

**SUSITNA
HYDROELECTRIC PROJECT**

**FEDERAL ENERGY REGULATORY COMMISSION
PROJECT No. 7114**

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**CULTURAL RESOURCES
INVESTIGATIONS
1979-1985**

**VOLUME IV
APPENDIX D (PART 2)**

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SUSITNA HYDROELECTRIC PROJECT

CULTURAL RESOURCES INVESTIGATIONS

1979 - 1985

VOLUME IV

APPENDIX D (PART 2)

DRAFT

Report by
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ARLIS
Alaska Resources
Library & Information Services
Anchorage, Alaska

AHRS Number TLM 076; Accession Number UA81-232

Area: Northeast of Oshetna River Mouth
Site Maps: Locus A, Figure D.101
Locus B, Figure D.102
Locus C, Figure D.103
Survey Locale 107: Figure E.177
USGS Map: Talkeetna Mts. C-1, Figure E.8
Site Location: Appendix F

Setting:

The site, consisting of three loci, is located on the south side of the Susitna River and east-northeast of the confluence of the Oshetna River with the Susitna River. Located at an elevation of approximately 710 m asl (2325 feet), the loci are all situated on kames forming knolls higher than surrounding terrain. None of these knolls directly overlook the Susitna River, although access to it is relatively easy and none are more than 400 m from the river. Low-lying marshy areas and standing water occur in the site area and a major drainage in the area borders the western side of the site. All knolls are visible from one another.

Locus A: Locus A is located on a discrete knoll south of the Susitna River that may be ascended from all sides. The top of the knoll is level, about 4 m in diameter, and is about 4 m above the surrounding terrain. A small, marshy pond, about 1 ha in area, lies 80 m east-southeast of the knoll top. The view from locus A is unobstructed to the east, north, and west, sections of the Susitna River being visible in the valley below. Elevation increases gradually to the south and the visibility is limited to about 700 m. Loci B and C are visible to the southwest. Vegetation at locus A is composed of scattered white spruce and low bush berries in addition to thin moss and lichen. The vegetation below and around locus A is predominantly marshy with mixed shrub growth and grasses.

Locus B: Locus B is ca. 140 m south-southwest of locus A (90 m south of locus C) and is located on the northern extent of a knoll overlooking the predominant drainage in the area, to the west. Visibility from locus B is greatest to the west, overlooking the drainage and the Susitna River to the northwest. Views to the north, east, and south are limited by knolls in the site area and increasing elevation of land to the south. Locus B is ca. 12 m higher than the marshy lowlands between the three loci. Some scattered spruce occur in the area. Ground vegetation at locus B is dominated by low bush berries and grasses in addition to mosses and lichen growth.

Locus C: Locus C is ca. 100 m southwest of locus A, 90 m north of locus B, and is located on a knoll top overlooking the drainage to the west and the Susitna River to the west-northwest. The visibility from locus C is similar to that of locus B, being greatest to the west and north overlooking the predominant drainage and the Susitna River valley and uplands beyond. Views to the east and south are limited by knolls in the site area and more elevated of land to the south. Locus C is approximately 10 m higher than the lower area between the three loci. Vegetation at locus C is similar to that of locus B; low bush berries and grasses predominate, mosses and lichens occurring in more exposed areas. Dwarf birch occurs sporadically in the area.

Testing:

Locus A: Locus A consists of a lithic scatter and a partially exposed hearth (Table D.150). The hearth (feature 1) contains charcoal, burned bone fragments, and thermally altered rock. An obsidian flake was found on the surface 50 cm north of the hearth. A deflated blowout 12 m southwest of the datum yielded 2 basalt flakes, 1 quartzite flake, and 1 basalt modified flake (UA81-232-2). Two test pits were excavated at locus A, neither of which contained subsurface cultural material. However, two burned bone fragments were recovered from the surface of test pit 2. Six shovel tests, all sterile, were placed in the vicinity of locus A. Estimated site size for locus A based on the distribution of artifacts is 45 square meters.

Locus B: Locus B consists of a chalcedony biface fragment point tip (UA81-232-7; Figure D.3781) and a possible flake, both found on the surface (Table D.150). One test pit was excavated at locus B but no cultural material was found below the surface. Four shovel tests in the vicinity of this test pit were also sterile. Estimated site size for locus B based on the distribution of artifacts is 4 square meters.

Locus C: Locus C consists of one basalt flake found on the surface in a blowout depression, 4 m southeast of the locus datum (Table D.150). Neither the shovel test nor the test pit excavated on the knoll top produced any cultural material. Estimated site size for locus C based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.150.

Artifact Summary, TLM 076

Provenience	Description
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Lithic Material

Surface:

<u>Locus A</u>	2	Basalt flakes
	1	Obsidian flake
	1	Quartzite flake
	1	Basalt modified flake (UA81-232-2)
	7	Thermally altered rocks

<u>Locus B</u>	1	Chert flake
	1	Chalcedony biface (UA81-232-7)

<u>Locus C</u>	1	Basalt flake
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Faunal Remains

Surface:

<u>Locus A</u>	2	Unidentified bone fragments, burned, mammal
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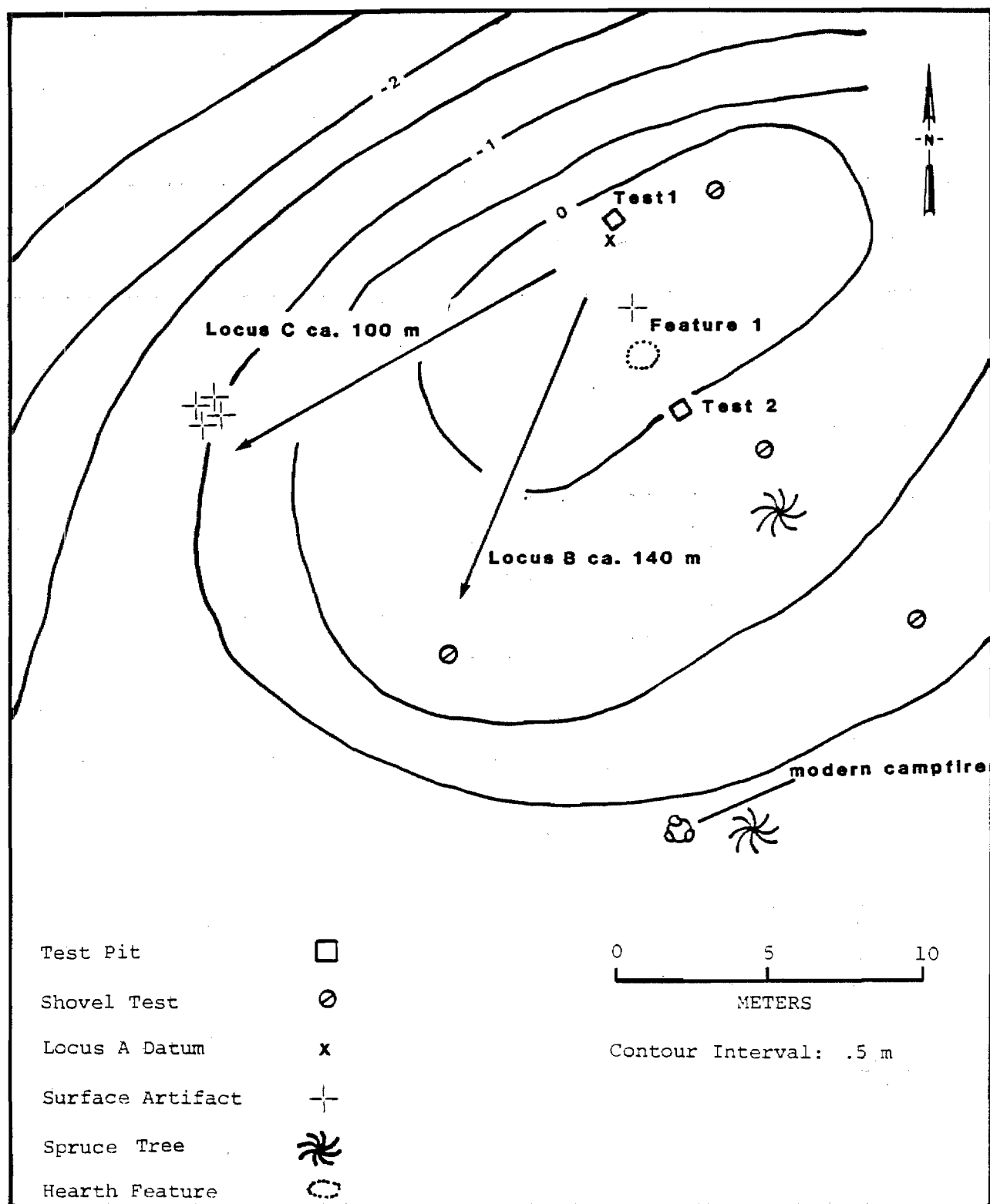


