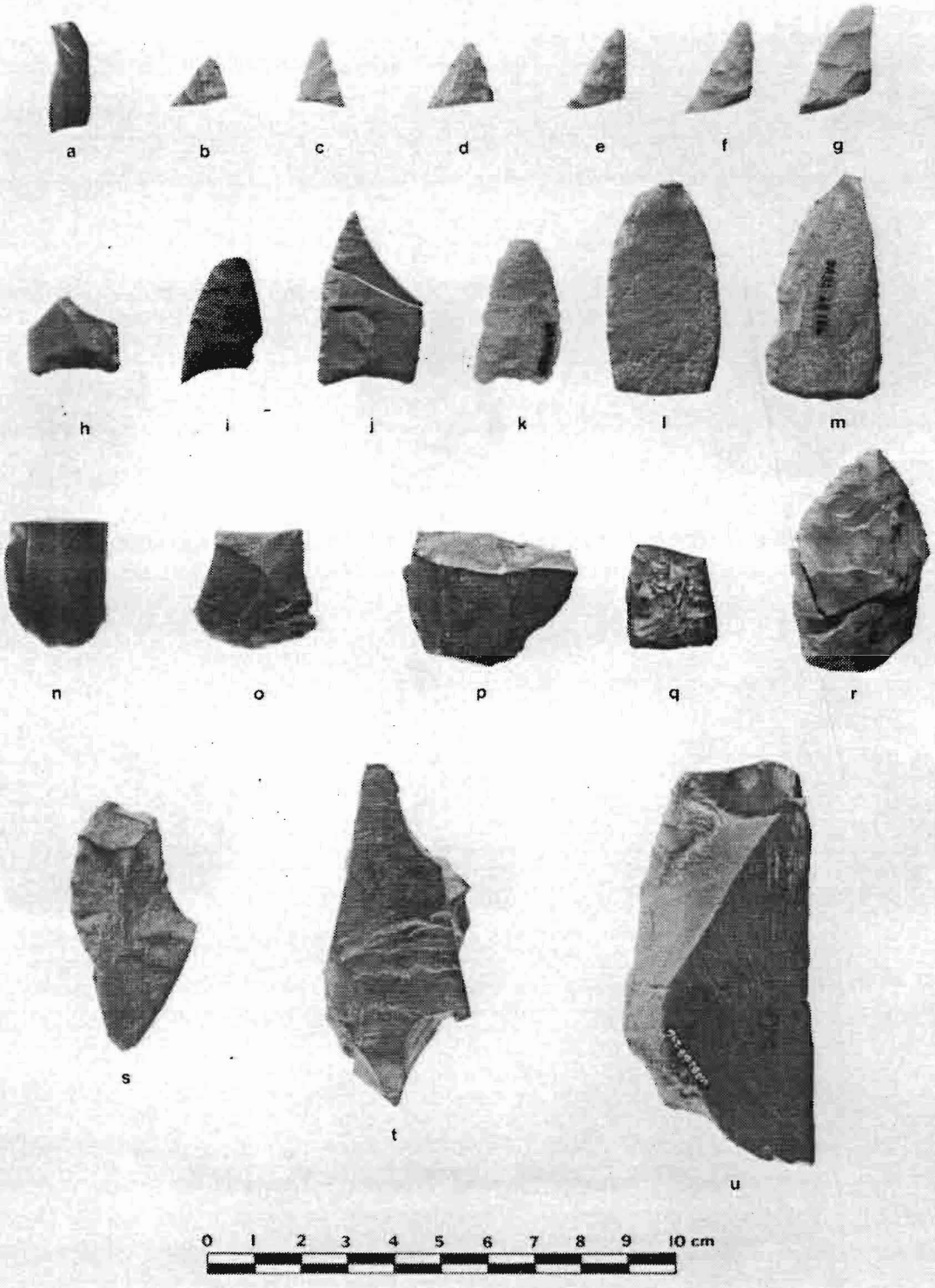


Figure D.381. Artifacts from Site TLM 128

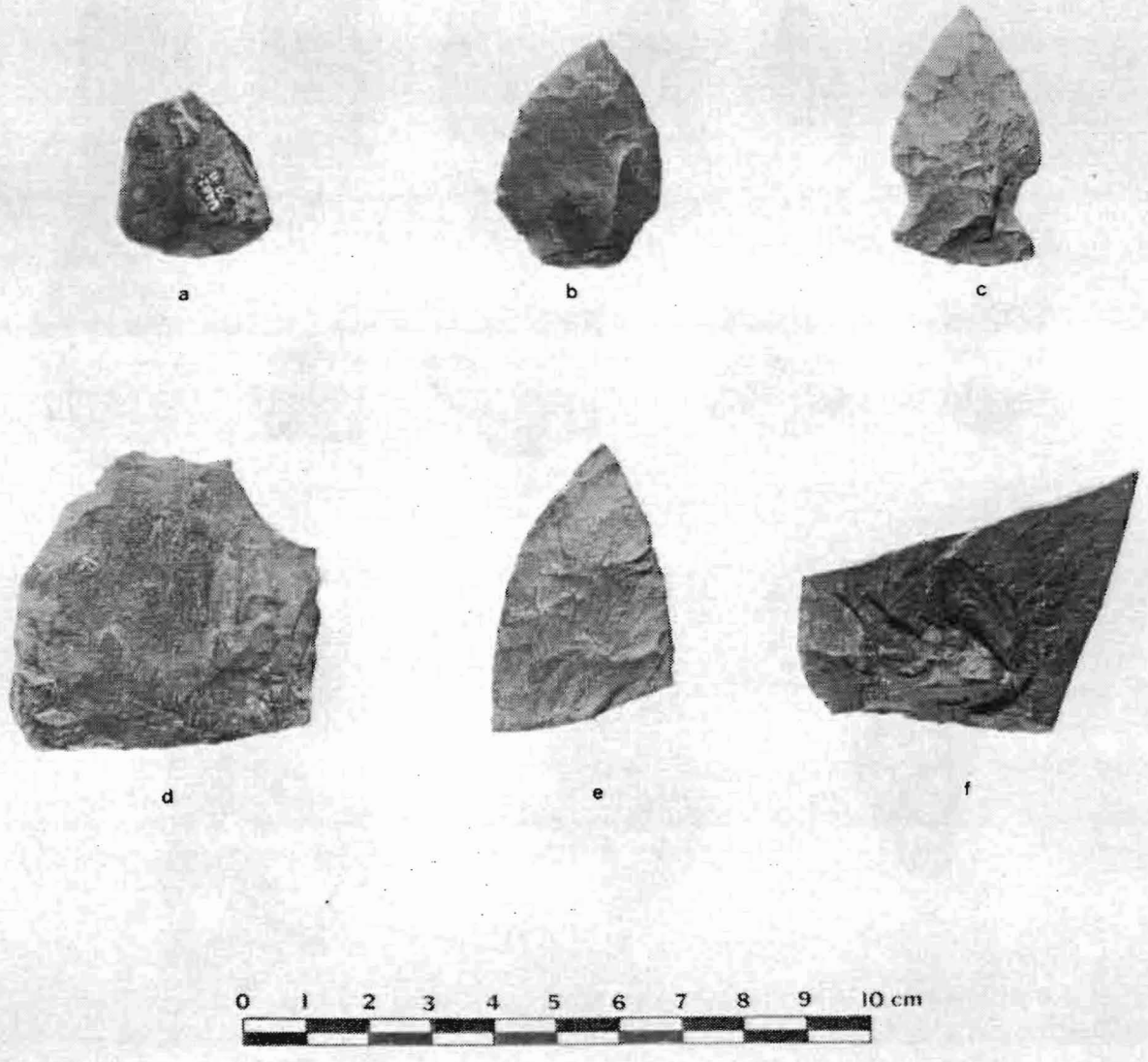


Figure D.382. Artifacts from Sites TLM 130 (a), TLM 133 (b), TLM 135 (c), TLM 136 (d), TLM 140 (e), TLM 141 (f)