Figure D.101. Site Map, TLM 076 Locus A

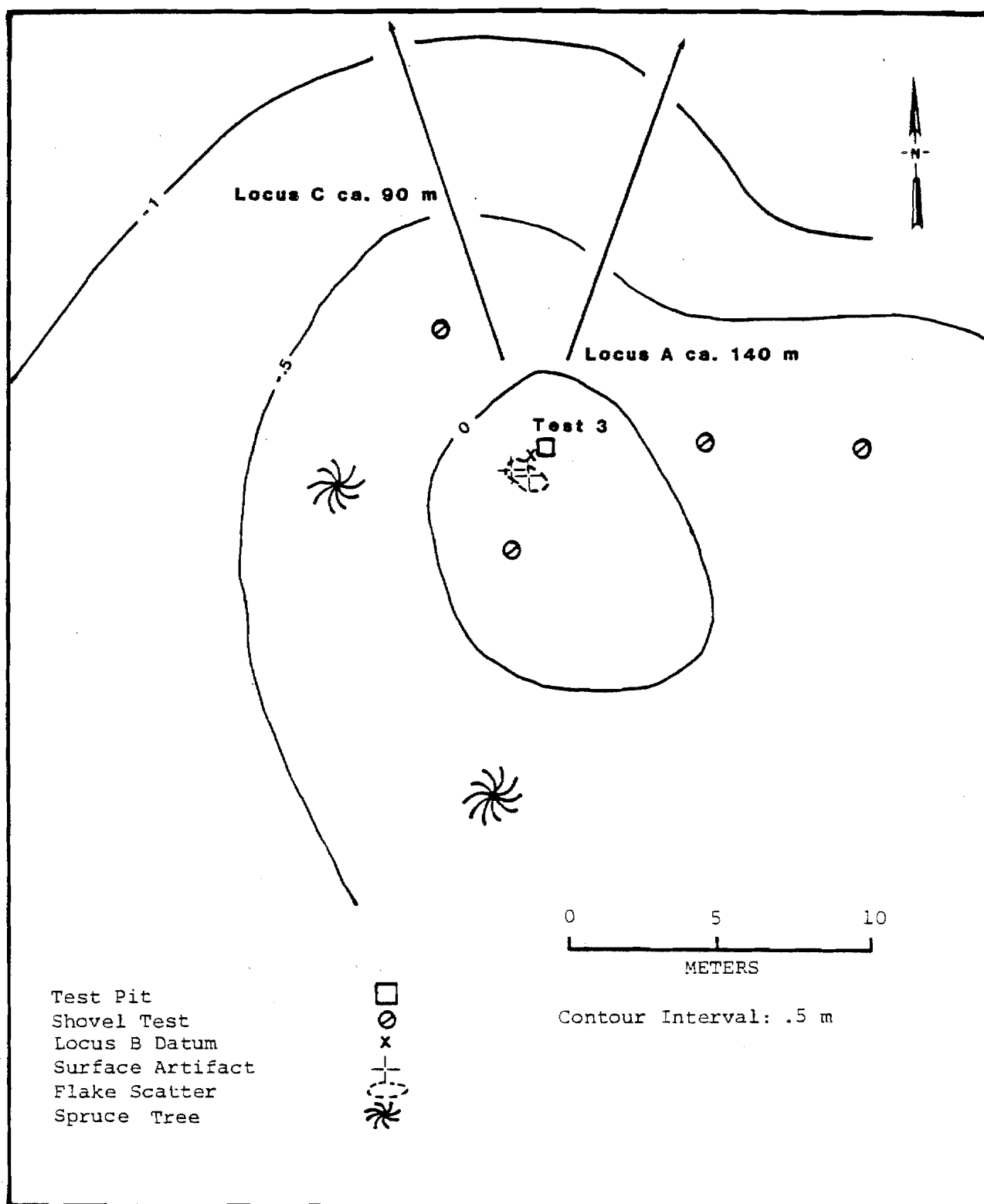


Figure D.102. Site Map, TLM 076 Locus B

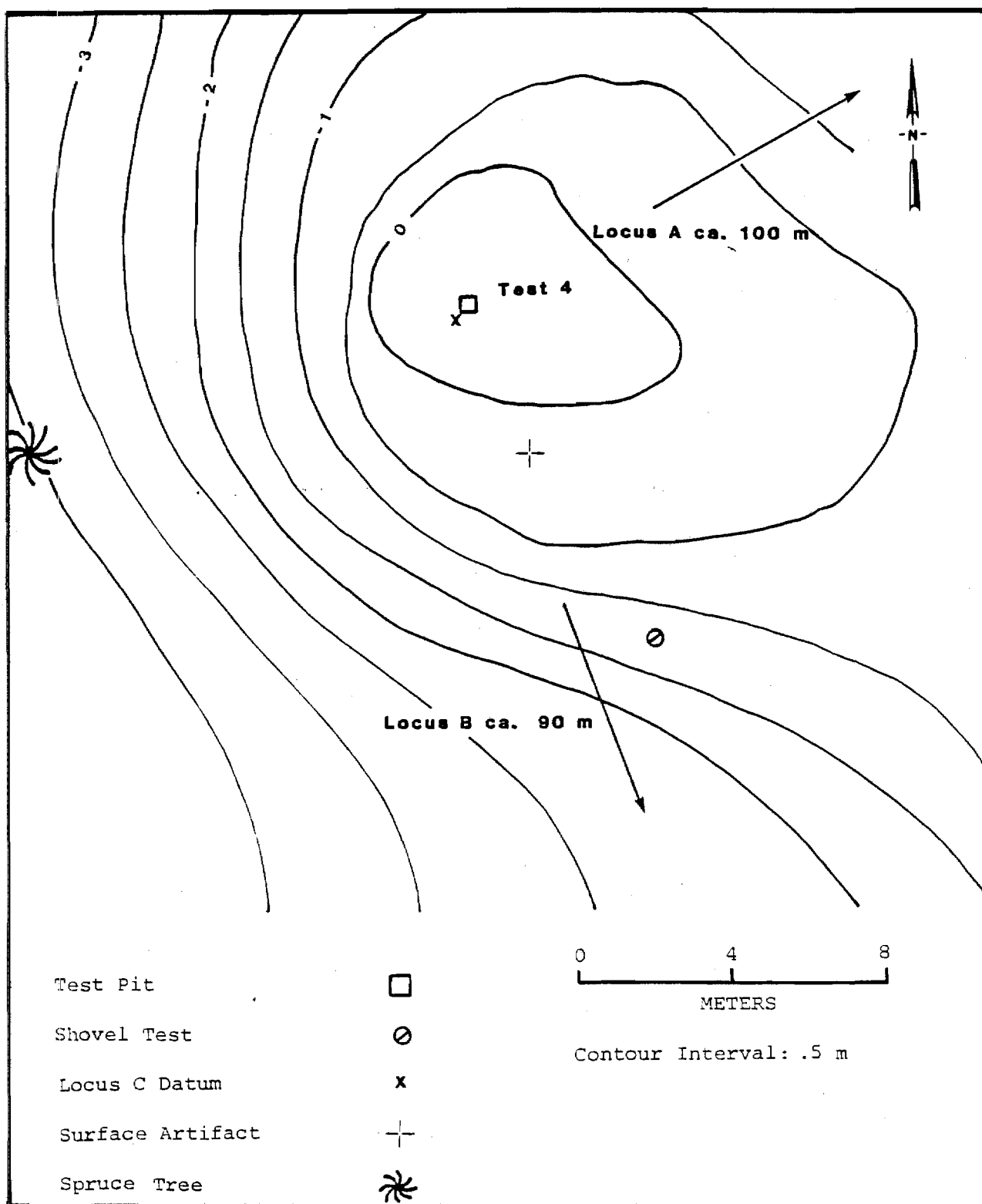


Figure D.103. Site Map, TLM 076 Locus C

AHRS Number TLM 077; Accession Numbers UA81-234, UA84-82

Area: South of Kosina Creek Mouth
Site Map: Figure D.104
Survey Locale 84: Figure E.158
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located south of the confluence of Kosina Creek with the Susitna River. Situated on the southern end of a relict stream terrace which runs approximately north-south along the alluvial fan formed by Kosina Creek. The site is on the highest point of relief, about 5 m above the surrounding terrain, at an elevation of 539 m asl (altimeter: 1768 feet). The site occupies the southern end of the relatively flat and broad terrace, which measures approximately 40 x 80 m. The rest of the terrace descends gently toward the Susitna River to the north. The view from the site is restricted by dense black spruce and birch forest in all directions except northward across the terrace itself, where the forest is open. Kosina Creek is located to the west of the site. The rushing creek is clearly audible but is not visible through the dense forest. The western steep-sided slopes of the Kosina Creek valley are visible through and above the dense forest. The constricting valley on the north side of the Susitna River, is also visible through the trees. Labrador tea, blueberry, lowbush cranberry, crowberry, willow, wild rose, sphagnum moss, and lichen cover the ground surface. Looking south and uphill, the terrace containing site TLM 065 is partially visible.

Testing:

Two basalt flakes were recovered from test pit 1 during survey testing. They are both stratigraphically associated with a coarse yellow brown sandy gravel (fluvial deposit), which underlies three tephra units. Charcoal flecks occur at the contact of the middle and lower tephra,

indicating a possible paleosol. Five additional shovel tests within a 10 m radius of test pit 1 revealed no further cultural material.

A grid shovel testing program was implemented to assist in determining the size of the site and to define the stratigraphic position, content, and extent of the occupation reported during the survey level testing. Forty-six grid shovel tests were excavated. Five of the shovel tests produced subsurface cultural material.

One 1 x 1 m test square was superimposed over grid shovel test N100/E96, which produced an argillite biface (UA84-82-1) and associated lithic debitage, in order to obtain further information on the stratigraphic position and content of the site's cultural occupations.

Discussion

Testing at TLM 077 included the excavation of 1 test pit (test pit 1), 5 survey shovel tests, 46 grid shovel tests, and a 1 x 1 m systematic test square. The cultural remains recovered from this site included both lithic and faunal remains and were comprised of 8 flakes (6 argillite and 2 basalt), 1 argillite biface, and 25 unburned bone fragments. Testing at this site has identified two and possibly three cultural components, which are correlated with four of the six stratigraphic units found at this site. The vertical placement of the soil/sediment units is fairly consistent within the single test square.

A general stratigraphic section consists of fluvial deposits (unit 6) represented by an unoxidized and oxidized sandy gravel overlain by a sequence of tephras (Figure D.105; Table D.151). The Oshetna tephra (unit 5b) is continuous throughout the test square and is overlain by a well-developed paleosol (unit 5a) found elsewhere in the project area. Above this contact is an unoxidized and oxidized Watana tephra (unit 4b and unit 4a, respectively) which is overlain by the Devil tephra (unit 3). Above the volcanic sediments is a humic, carbonaceous organic silt layer (unit 2) that represents the 02 horizon of the contemporary root mat that caps the sequence. This thick organic root mat contains plant

debris, roots, and rootlets from Labrador tea, lowbush cranberry, low heath, crowberry, blueberry, willow, wild rose, sphagnum moss, and lichen. Disturbance of these stratigraphic units as a result of natural processes such as cryoturbation and some root invasion is evident. Frozen ground is consistently encountered on the site due to its low elevation and thick insulating organic mat.

Four of the six soil/sediment units contain associated cultural material which defines three cultural components. Table D.152 presents the total artifact inventory, while Table D.154 lists the artifacts by stratigraphic unit. Based on systematic testing the upper occupation is correlated to the humic, carbonaceous organic silt layer (unit 2) which is represented exclusively by faunal material. The middle component contains lithic material from within both the oxidized and unoxidized Watana tephra (unit 4a and unit 4b). The lower component also contains lithic material found in the lower extent of the Oshetna tephra (unit 5) and in the fluvial deposits (unit 6).

Upper Component: Cultural material associated with the upper component was found in four shovel tests during grid shovel testing and is represented by unburned bone fragments of medium-large mammal (Table D.153). This faunal material consists of 25 bone fragments, four of which have been identified as caribou (Rangifer tarandus). Positive identifications consist of a metapodial shaft fragment and a proximal phalanx fragment and tentative identifications include a vertebral centrum and a thoracic vertebra spinous process fragment. Six rib fragments and 15 long bone and unidentifiable bone fragments complete the faunal inventory. This upper cultural component is located stratigraphically below the organic root mat (unit 1) and above the Devil tephra (unit 3). Small amounts of scattered charcoal flecks mixed with a fine silt comprise the matrix of this unit.

The possible middle component is concentrated in the Watana tephra and is found in both the oxidized and unoxidized units (unit 4a and unit 4b); however, this possible component may be due to artifact movement caused by cryoturbation. Cultural material associated with these

stratigraphic units was found in the 1 x 1 m test square N100/E96 and includes four argillite flakes and one argillite biface (UA84-82-1; Figure D.379a) in the oxidized Watana tephra (unit 4a) and one argillite flake in the unoxidized Watana tephra (unit 4b).

Lower Component: The lower cultural component is concentrated in the lower extent of the Oshetna tephra (unit 5) and in the fluvial deposits (unit 6). Two basalt flakes associated with this lower component were uncovered from the fluvial deposits (unit 6) in the 40 x 40 cm test pit (test pit 1) during the survey testing phase. One additional argillite flake was found at the lower extent of the Oshetna tephra (unit 5) in test square N100/E96 during the systematic testing phase.

Evaluation

TLM 077 is situated on the southern end of a discrete relict river terrace which is oriented north-south approximately 5 m above the surrounding terrain of the alluvial fan formed by Kosina Creek. The views from the site are restricted by dense stands of black spruce and birch forest but allow partial visibility of the western steep-sided slopes of the Kosina Creek valley to the west and the northern slopes of the constricting valley of the Susitna River.

Systematic testing at TLM 077 defined two and possibly three cultural components. The upper component occurs in the organic silt layer (unit 2) above the Devil tephra and represents a homogeneous component consisting exclusively of faunal materials. The possible middle component occurs within the oxidized and unoxidized Watana tephra (unit 4a and unit 4b) and contains five argillite flakes associated with a large argillite biface. The lower component consists of one argillite flake which occurs in the lower extent of the Oshetna tephra (unit 5) and two basalt flakes which occur in the fluvial deposits (unit 6). Observed site size based on the distribution of artifacts is 46 square meters (Table D.2).

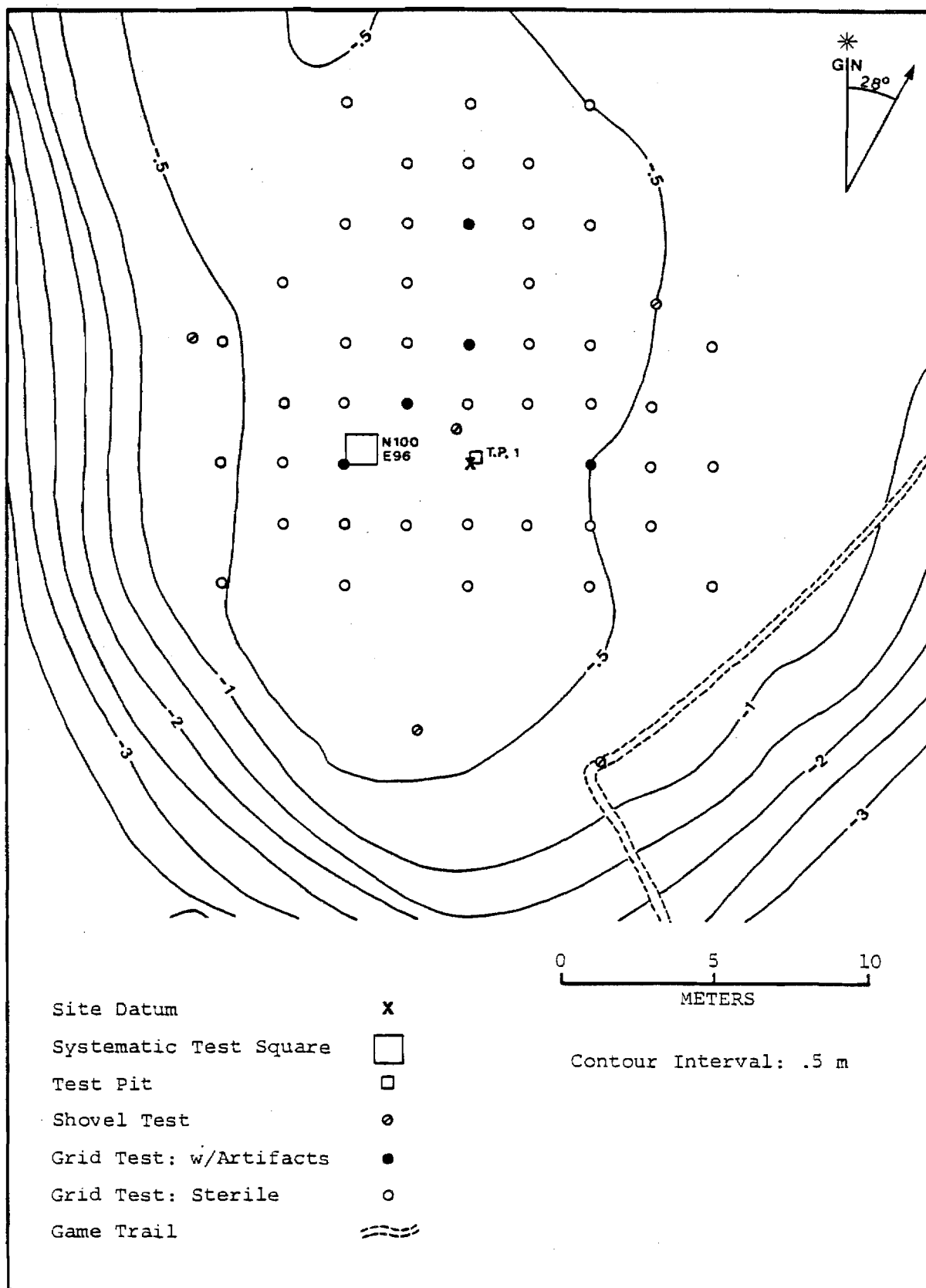


Figure D.104. Site Map, TLM 077

DEPTH (cm)

PROFILE

UNIT

0

5

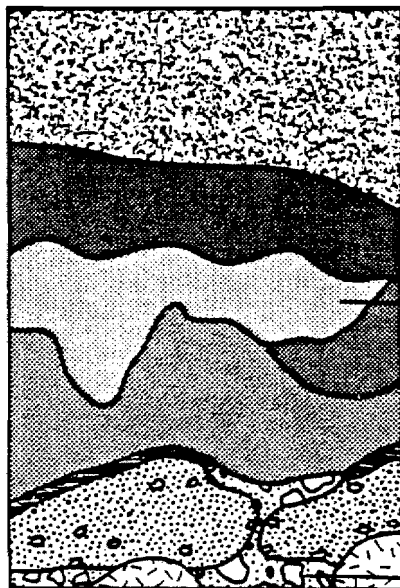
10

15

20

25

30



1

2 — CULTURAL

3

4a

4b

PALEOSOL

5

6

CULTURAL

CULTURAL

Figure D.105. Composite Profile, TLM 077

Table D.151.

Soil/Sediment Description for Composite Profile, TLM 077

Unit	Description
1	Surface organic layer: thick fibrous root mat and decayed sphagnum moss, Labrador tea, and lowbush cranberry. Thickness varies from 4-14 cm, usually 9-11 cm. Lower boundary clear and smooth. Continuous O1 horizon.
2	Very fine silt with decomposed plant fragments and rootlets; dark reddish brown (5YR 3/2). Thickness varies from 1-10 cm, generally 4-6 cm. Lower boundary clear, wavy and continuous. Tiny flecks of charcoal present. Unit moist and spongy. Cultural.
3	Fine-grained silt; pinkish gray (7.5YR 6/2). Thickness varies from 2-10 cm, usually 4-6 cm. Lower boundary abrupt, irregular and discontinuous. Devil tephra. Eluvial A horizon.
4a	Fine silt; dark reddish brown (5YR 3/2). Thickness varies from 1-9 cm, generally 3-5 cm. Lower contact diffuse, discontinuous and indistinct. Oxidized Watana tephra. Illuvial B2 horizon. Cultural.
4b	Fine silt; yellowish brown (10YR 5/6). Cryoturbated. Thickness varies from 1-16 cm, generally 9-11 cm. Lower boundary abrupt, irregular and discontinuous. Unoxidized Watana tephra. Illuvial B2 horizon. Cultural.