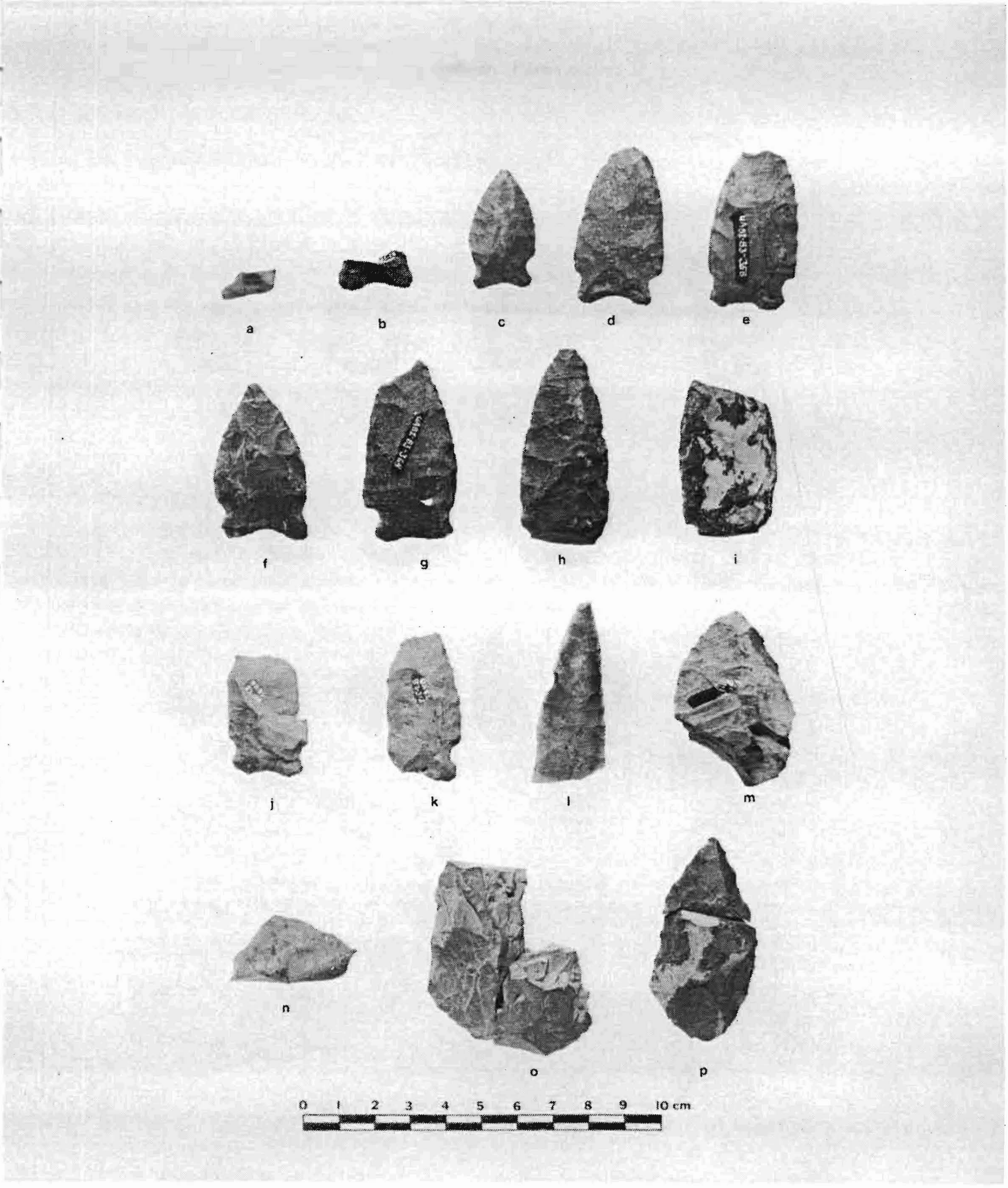


Figure D.383. Artifacts from Site TLM 143

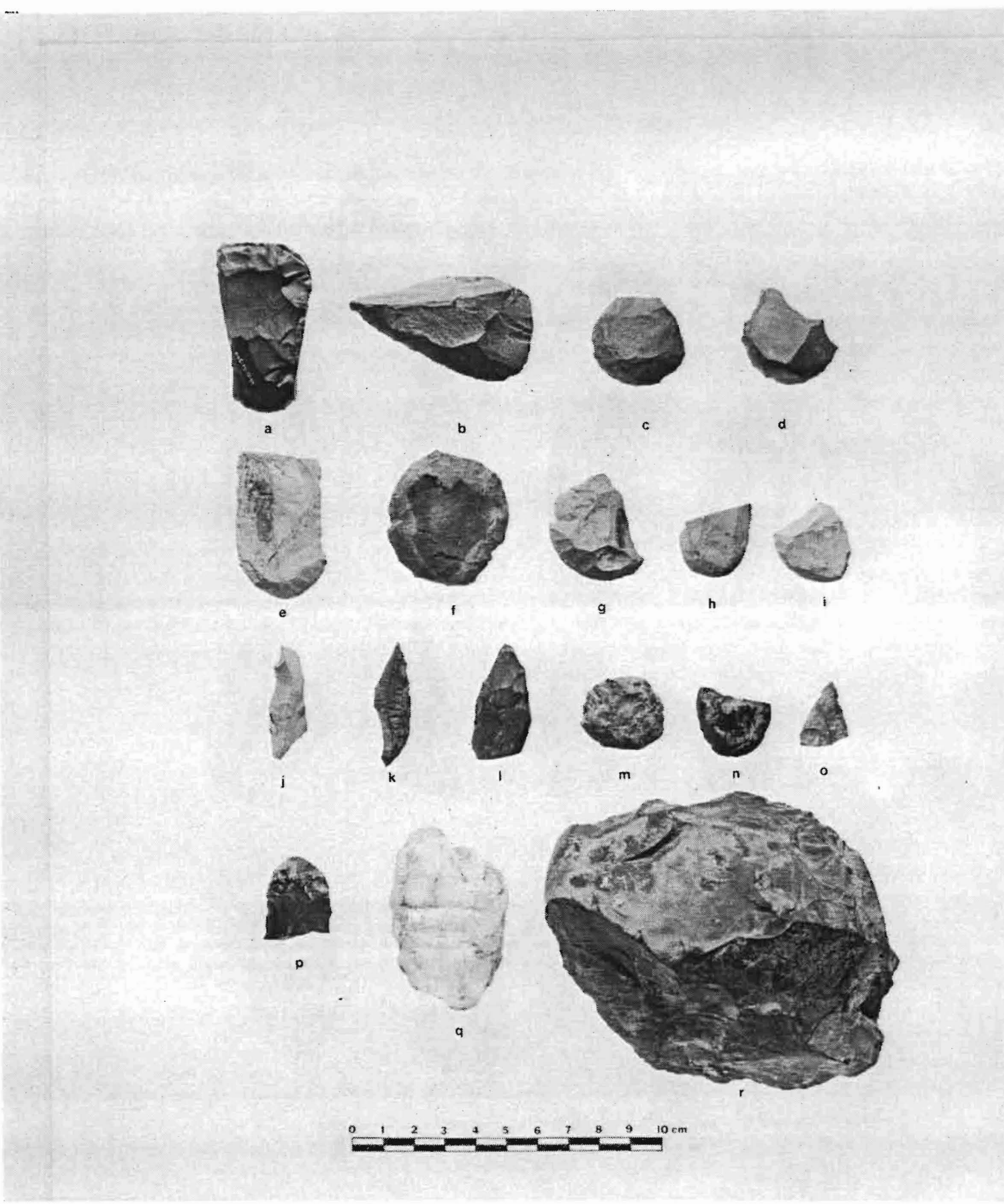


Figure D.384. Artifacts from Site TLM 143

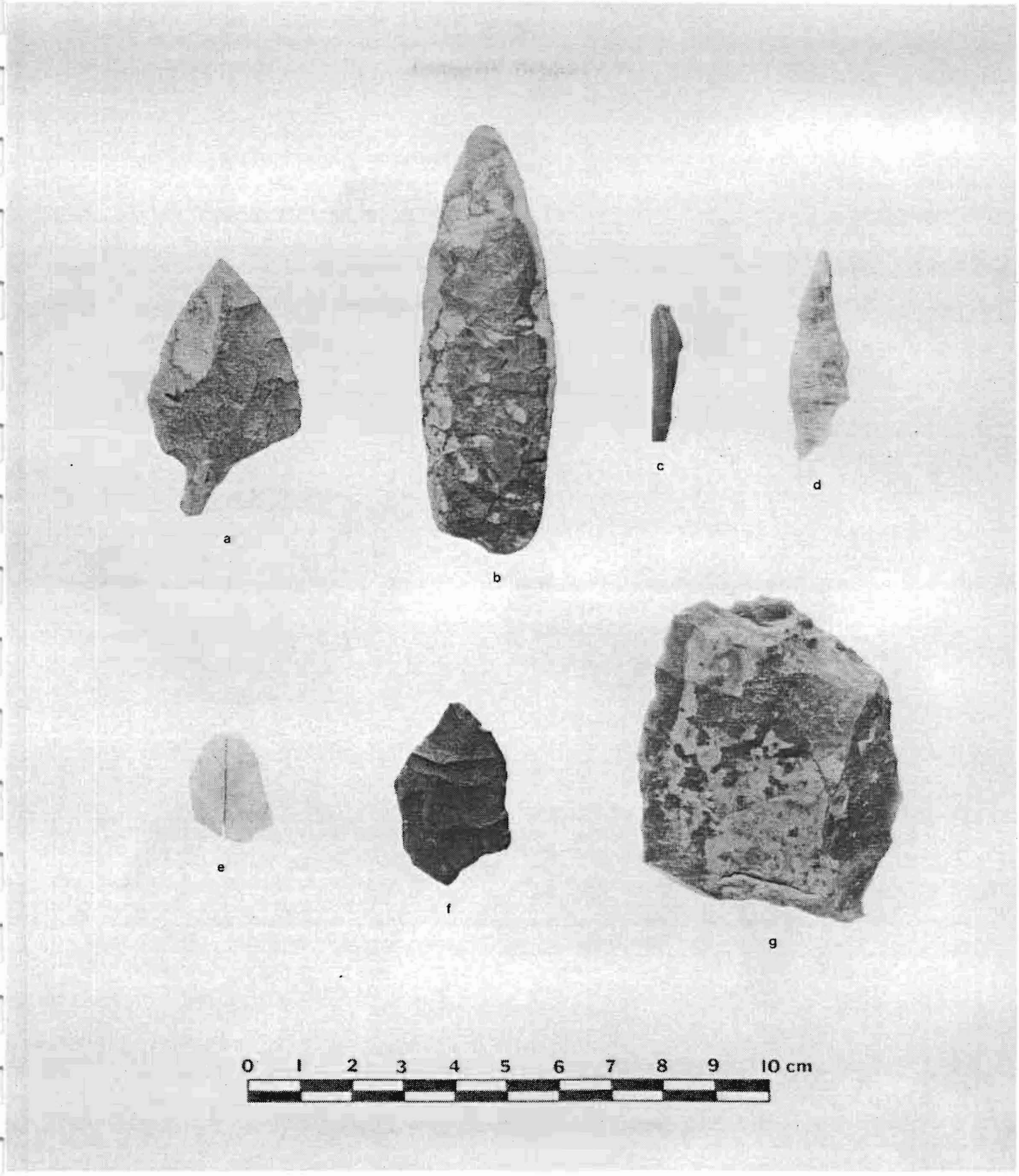


Figure D.385. Artifacts from Sites TLM 144 (a), TLM 154 (b), TLM 159 (c-e), TLM 166 (f), and TLM 169 (g)