Table D.151. (Continued)

Unit	Description
Charcoal Lens (Paleosol)	Small-medium size charcoal particles. Lens 1-2 cm thick. Discontinuous. Primarily in western half the of test square. Lower boundary clear and irregular.
5	Silt and sand, gritty texture; gray (10YR 5/1) to dark gray (10YR 4/1). Thickness varies 2-15, generally 4-7 cm. Lower boundary clear and irregular, to broken and discontinuous. Oshetna tephra. Frost features present. Pockets of grus and cobbles (4-20 cm) are present. Cultural.
6	Silty sand and medium coarse sand with gravels and cobbles; strong brown (7.5YR 5/6). Fluvial deposits. Poorly sorted. Oxidized. Extent of excavation. Cultural.

Table D.152.

Artifact Summary, TLM 077

Tools

1	Biface
	1 Argillite (UA84-82-1)

Lithic Material

6	Argillite flakes
2	Basalt flakes

8

Faunal Material

25	Bone fragments
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Table D.153.

Faunal Material by Stratigraphic Unit, TLM 077

Unit	Description
2 Very fine silt mixed with organic debris	1 Vertebral centrum, unburned, probably caribou (<u>Rangifer tarandus</u>)
	1 Thoracic vertebra spinous process fragment, unburned, probably caribou (<u>Rangifer tarandus</u>)
	1 Metapodial shaft fragment, unburned, caribou (<u>Rangifer tarandus</u>)
	1 Proximal fragment proximal phalanx, unburned, caribou (<u>Rangifer tarandus</u>)
	6 Rib fragments, unburned, large mammal
	15 Long bone and unidentifiable bone fragments, unburned, medium-large mammal

Table D.154.

Artifact Summary by Stratigraphic Unit, TLM 077

Unit	Description
4a Oxidized Watana tephra	4 Argillite flakes 1 Argillite biface (UA84-82-1)
4b Unoxidized Watana tephra	1 Argillite flake
5 Oshetna tephra	1 Argillite flake
6 Fluvial Deposits	2 Basalt flakes

AHRS Number TLM 078; Accession Numbers UA81-235, UA84-216

Area: North of Tsusena Butte
Site Map: Figure D.106
Survey Locale: Proposed Borrow C, Figure E.275
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on a small kame 8 m above and east of Tsusena Creek. Situated at 756 m asl (altimeter: 2479 feet), the site occurs north of the confluence of Tsusena Creek with the Susitna River in a valley greatly modified by glacial processes. Numerous eskers, kames, and kettle lakes occur on the 300-400 m wide low-lying area east of Tsusena Creek with the remainder of the 1 km wide valley floor west of the creek being a moist level plain. The steep walls of the valley, reaching approximately 1525 m asl (5000 feet), are drained by numerous deeply incised streams. Two of these drainages are visible from the site. One joins Tsusena Creek, to the north, from the west side of the valley, while the other enters the creek, to the south, from the east. The kame on which the site is located is roughly circular, 20 (north-south) x 15 m (east-west), and is part of a series of similar landforms surrounding a small pond ca. 35 m to the southeast. The west side of the kame slopes at 15 degrees to the edge of Tsusena Creek while to the east there is undulating ground for 70-80 m before encountering the steep valley walls. A panoramic view is available from the site with the greatest distances being to the north and south along the valley. Vegetation in the vicinity of the site includes dense concentrations of dwarf birch, Labrador tea, sphagnum moss, berries, and lichen among open stands of spruce. The wooded section is limited to the valley floor with the vegetation changing rapidly to low shrubs and eventually becoming absent on the bare rock slopes of the steep valley walls to the east and west.

Testing:

This site was identified by the finding of a basalt flake on the surface of the knoll. Lithic material was found in the two subsurface tests excavated at the site. Test pit 1, located 3 m south of the center of the landform, produced a single gray chert flake possibly associated with the humic unit, 8-10 cmbs. Test pit 2, 4 m southwest of test pit 1, yielded four black basalt and two gray chert flakes from a highly oxidized dark red brown silt at a depth of 14-16 cmbs. A shovel test placed next to test pit 1 was sterile.

A grid shovel testing program was implemented to assist in determining the areal extent of the site. Forty-two grid shovel tests were excavated, three of which yielded cultural material. Shovel test N98/E104 produced two basalt flakes at the contact between the root mat and the underlying organic brown silts. Shovel test N98/E98 contained two argillite flakes at the contact between the Devil and Watana tephra. Shovel test N92/E102 yielded one basalt flake below the Devil tephra in a mixed Watana tephra unit. Additional surface artifacts (not all plotted on the site map) consisting of eight basalt flakes and three quartzite flakes were collected during grid shovel testing (Table D.155). The initial basalt flake found on the surface was not collected. Observed site size based on the distribution of artifacts is 39 square meters (Table D.2).

Table D.155.

Artifact Summary, TLM 078

Provenience

Description

Lithic Material

Surface: 8 Basalt flakes
 3 Quartzite flakes

Subsurface:

Test pit 1 1 Chert flake

Test pit 2 4 Basalt flakes
 2 Chert flakes

Shovel test 2 Basalt flakes
N98/E104

Shovel test 2 Argillite flakes
N98/E98

Shovel test 1 Basalt flake
N92/E102

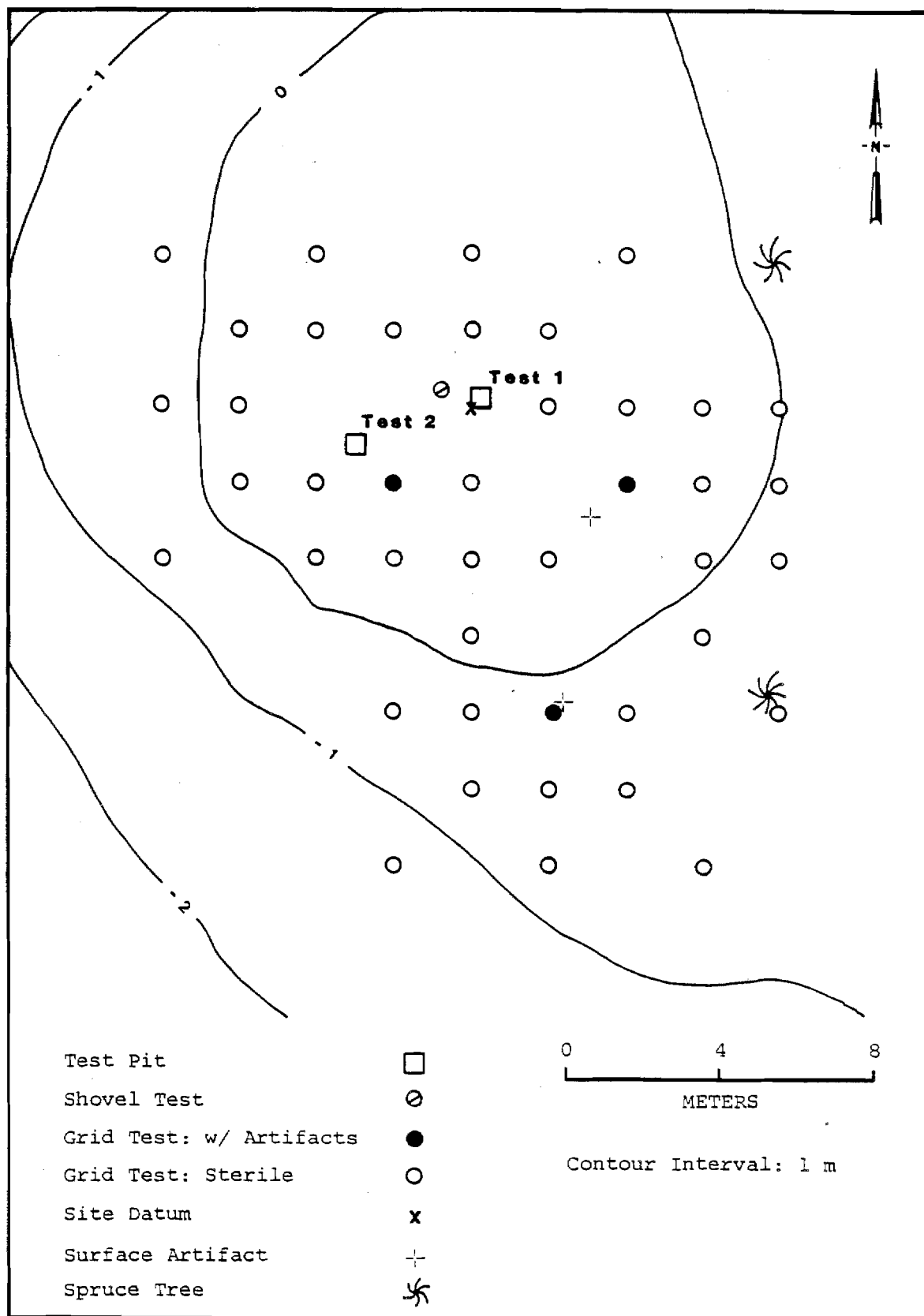


Figure D.106. Site Map, TLM 078

AHRS Number TLM 079

Area: East of Jay Creek Mouth
Site Map: Figure D.107
Survey Locale 33: Figure E.110
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site, a trapper's line cabin complex built by Elmer Simco in the mid-1930's, is located on the low alluvial plain east of the confluence of Jay Creek and the Susitna River at an elevation of 530 m asl (altimeter: 1739 feet). Jay Creek, to the north, and the Susitna River, to the south, border the site complex. Occasional flooding of the slightly lower terrain west of the cabin is apparent due to the presence of driftwood debris and the displacement of a dog kennel structure. It also appears that the cabin has been moved from its original location by flooding as a depression and berm are visible to the southwest. Toward the northwest, the fairly level plain continues for approximately 600 m before reaching the steep (20-30 degree) slope of the valley wall. Vegetation in the vicinity of the site consists of large white and black spruce, tall alder, dwarf birch, mosses, and grasses.