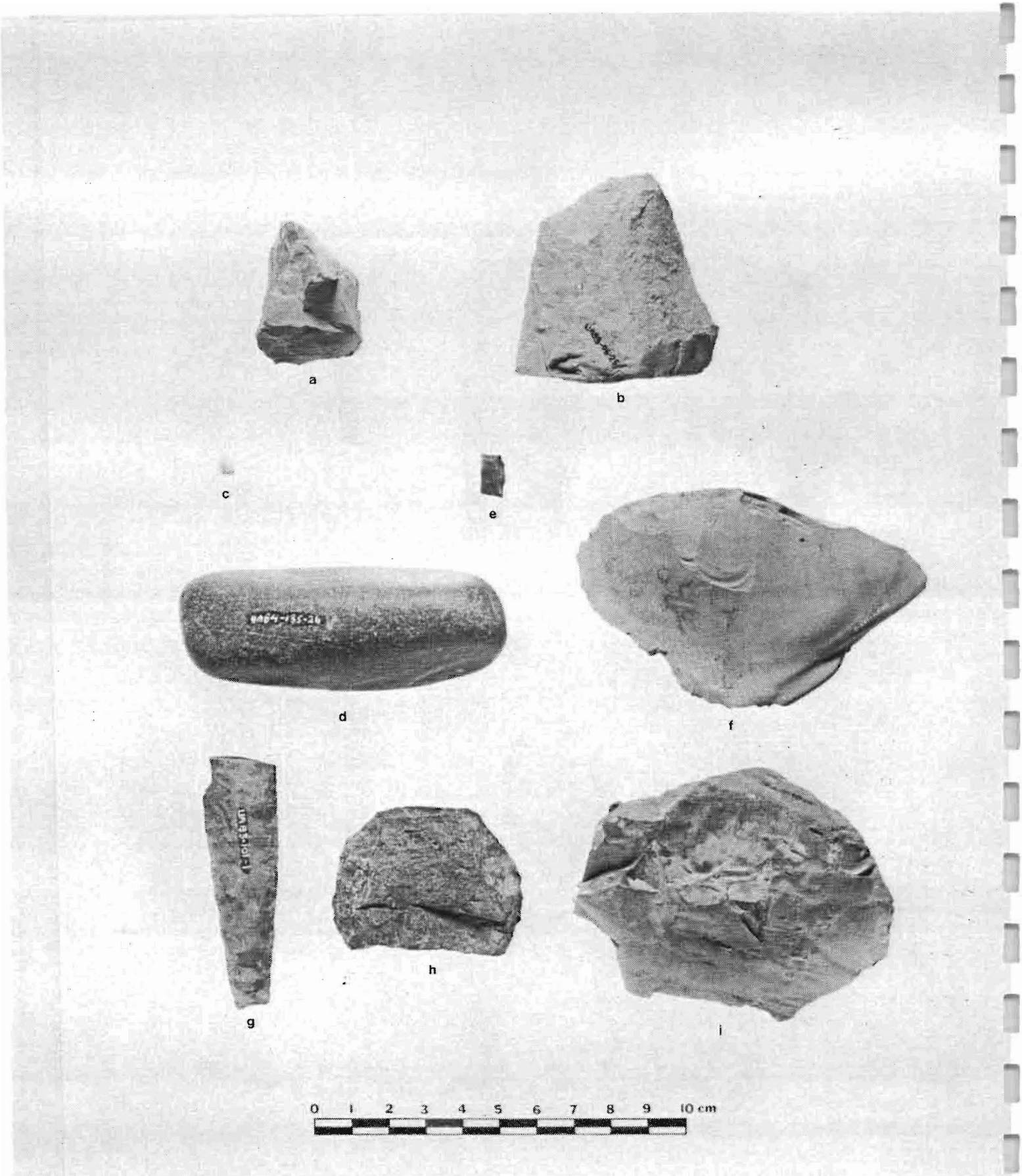
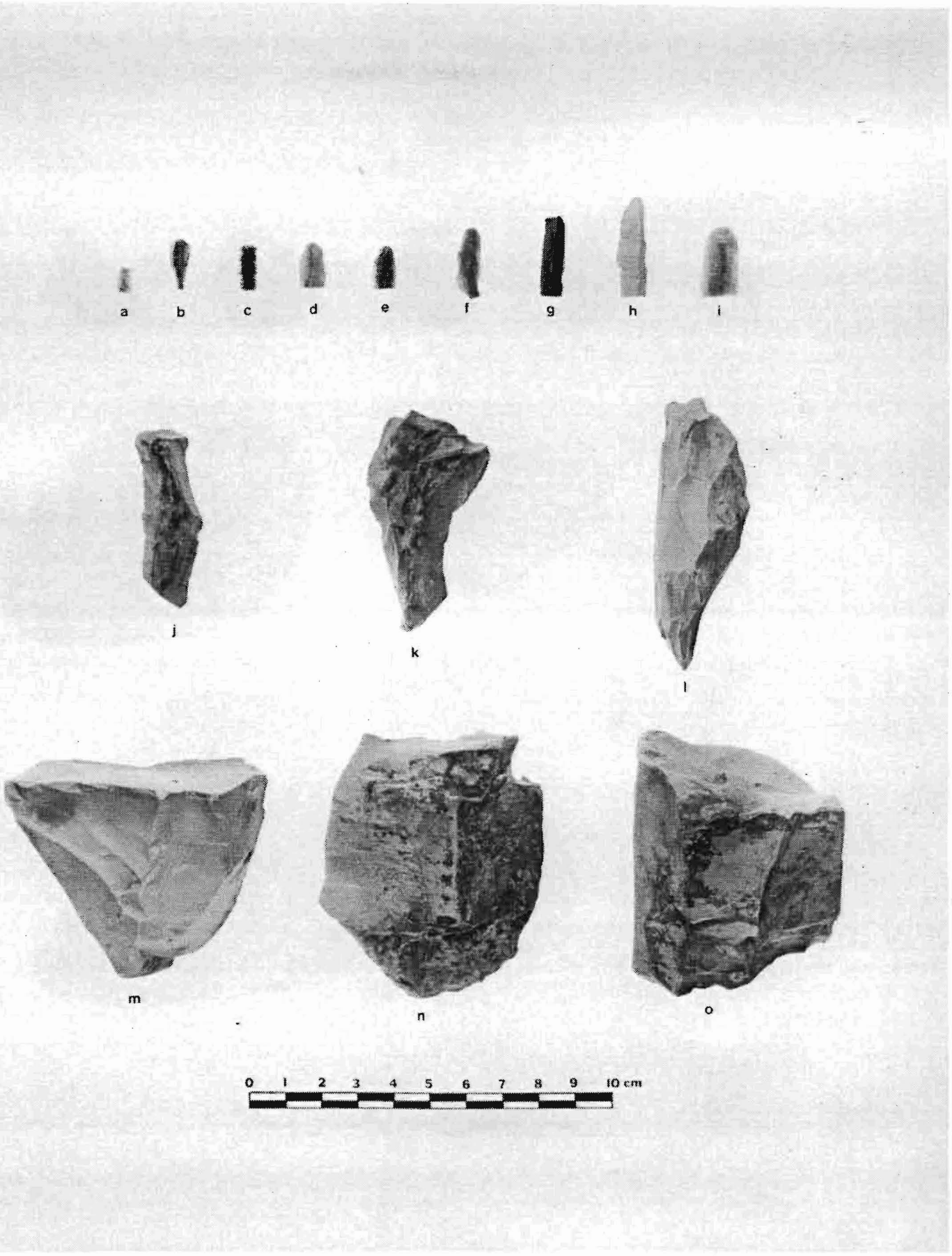


Figure D.386. Artifacts from Sites TLM 170 (a-b), TLM 171 (c), TLM 173 Locus B (d-e), TLM 173 Locus C (f), and TLM 175 (g-i)



Figue D.387. Artifacts from Site TLM 180

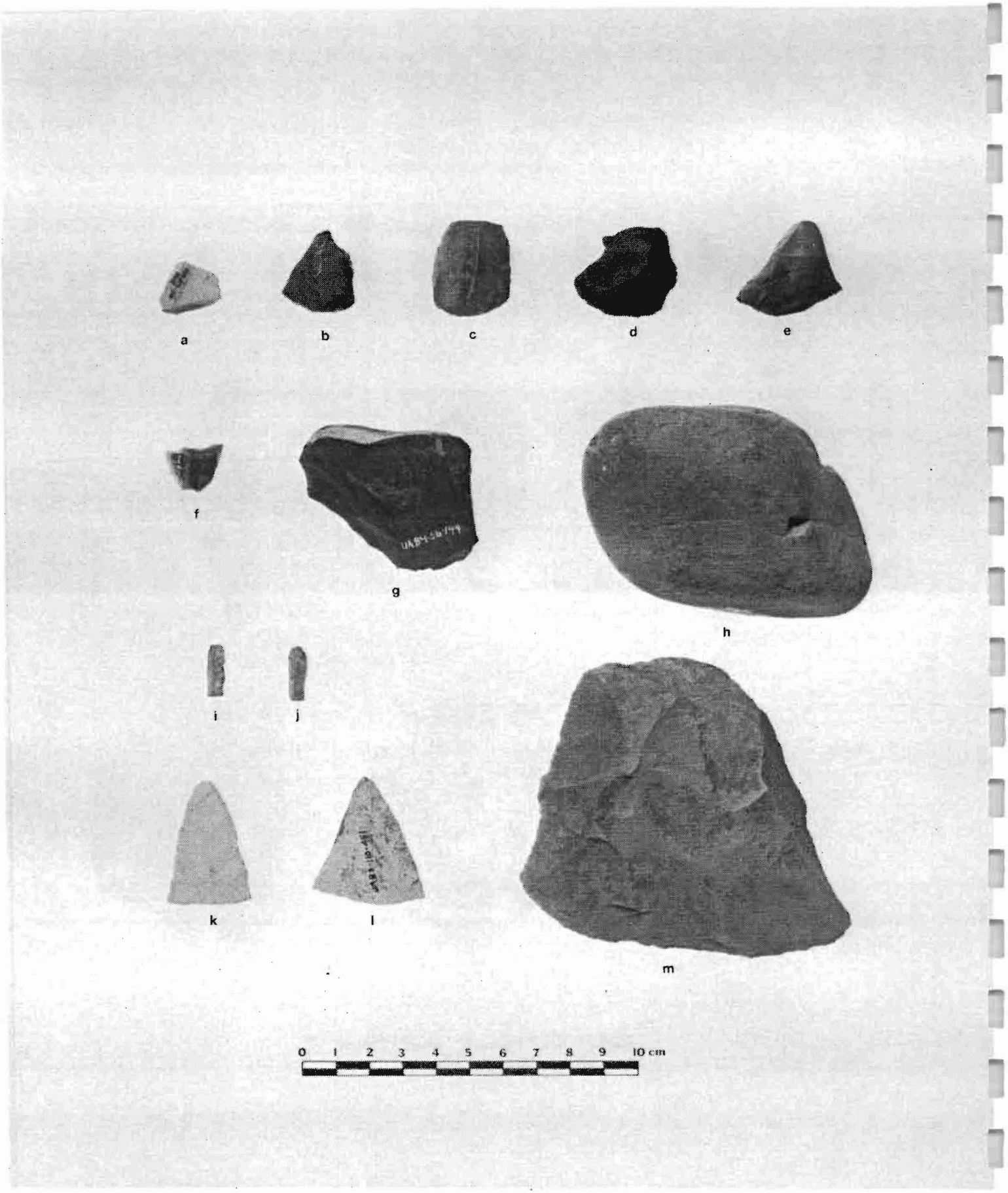


Figure D.388. Artifacts from Site TLM 184

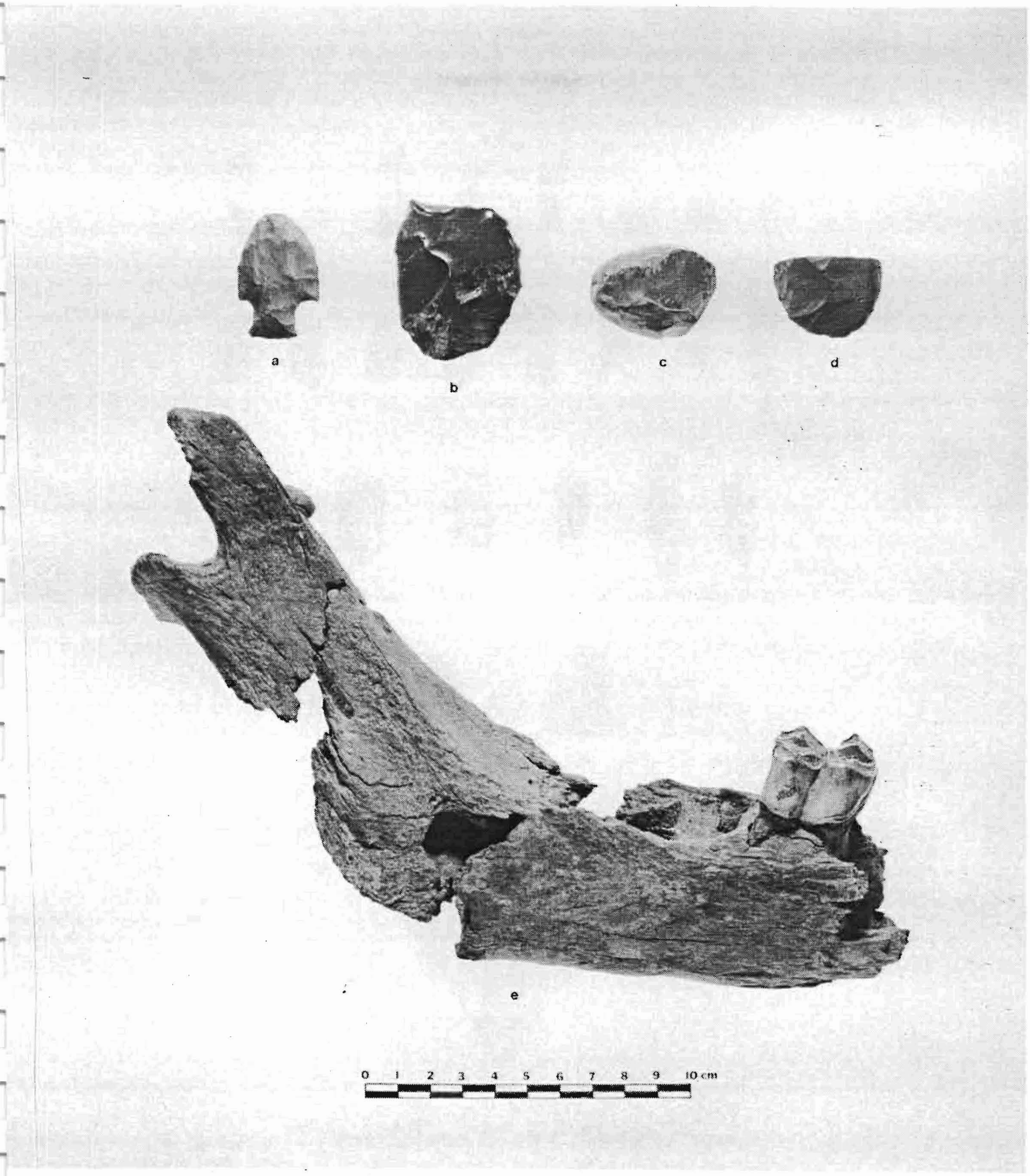


Figure D.389. Artifacts from Sites TLM 185 Locus B (a), TLM 186 (b), TLM 197 (c), TLM 205 (d), and TLM 196 (e)