Documentation:

Documentation consisted of the recording of the cabin, three outbuildings, a tree cache structure, a garbage dump, and associated historic debris (Figure D.107). No subsurface tests were excavated. This site was camp number 3 on the trap line of Elmer Simco, as indicated by a map found in another of Simco's cabins (see site TLM 071, headquarters).

The cabin consists of a 13 x 9 ft. one room, dirt-floored structure, built of horizontally stacked spruce logs. The corner joints are

triangularly notched with the logs extending past their point of intersection. On the interior of the cabin the logs have been hewn square. Moss and dirt chinking was used between the logs. The roof is peaked, supported by five log beams (two of which are the top wall logs) which extend more than 2 ft. past the front of the cabin, providing a protected overhang. Roof covering consists of sawn boards, flattened stove pipe and large pieces of sheet metal. Openings into the cabin include: two small (21 x 16½ in. and 19 x 21 in.) formerly glazed windows in the southwest wall; two small (approximately 4 x 5 in.) gable vents at either end of the cabin near the roof; a screened, clear polyethylene tarp covered, 17 x 22 in. skylight near the peak above the door and a 4'3" x 2'7" door in the southeast wall. The very few interior supplies present consist of fairly modern (1960's and later) cooking utensils and cans. Two granite enamelware pots were noted which may date to the 1930's. The cabin is sparsely furnished with a stacked bunk with springs along the northwest wall, a three-tiered shelf between the windows on the southwest wall, and a table in the south corner.

There is a small sheet metal Yukon stove in the southeast section of the cabin with a shelf beside it on the northeast wall. Another recent shelf is above the door. Many pencil inscriptions with dates are on the interior walls. Above the door is "Simco Aug 28, 19__ (date illegible) Built Cabin." The earliest dated inscription is "Aug 18-36 ELMER." Bush pilot Don Sheldon's name from Talkeetna is also present. Generally, the cabin is in good condition, having been protected by the sheet metal roof. Two sections of the bottom wall logs are displaced and may cause subsequent collapse of the walls. Dry rot was noted on the ends of the five horizontal roof support logs.

Outbuilding number 1 is a 3' x 3'8" interior dimension horizontal spruce log-walled outhouse with square-notched corner joints. The roof slopes toward the rear of the structure and is sod-covered. The structure is in good condition.

Outbuilding number 2 is completely collapsed and covered with vegetation. Many structural elements are recognizable and have been used to

reconstruct the building layout and description. A rope with wooden floats, possibly the remains of a fishing net, was found with the structural debris. The structure consisted of a 5' x 6'6" interior dimension horizontal spruce log-walled shed with saddle-notched corner joints. The roof was peeked and covered with two layers of split logs. The structure is similar to outbuilding number 1 at site TLM 071. Its probable function was a harness and general storage shed.

All that appears to remain of outbuilding number 3 are the front two cut logs of a dog kennel. These were found displaced near a ditch north of the cabin. Fitted together, the logs have two 11 in. square openings and notched ends. The size of the openings correspond to those found in the kennel at TLM 071. This structure was apparently a two-bay dog kennel that has been destroyed by flooding.

The tree cache is represented by two widely separated fallen support posts located on the low, occasionally flooded plain north of the cabin. These 11 ft. logs have a square notch at the top for the cross beam and two diagonal support notches 3 ft. lower. One square 7 ft. long cross beam with notches for the diagonal supports was noted near the first cache post. A 4 ft. section at the middle of both posts is sheathed with flattened sheet metal cans to prevent animals from climbing up them to reach cached foodstuffs. Written on one of the sheet metal areas is what appears to be the name of Elmer Simco and the word cache along with other illegible writing. Although separated, the support posts were probably the uprights from a single cache.

A deposit of historic debris was found northeast of the cabin. Included in this deposit were recent items such as plastic, a sleeping bag, and cans, as well as a sheet metal stove and oven similar to that found at TLM 071, a cream-colored enamelware pail and a metal cot with springs.

This cabin complex is a good example of a 1930's line cabin and associated structures of the trapping industry in the Susitna River valley. Based on the potential information at this site, one would be able to reconstruct the essential structures, furnishings, and supplies for fall

and winter utilization of the valley's resources. No collection of cultural material was made at this site. Estimated site size based on the distribution of artifacts is 2,100 square meters (Table D.2).

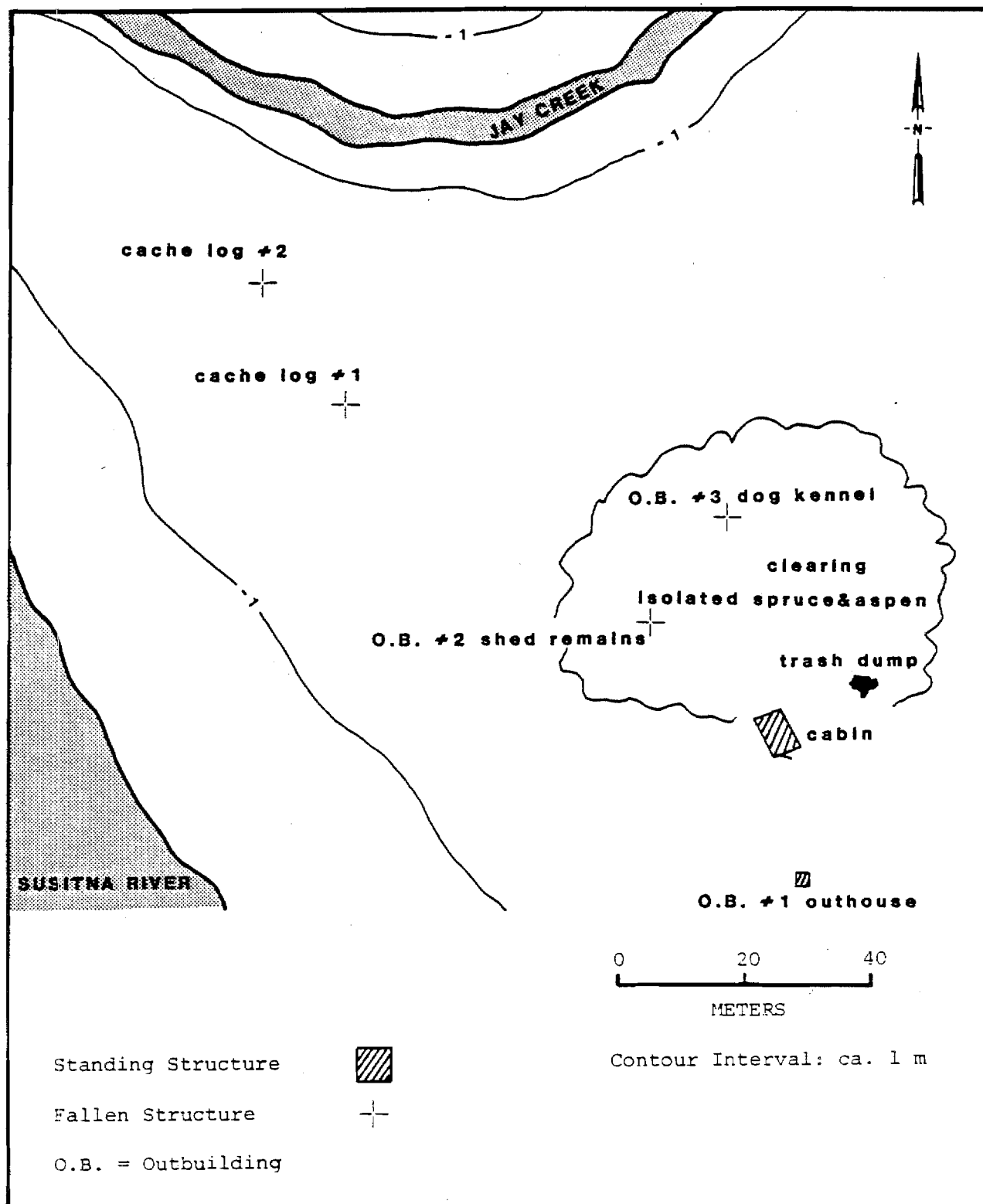


Figure D.107. Site Map, TLM 079

AHRS Number TLM 080

Area: East of Watana Creek Mouth
Site Map: Figure D.108
Survey Locale 55: Figure E.134
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is a historic trapper's line cabin located on the first unnamed drainage east of the mouth of Watana Creek on the south side of the Susitna River. The cabin is situated on a low, flat, poorly drained, alluvial terrace east of a small braided stream at an elevation of 482 m asl (altimeter: 1581 feet). The Susitna River, to the north, is 2 m lower. Intermittent drainages of the small stream surround the cabin to the east, north, and west subjecting the site to occasional flooding. Vegetation in the vicinity of the site consists of lowland black spruce forest with some white spruce, alder, and occasional cottonwood. Willow predominate in thickets along the creeks. Ground cover is grass, sphagnum, and a sparse understory of dwarf birch, Labrador tea, and bearberry.

Documentation:

The site consists of a single cabin and a stacked pile of spruce logs partially cut for firewood. No outbuildings or historic debris scatters were noted, however the area was flooded and heavily vegetated, which may have obscured additional features.

The cabin is a one room, dirt-floored, 7' x 10'6" structure built of horizontal moss-chinked spruce logs with the interior side of the logs hewn flat (Figure D.108). The corner joints are square-notched and the logs extend past their point of intersection. The side walls are 4'4" high at the eaves. The roof is low and peaked, supported by a central ridge beam 6'3" above the floor. It is covered with three layers of

split logs and extends past the front approximately 4 ft., providing a protected area over the doorway. The roof also overhangs the side walls.

Openings in the cabin include a 2 x 4 ft. door in the southeast wall, a 12 x 13 in. formerly glazed window centered on the southwest wall and a small square opening in the southeast section of the roof for a stove pipe exit.