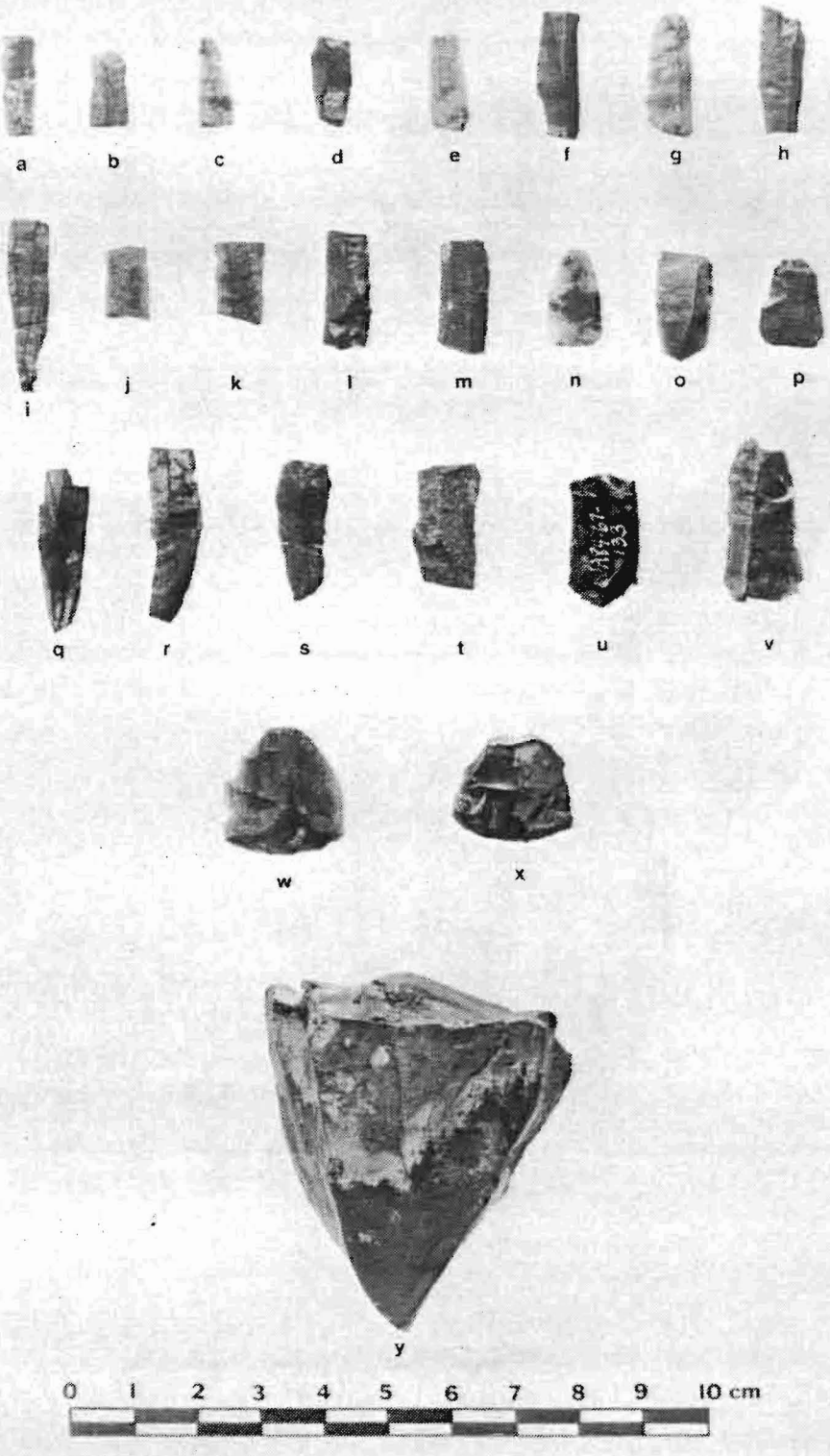


Figure D.390. Artifacts from Site TLM 207

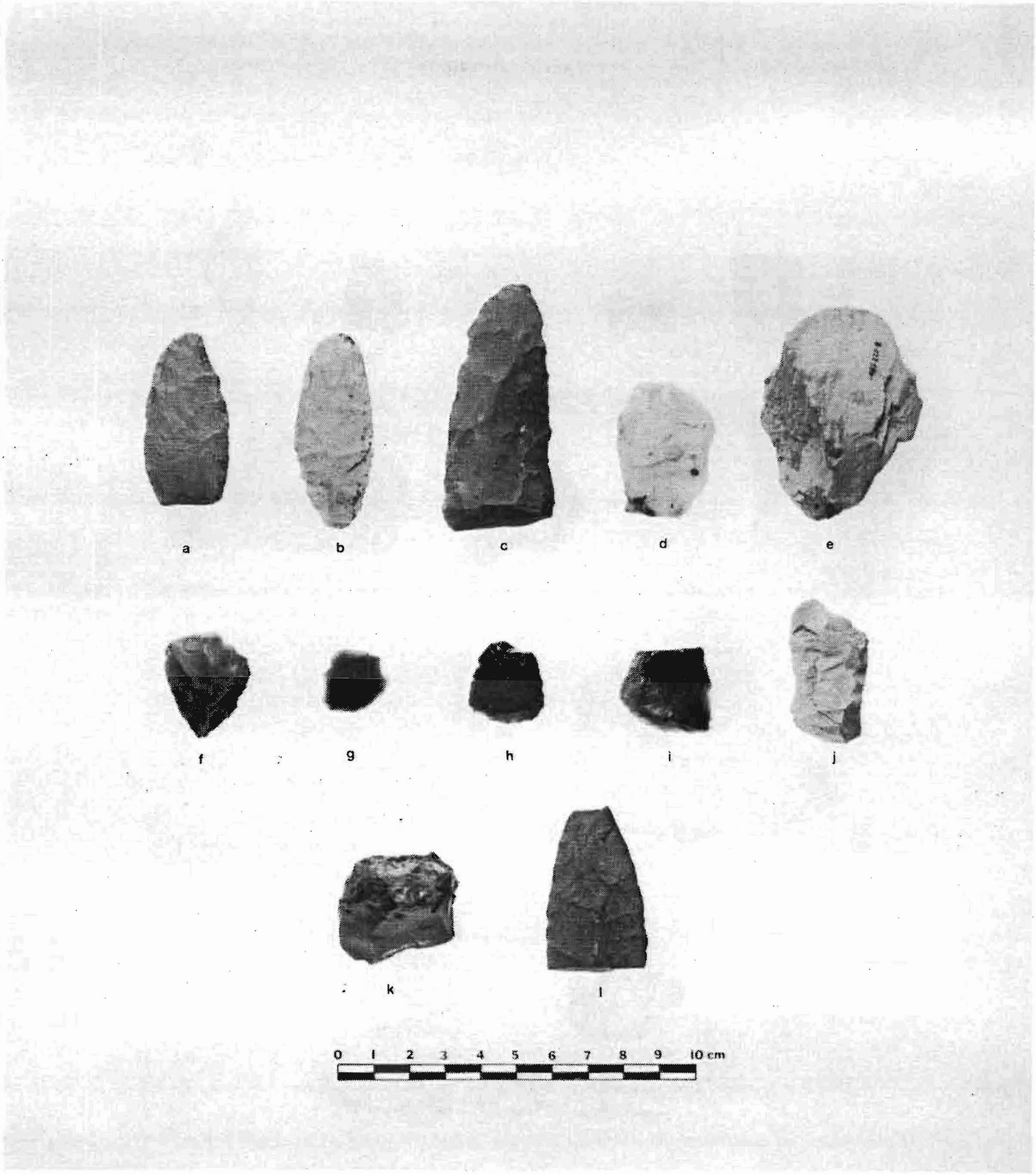


Figure D.391. Artifacts from Site TLM 208 Locus A (a-j), TLM 208 Locus B (k), TLM 208 Locus C (e)

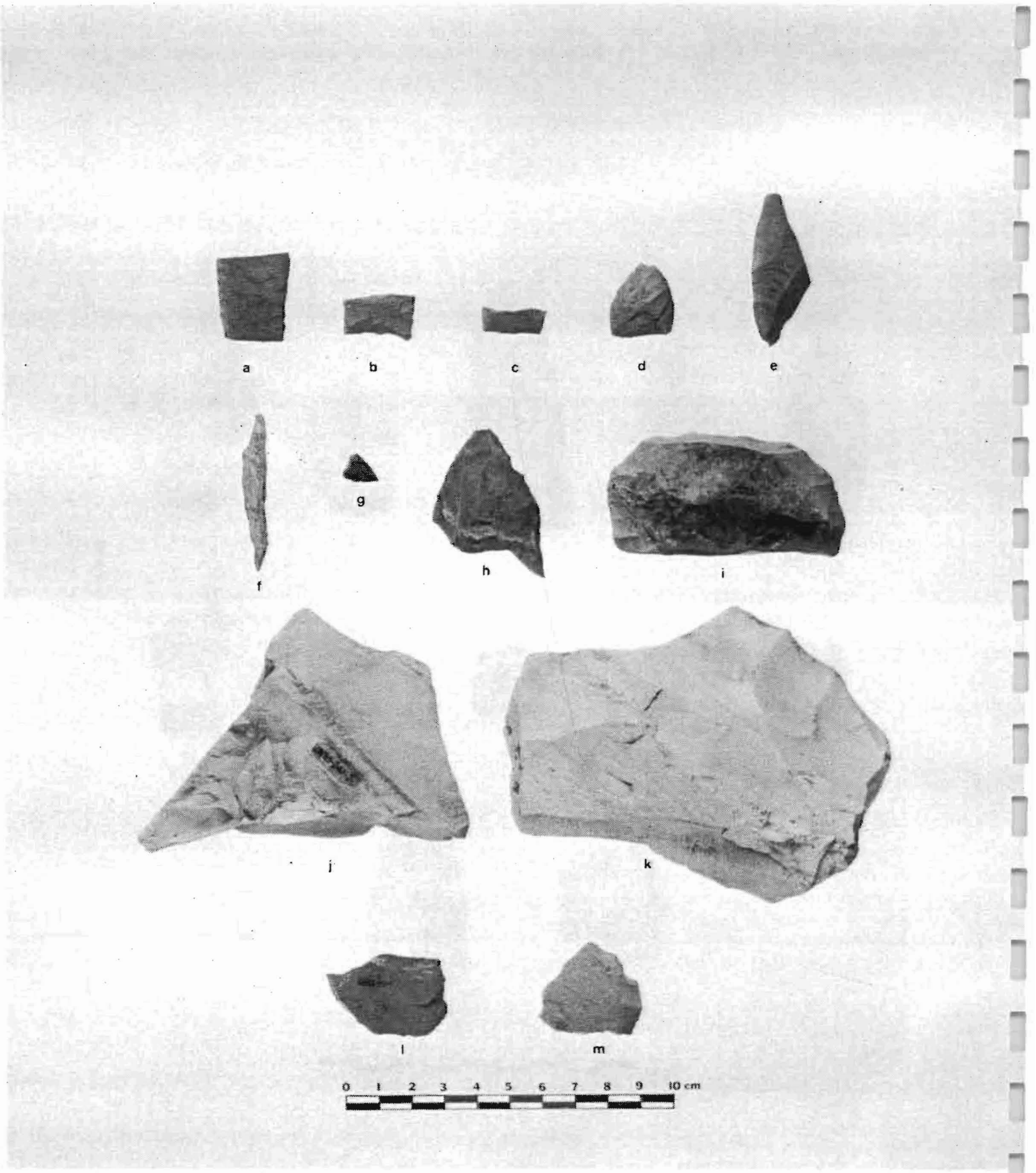


Figure D.392. Artifacts from Sites TLM 217 (a-h), TLM 218 (i-k), and TLM 219 (l-m)