Interior furnishings are sparse, consisting of: a built-in bunk along the northeast wall supported by a beam and round wooden slats covered with spruce boughs; a low bench, and two shelves and a table constructed out of wooden boxes along the southwest wall; and a rusted stove and pipe (Pacific Stove and Fdry Co., Seattle, Wash.). Supplies included coffee cans, aviation gas cans modified for use as water buckets, granite enamelware wash basins and a coffee and tin pots (Table D.156). Pencil inscriptions are by O. H. Vogel and range in date from September 11, 1945 to 1949.

The cabin is in fair condition with the exception of half of the southeast front wall which has collapsed.

No cultural material was collected at the site. Estimated site size based on the distribution of artifacts is 36 square meters (Table D.2).

Table D.156.

Artifact Summary, TLM 080

Provenience	Description
<u>Historic Remains</u>	
(Uncollected)	<ul style="list-style-type: none"> 1 Standard aviation 5 gal. square can with top cut open and rope handle 1 20 lbs. square tin of Hills Bros. coffee, red can brand with top cut out 1 Chevron aviation gasoline 5 gal. square can with top cut open 1 Small round can Hill Bros. coffee, 1 lb. 1 1 lb. round can of Darigold sweet cream butter 2 1 pt. cans of Eagle brand condensed milk 1 Tin kettle, art deco style 1 Small coffee percolator pot with faceted sides 2 Small granite enamelware wash basins 1 9½" white with blue trim enamelware plate 1 Small round can of MJB regular grind coffee, 1 lb. 1 Small file 1 Small wood stove (rusted) Portions of a magazine on bunk; no date, ca. 1940's

Cabin was flooded when this inventory was taken, so additional items may have been present under the water.

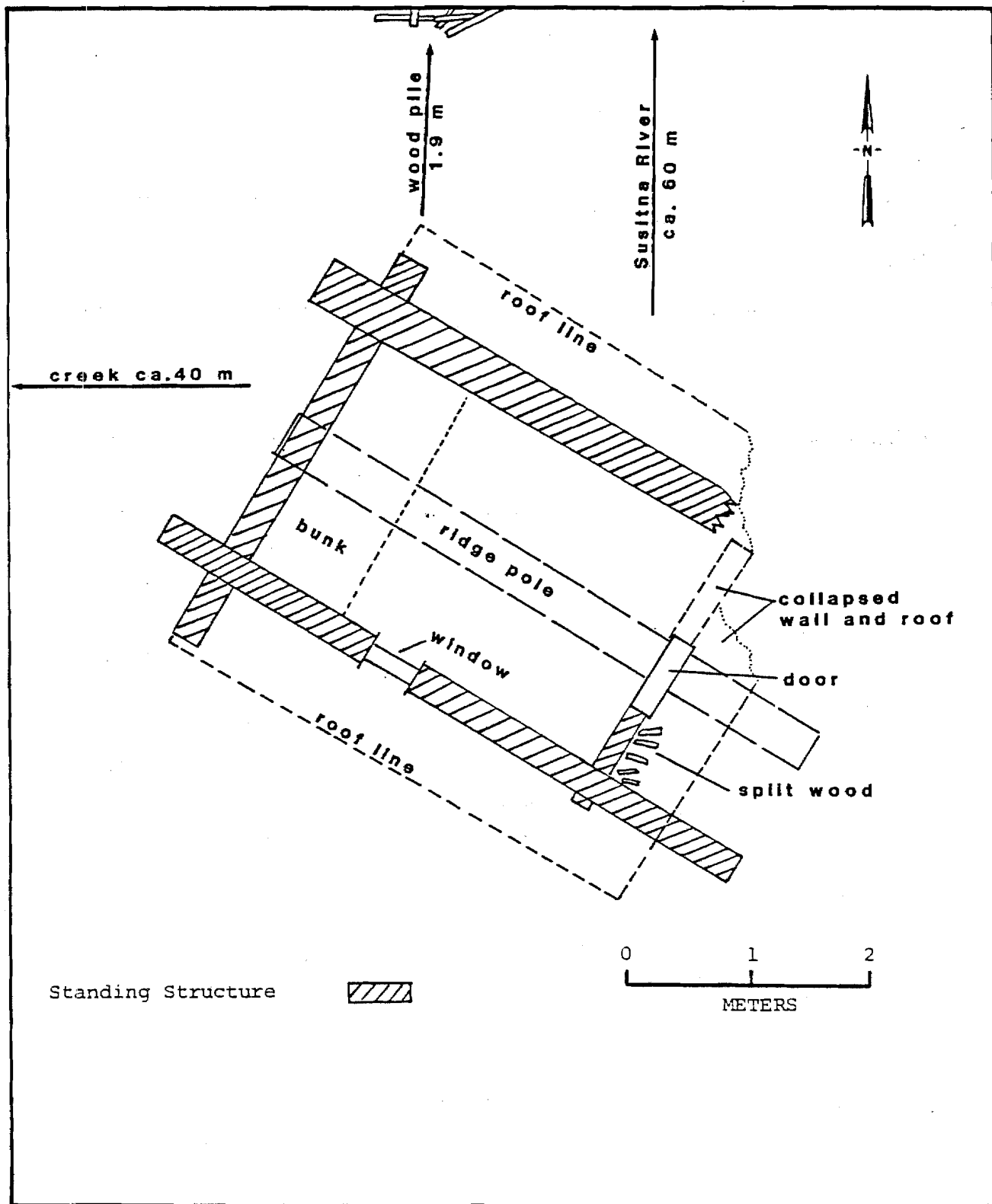


Figure D.108. Site Map, TLM 080 .

AHRS Number TLM 081; Accession Number UA81-244

Area: Southwest of Tsusena Butte
Site Map: Figure D.109
Survey Locale: Proposed Borrow C, Figure E.276
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

This site is located on a kame south and southeast of Tsusena Creek as it bends from westward to southward around the northern base of Tsusena Butte. The ca. 7 m diameter kame, at an elevation of 734 m asl (altimeter: 2407 feet), is 5 m higher than the level of the creek. Situated in the 70 m wide band of kames and eskers bordering the east side of Tsusena Creek, the site is neither at an extreme in topographic relief nor on an unusual feature in the region. The kame on which the site occurs is between two eskers oriented southeast to west-northwest; one bordering Tsusena Creek to the north and about 2 m lower than the site and another esker occurring southeast, which is 3 m above the level of the site. From its protected setting, the site commands an unobstructed view to the north of the large, open flood plain which parallels the west side of the creek and the eastern slopes of the mountains to the west. The vegetation on the site is predominantly dwarf birch around an open lichen mat with blueberry, crowberry, lowbush cranberry, dwarf Labrador tea, mosses, and grasses. Spruce occur infrequently on the well-drained surfaces of the kames and eskers as well as at the base of Tsusena Butte and the surrounding mountains.

Testing:

An initial survey level shovel test near the center of the kame (Figure D.109) unearthed two brown argillite flakes. Upon expanding this test into the standard 40 x 40 cm test pit (test pit 1), an additional 29 flakes of the brown argillite were recovered (Table

D.157). The flakes appear to be coming from a 17 cm thick zone of mixed tephras in the thin soil between the organic mat and glacial drift.

A grid shovel testing program was implemented to provide an estimate of site size and the distribution of cultural materials. Sixteen shovel tests were excavated, none of which produced cultural material. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2)

Table D.157.

Artifact Summary, TLM 081

Provenience	Description
<hr/>	
<u>Lithic Material</u>	
Subsurface:	
Test pit 1	31 Argillite flakes

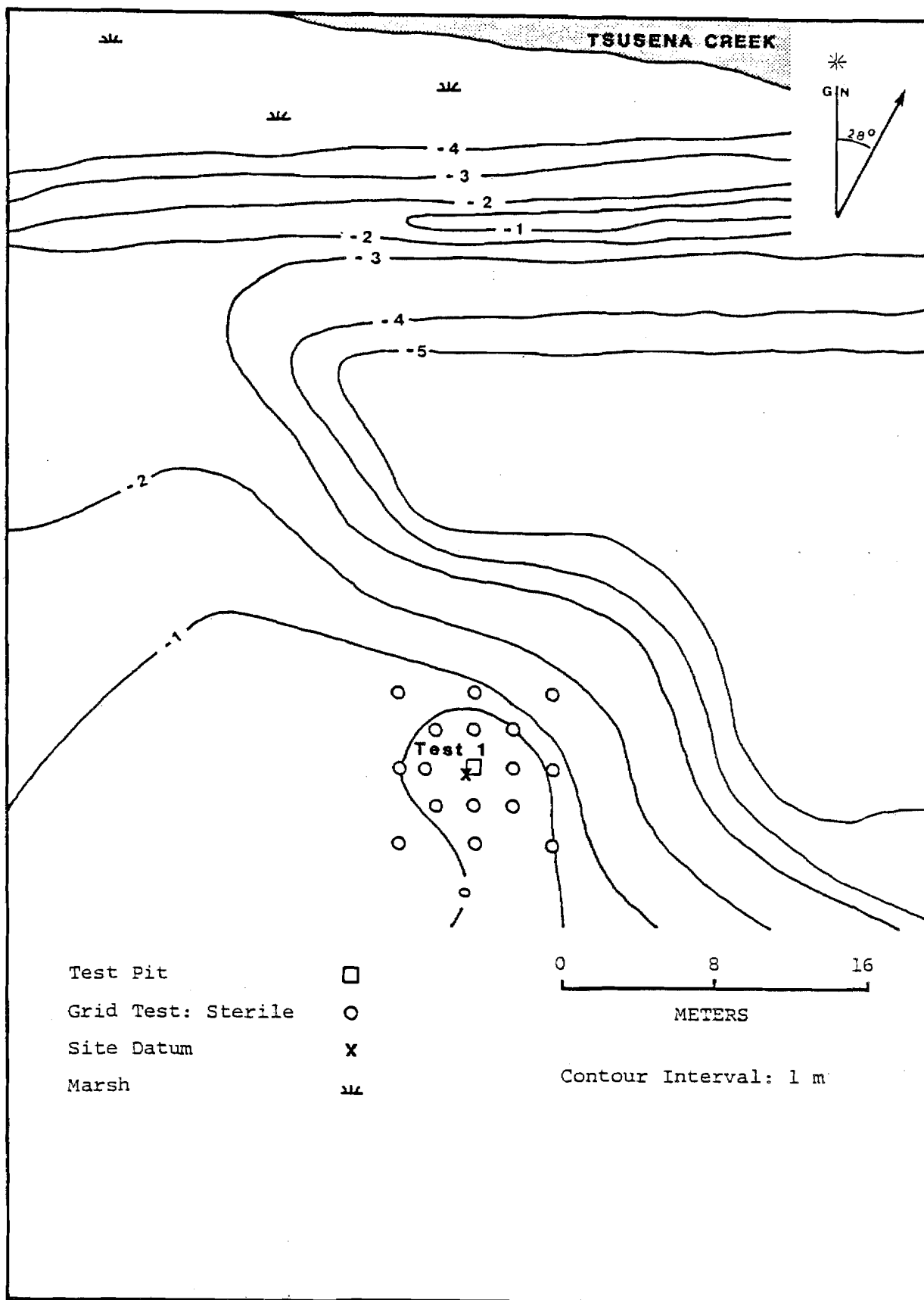


Figure D.109. Site Map, TLM 081

AHRS Number TLM 082; Accession Number UA81-239

Area: Black River
Site Map: Locus A, Figure D.110
Locus B, Figure D.111
Site Location Map: Figure E.56
USGS Map: Talkeetna Mts. B-2, Figure E.9
Site Location: Appendix F

Setting:

The site consists of two loci located on top of a northeast-southwest oriented lateral moraine north of and parallel to the Black River, one of several such moraines, upstream from its confluence with Oshetna River. The site rests on a 300-400 m long segment of the highest moraine in the region, ca. 1100 m asl (3600 feet). Distinct game trails occur on the top of every moraine.

The top of the moraine on which TLM 082 is located reaches 50 m wide at its greatest extent. The moraine is fairly straight with the exception of a slight bend eastward on the southerly end. The highest point on this moraine segment is located just north of the middle, dropping 10 m lower for the north quarter and 2 m lower for the southern half. The northwest termination of this segment drops approximately 10 m at a 20-25 degree slope opposite the base of another segment of the same moraine, forming a 15 m wide valley. A game trail is present at the base of this valley. A similar situation occurs at the southeast termination of the moraine segment. From the highest point, the moraine slopes downward 15 m to the southwest on a 15-degree slope. On the southeast side, there is a gradual, 3-5 degree slope for 8 m which then increases to 30 degrees eventually dropping 30-35 m in elevation.

The site is located on a locally prominent feature offering a near-panoramic view of the surrounding terrain. The view eastward encompasses a nearby series of lower moraines, a broad open valley with a single sinuous moraine adjacent to the Black River, and Big Bones

Ridge 6-8 km distant. The view to the northwest and west is of higher undulating slopes with a minor stream draining to the east. Higher, northeast facing slopes are visible to the southwest. The view to the south includes the northeast flowing Black River and adjacent moraine sequence with the Twin Hills in the distance. Vegetation in the region is limited to low shrub tundra. On the west side of the moraine vegetation is sparse, low growth becoming more abundant at the base. The east side of the moraine is well vegetated with dwarf birch, Labrador tea, mosses, and lichen. A lone white spruce occurs in the middle of the south end of this moraine segment.

Testing:

Surface survey of this moraine segment resulted in the collection of four of the seven surface flakes discovered (Table D.158). This material was found in two concentrations located 171 m apart on top of the moraine.

Locus A: A concentration of five argillite flakes was found in a blowout approximately midway between the northwest and southeast ends of the moraine segment and 50 cm lower than the highest point (Figure D.110). Two of the five flakes were collected. Test pit 1 was placed approximately 50 cm north of the flake scatter and just below the ridge line. No subsurface cultural material was encountered.

Locus B: This locus is situated 171 m north (20 degrees) of locus A near the termination of this segment of the moraine. A 15 m wide gap in the moraine containing a game trail occurs immediately to the east and 10 m below the ridge top. A gray chert modified flake (UA81-239-1) and a light brown chert flake were found and collected in the vicinity of this minor overlook (Figure D.111). Test pit 2 at this location was sterile.

Estimated size for locus A based on the distribution of artifacts is 4 square meters. Estimated size for locus B based on the distribution of artifacts is 13 square meters (Table D.2).

Table D.158.

Artifact Summary, TLM 082

Provenience	Description
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Lithic Material

Surface:

<u>Locus A</u>	2	Argillite flakes
	3	Argillite flakes (uncollected)
<u>Locus B</u>	1	Chert flake
	1	Chert modified flake (UA81-239-1)