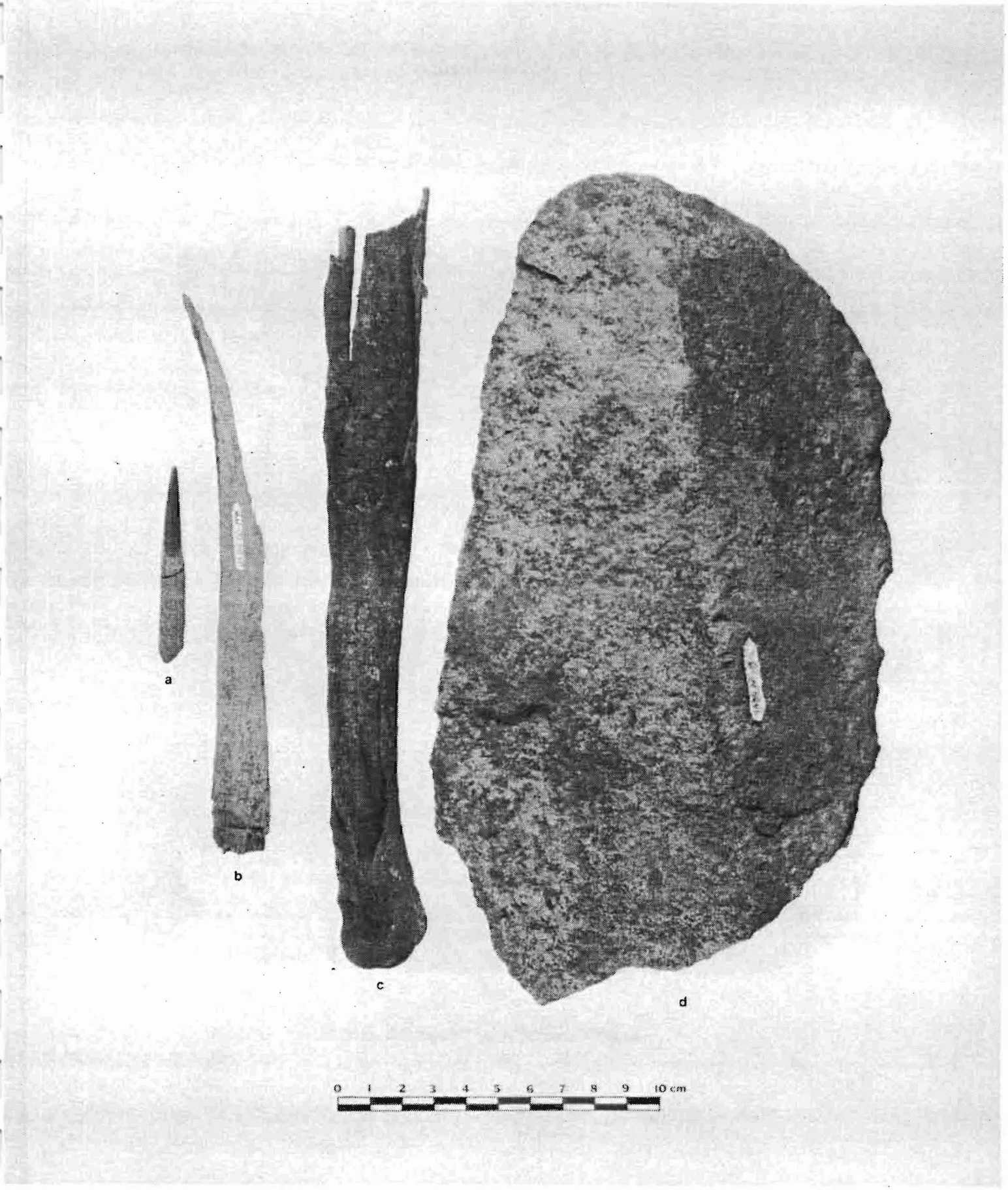


Figure D.393. Artifacts from Site TLM 220

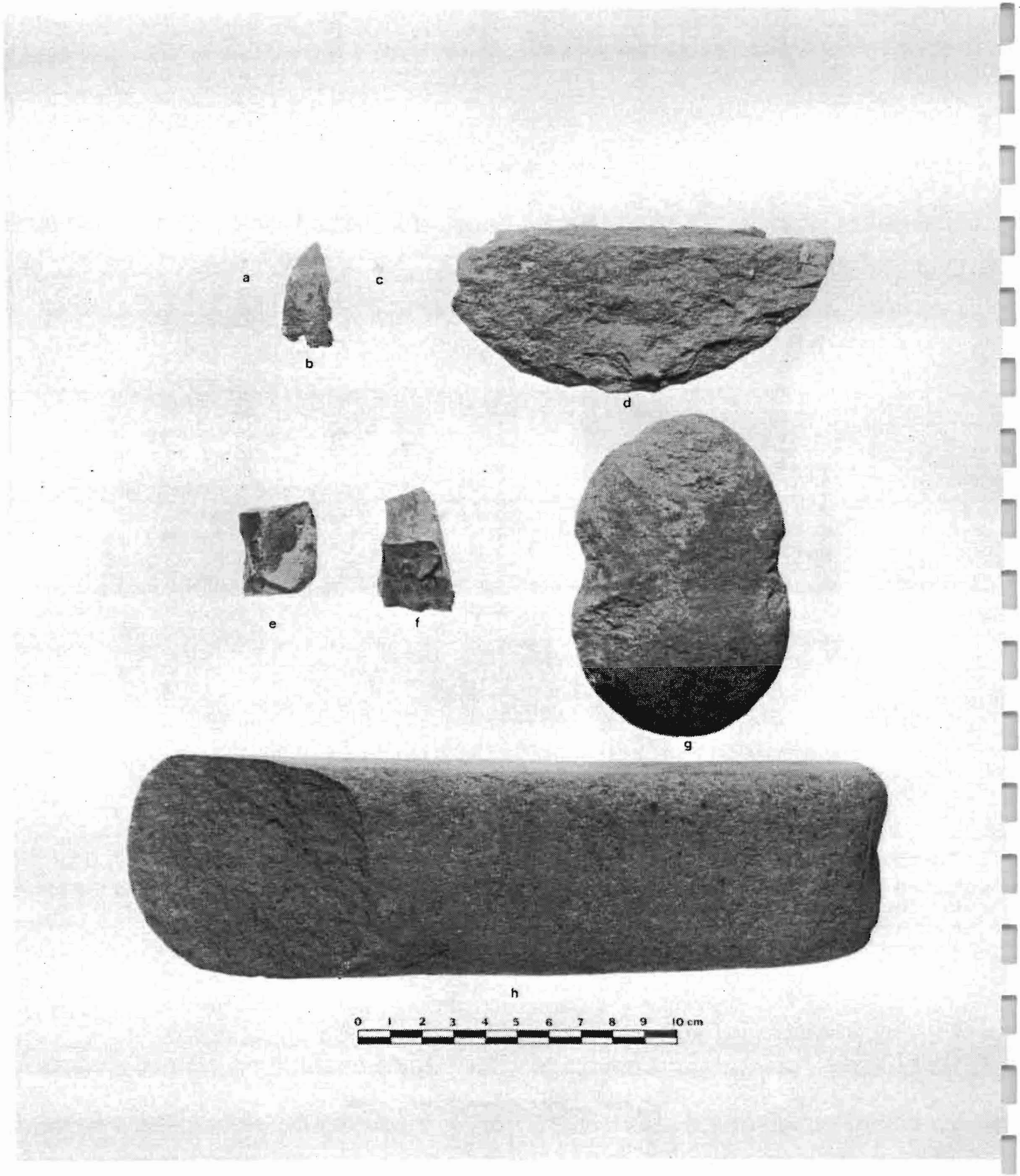


Figure D.394. Artifacts from Sites TLM 222 (a-b), TLM 226 (c-d), and TLM 230 (e-h)

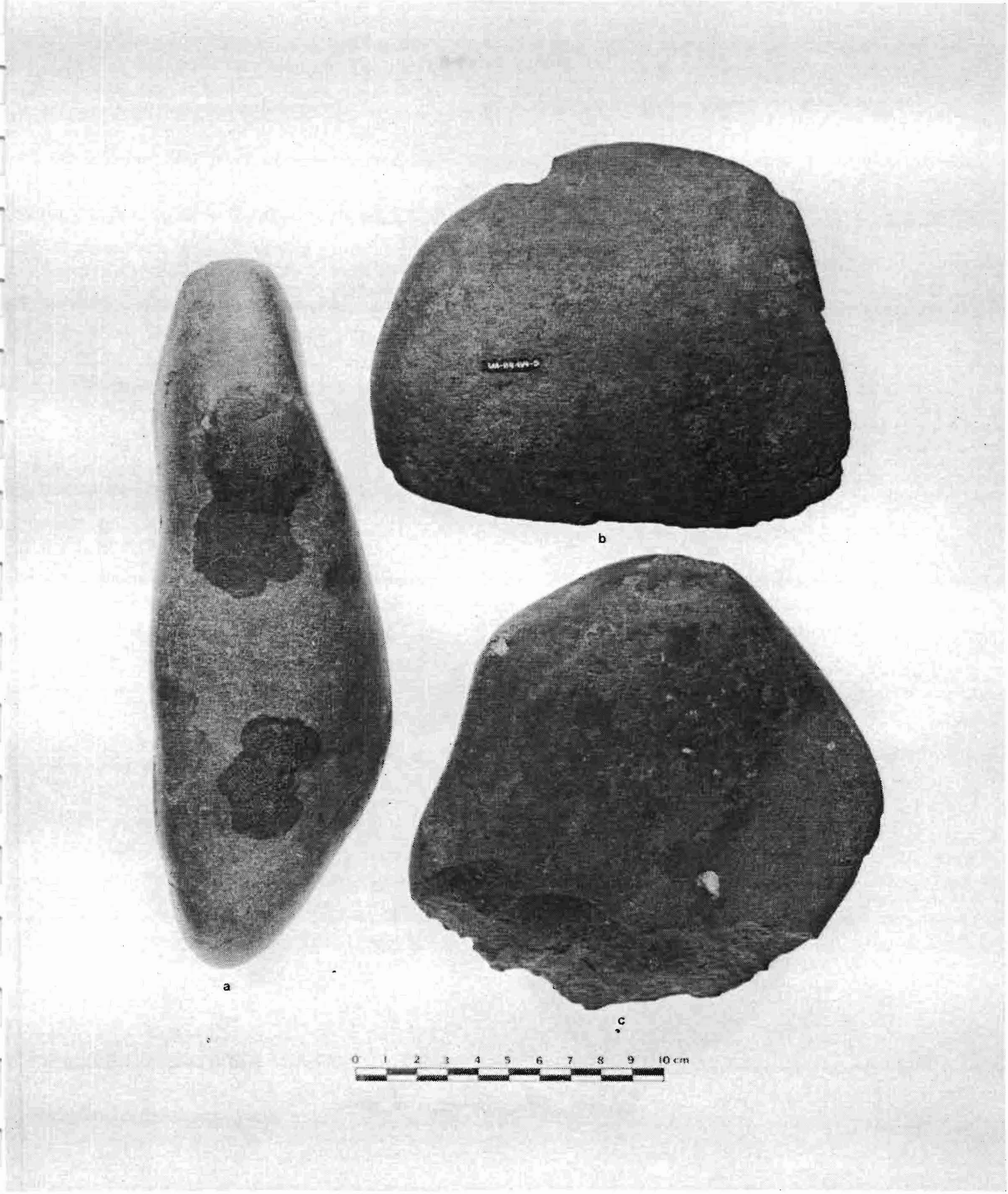


Figure D.395. Artifacts from Site TLM 232

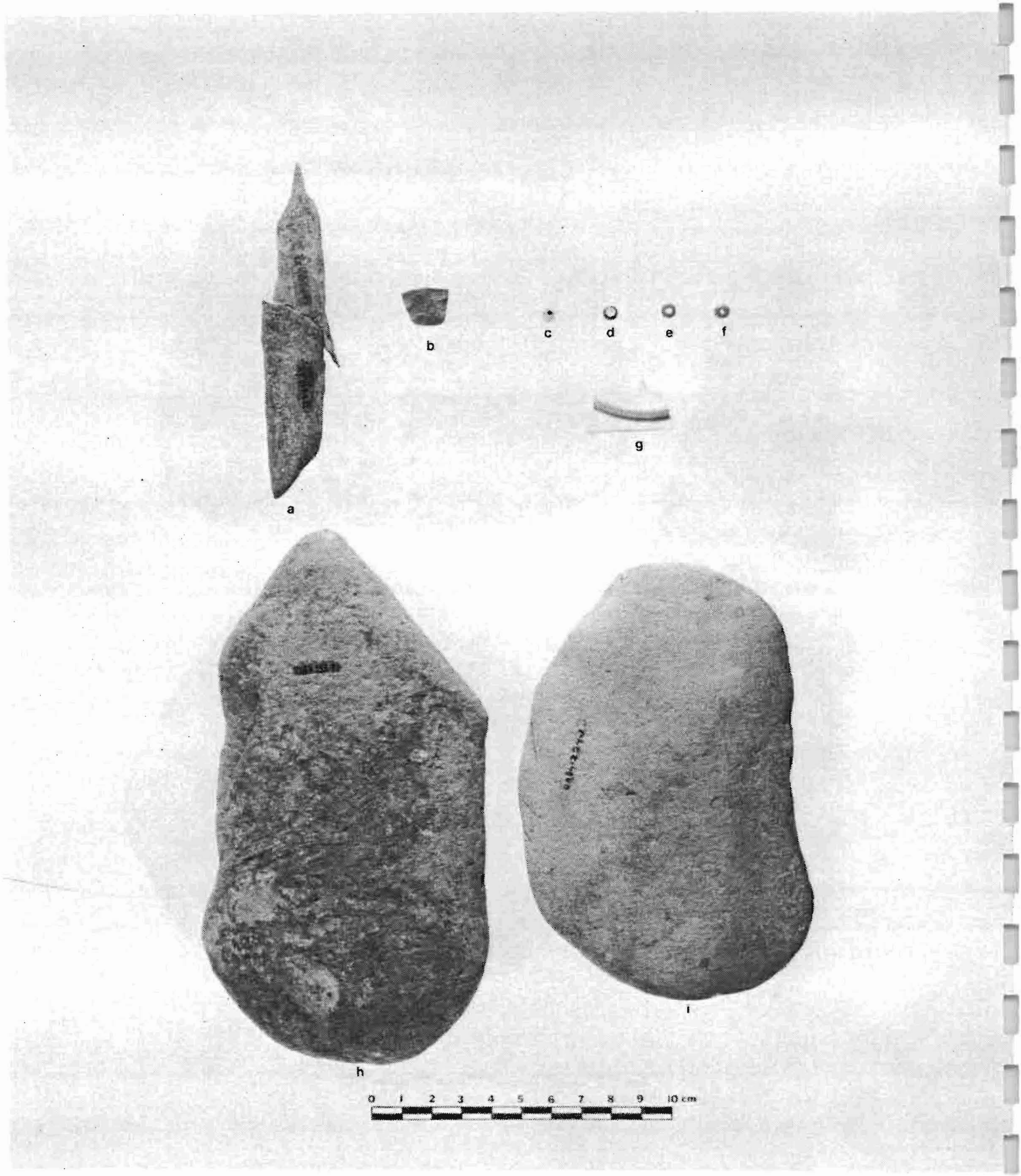


Figure D.396. Artifacts from Sites TLM 232 (a), TLM 235 Locus C (b), TLM 240 (c-g), TLM 247 (h), and TLM 251 (i)

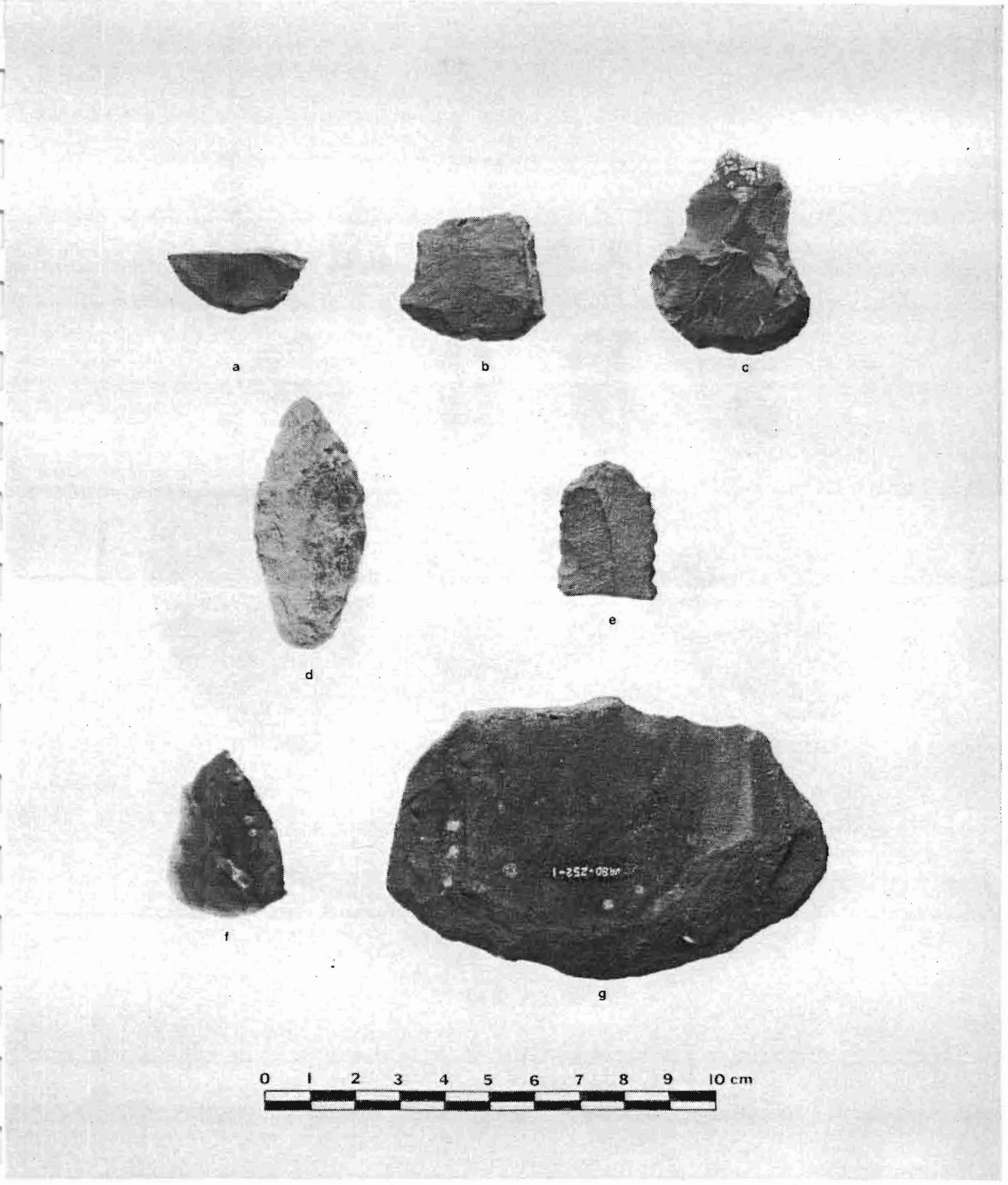


Figure D.397. Artifacts from Site HEA 174

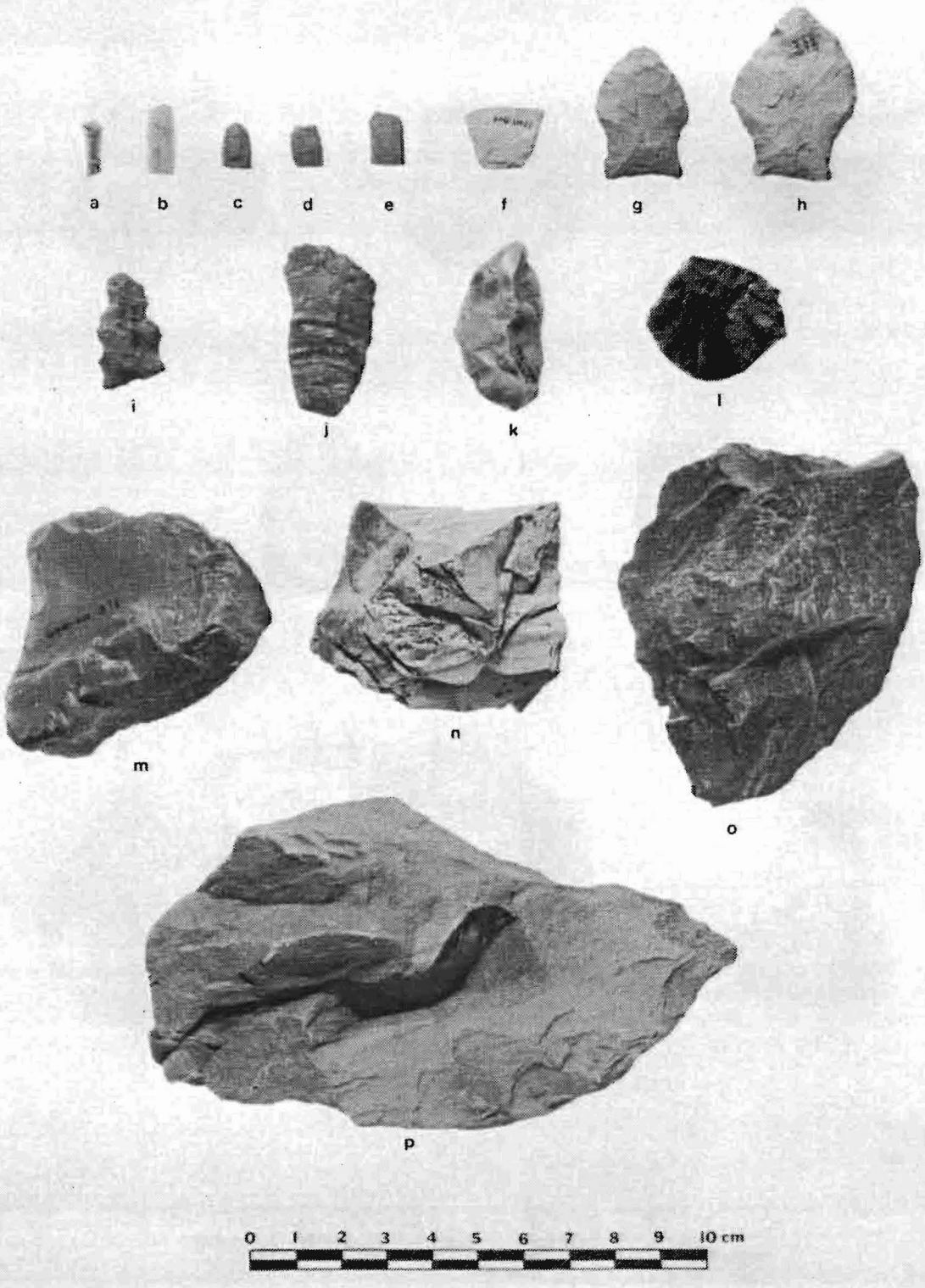


Figure D.398. Artifacts from Site HEA 175

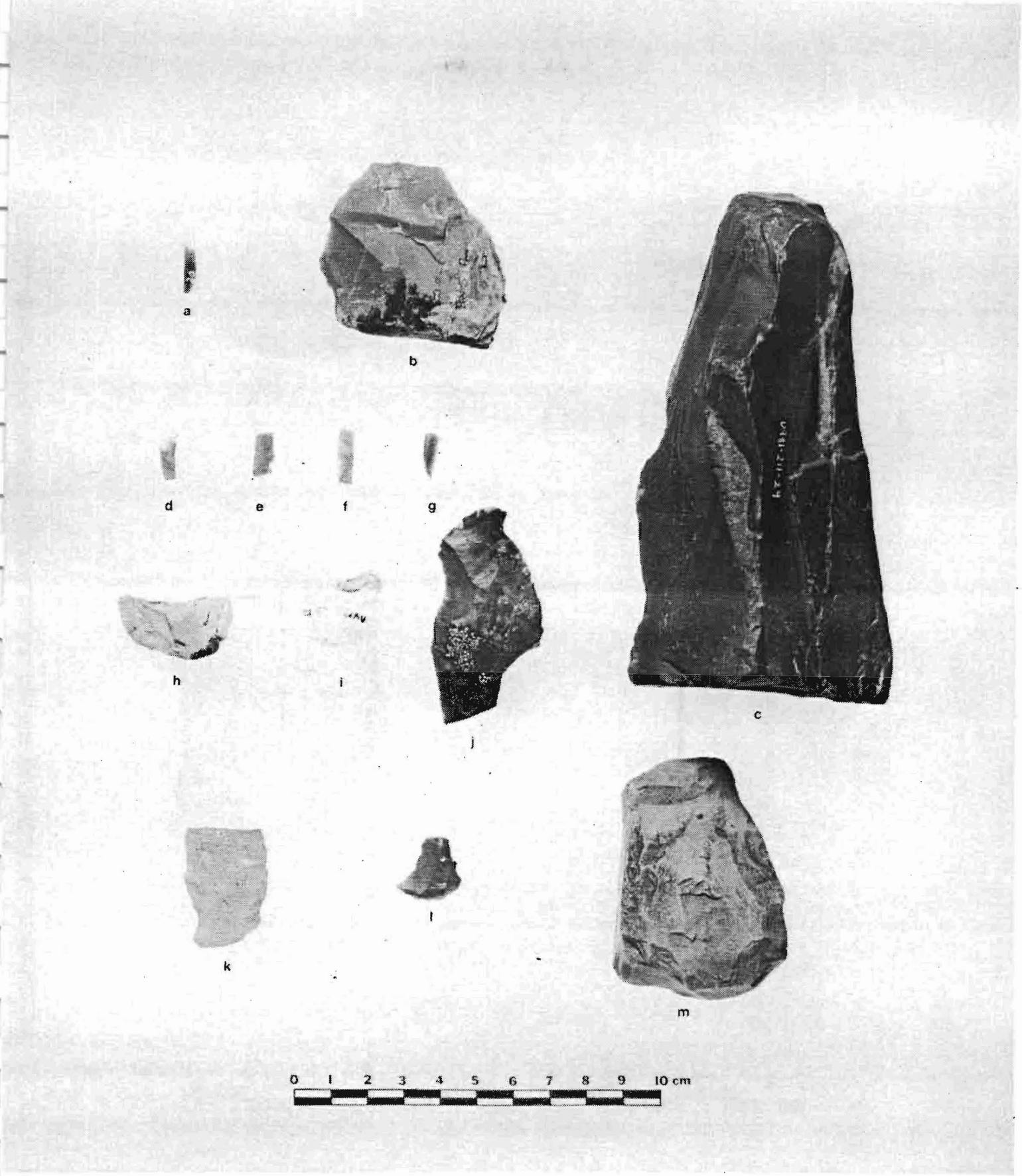


Figure D.399. Artifacts from Sites HEA 177 (a-b), HEA 178 (c), HEA 180 (d-j), HEA 182 (k), and HEA 185 (l-m)

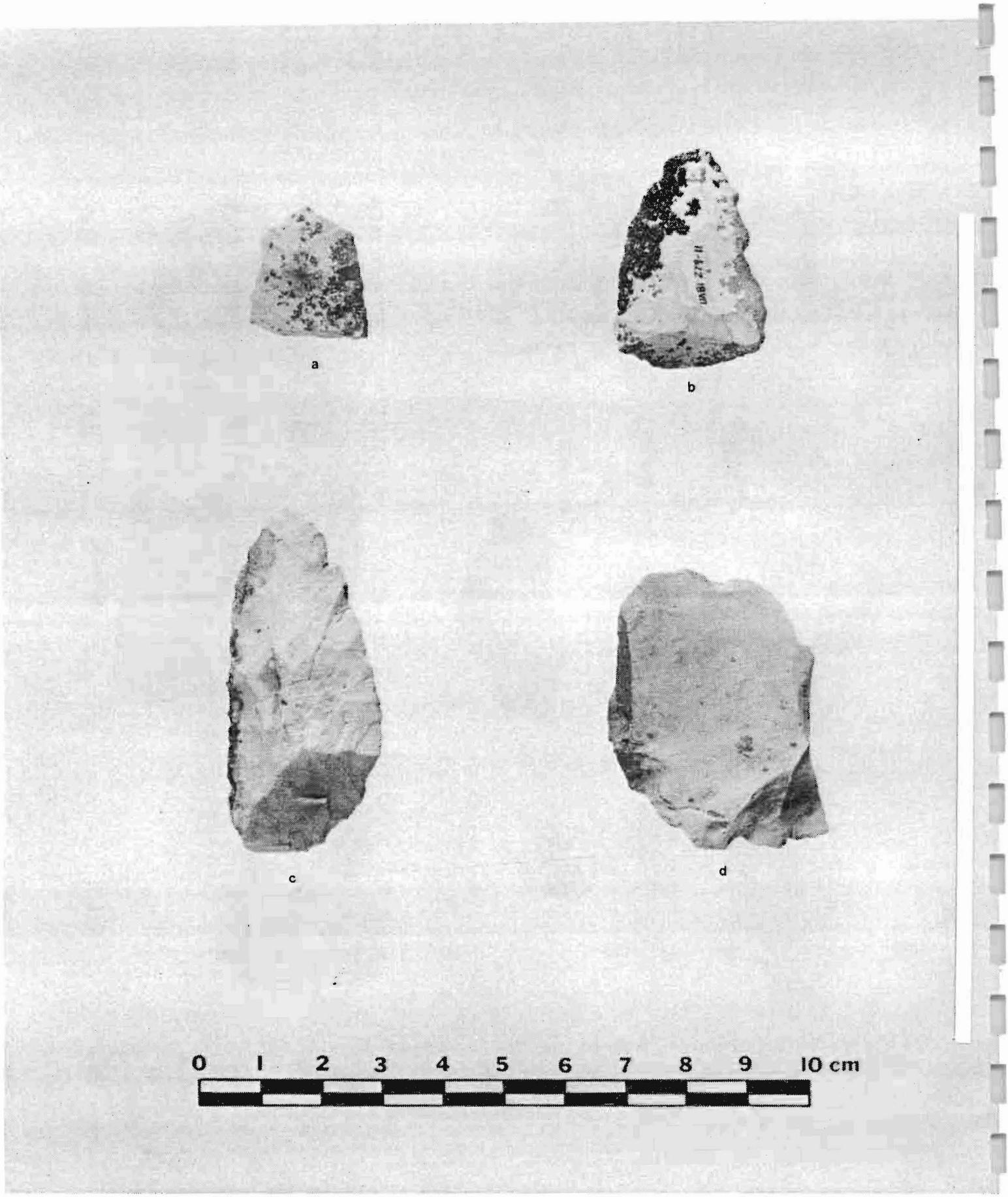


Figure D.400. Artifacts from Site HEA 186