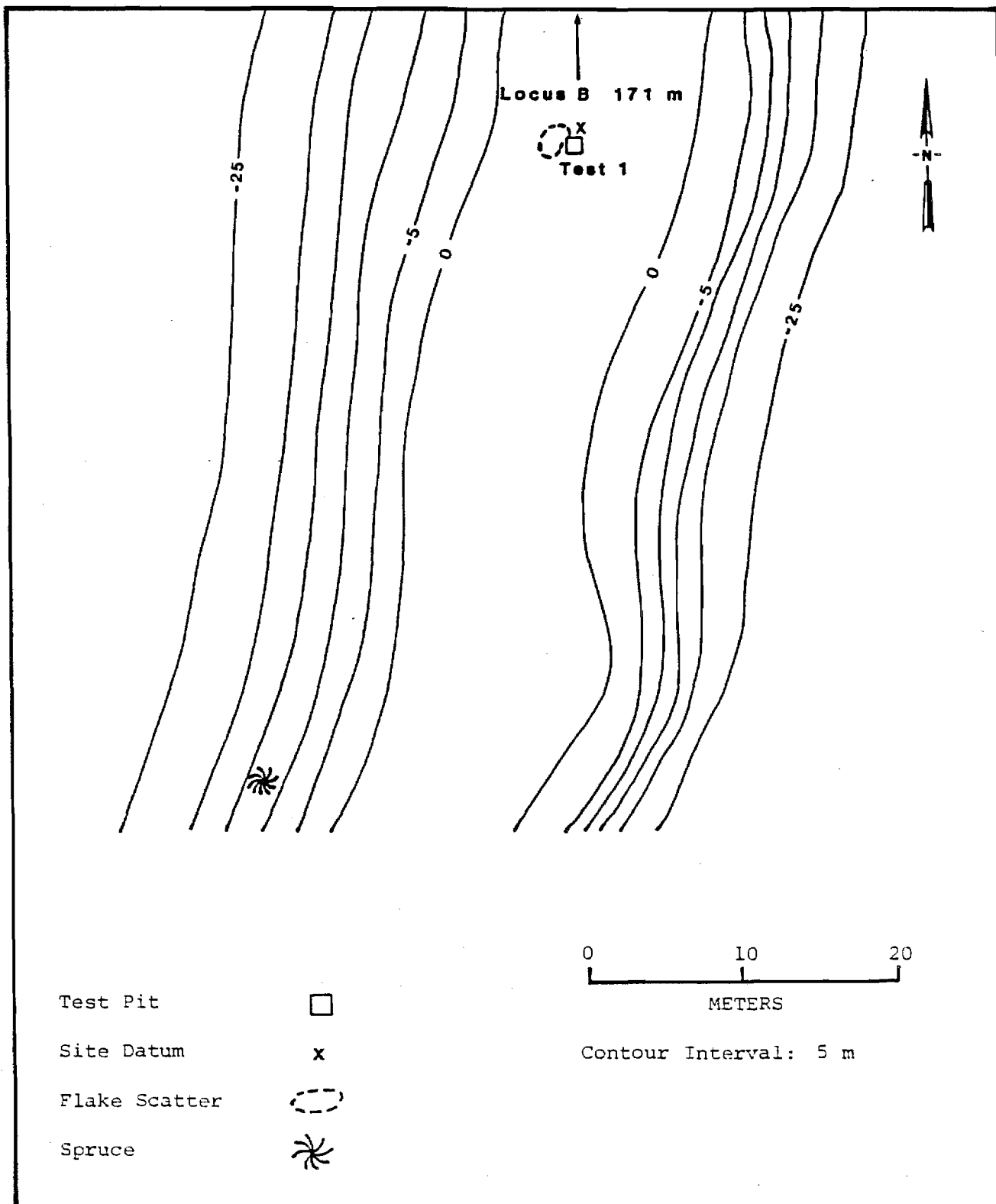


Figure D.110. Site Map, TLM 082 Locus A

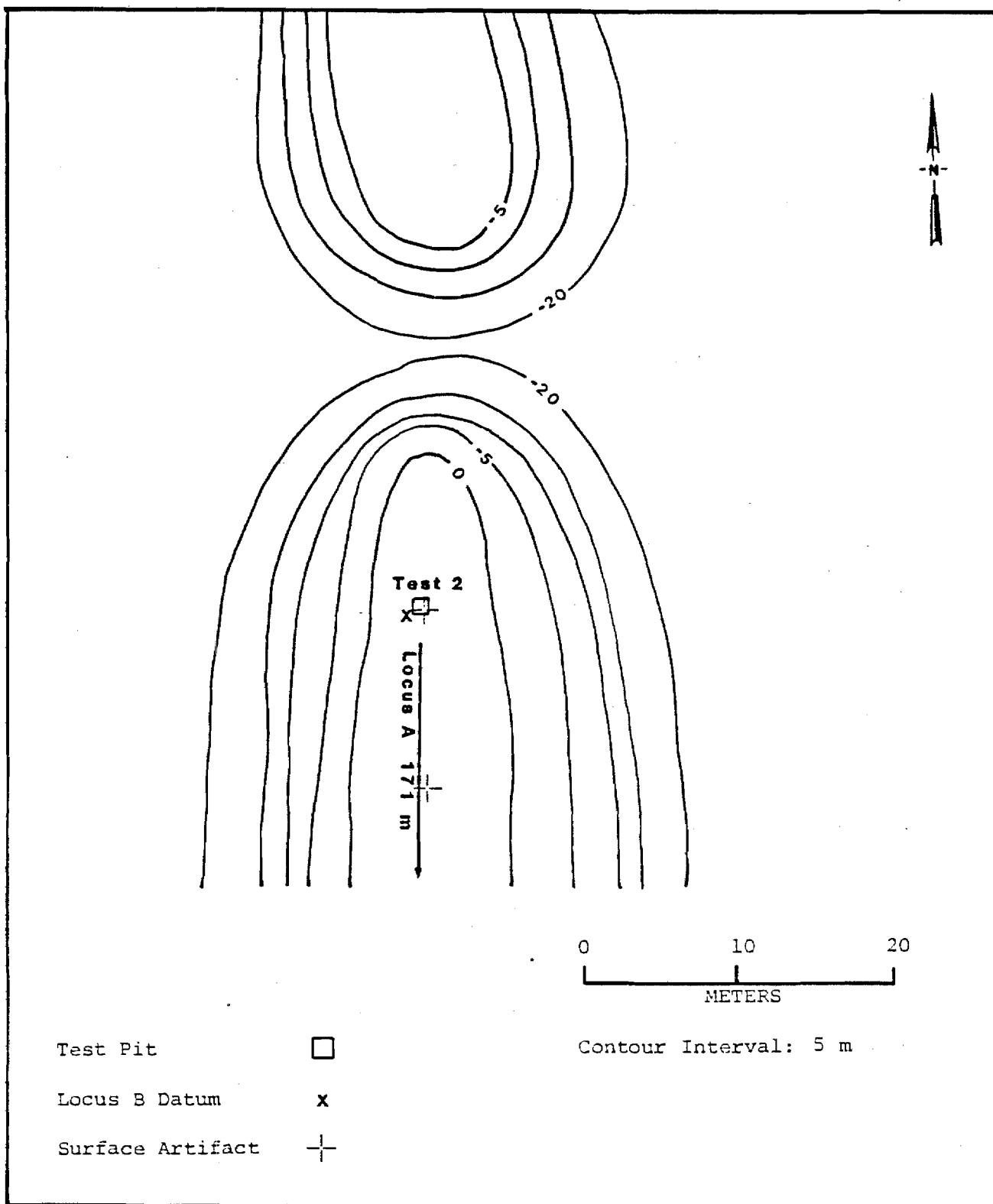


Figure D.111. Site Map, TLM 082 Locus B

AHRS Number TLM 083; Accession Number UA81-237

Area: North of Tsusena Butte
Site Map: Figure D.112
Site Location Map: Figure E.275
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is situated on a kame at 763 m asl (altimeter: 2503 feet), east of Tsusena Creek and north of Tsusena Butte just north of proposed Borrow C. To the north and northeast ca. 50 m distant are two similar kames which are 7 m and 12 m higher, respectively. A west fork of Tsusena Creek joins the main channel ca. 100 m to the northwest before passing 7 m below the site on the stream's southward course to the Susitna River. The kame, oriented north-south and paralleling the present Tsusena Creek channel, is approximately 21 x 7 m. The upper level region of the kame is ca. 11 x 7 m. The site is located on a feature of sufficient relative relief to afford a panoramic view of the surrounding region. Unimpaired by the lichen mat on top of the kame and the dwarf birch, willow, and berries on the slopes, an extensive view is available of Tsusena Creek and adjacent open flood plains in the kilometer wide valley floor. East of the site, the terrain rises gently (5-10 degrees) for ca. 70 m before reaching the steeper (15-30 degree) slopes of the valley walls which terminate in ca. 1500 m asl (4922 feet) mountains. The moist flood plain is more extensive on the west side of Tsusena Creek before reaching the eastern slopes of the mountains opposite the site. Small spruce thickets occur infrequently on the drier landscapes of the kames and lower valley slopes.

Testing:

TLM 083 was located by the presence of a single gray chalcedony modified flake (UA81-237-1) in the shovel test which was enlarged to become test pit 1 (Table D.159). No exact provenience is available for this

specimen. No additional subsurface artifacts were found in a second shovel test located 2 m to the southeast.

A grid shovel testing program was implemented to locate additional subsurface material and to assist in determining the areal extent of TLM 083. Sixteen grid shovel tests were excavated, none produced cultural material. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.159.

Artifact Summary, TLM 083

Provenience	Description
<hr/>	
<u>Lithic Material</u>	
Subsurface:	
Test pit 1	1 Chalcedony modified flake (UA81-237-1)

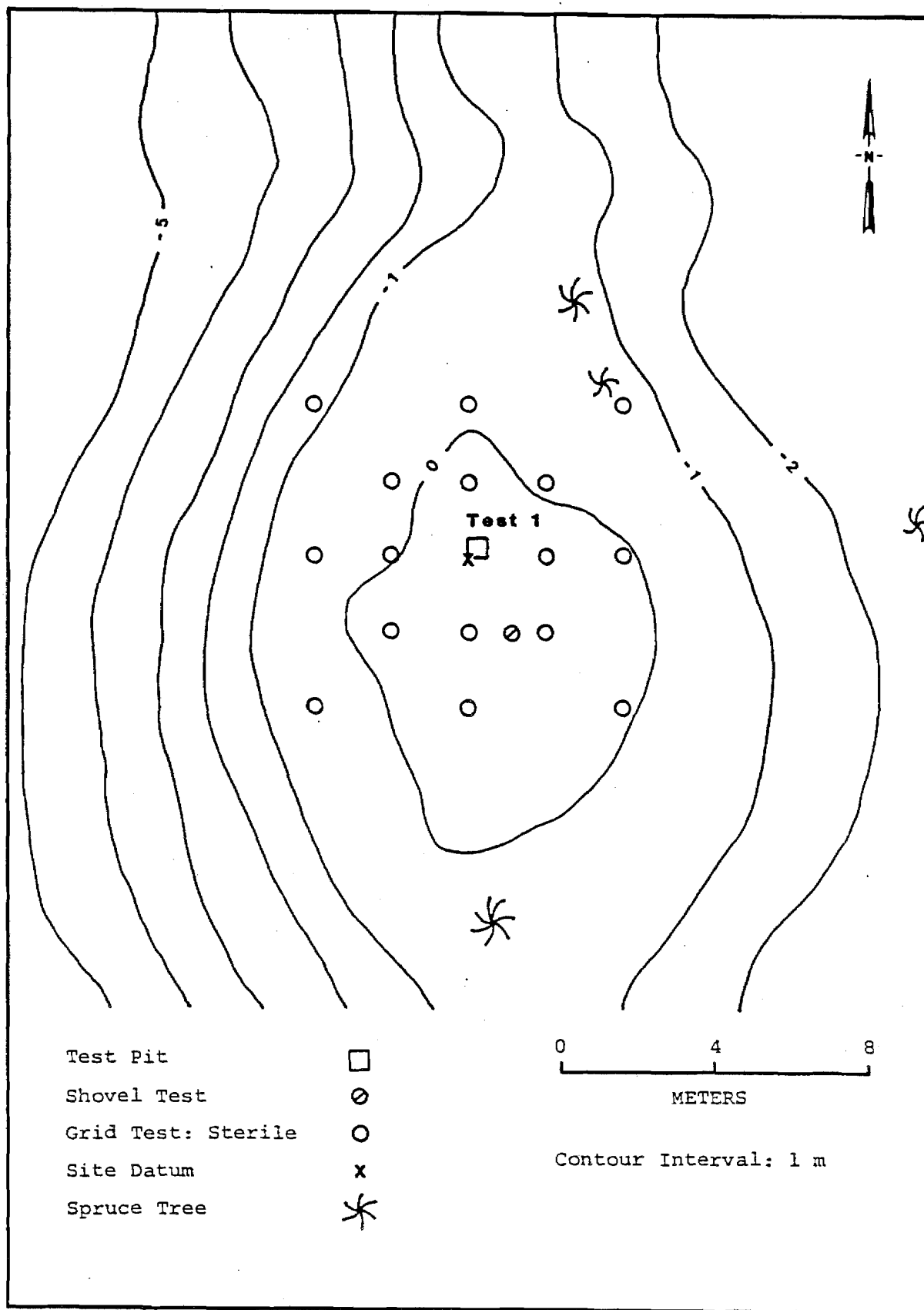


Figure D.112. Site Map, TLM 083

AHRS Number TLM 084; Accession Numbers UA81-236, UA84-219

Area: North of Tsusena Butte
Site Map: Figure D.113
Survey Locale: Proposed Borrow C, Figure E.275
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is situated on top of a kame, at 746 m asl (altimeter: 2447 feet), east of Tsusena Creek and north of Tsusena Butte. Tsusena Creek, a major clear water tributary of the Susitna River, makes a small eastward bow in its southward course northeast of the site. The east side of the creek is bounded by kettle and kame topography while the west side consists of low-lying marsh in the flood plain which dominates the 1 km wide valley. Steep valley walls to the east and west restrict movement to the broad valley floor, with a series of kames and eskers providing drier terrain along the east side of Tsusena Creek. The site rests on the most northerly tip of a ca. 30 x 22 m northeast-southwest oriented kame lying 6 m above the wet flood plain. The site location affords an unobscured view of Tsusena Creek to the north, TLM 085 on an adjacent kame ca. 100 m to the southwest, and the open marsh on the sides of the creek. The surface of the kame is covered with dwarf birch, willow, and a lichen mat with numerous berry species. Spruce trees impair the view to the east and south of neighboring kames and eskers including site TLM 087, 150 m to the south-southwest.

Testing:

TLM 084 was identified by the presence of basalt flakes in a survey shovel test. One hundred eighty basalt flakes came from this test and its subsequent expansion into test pit 1 (Table D.160). Four additional survey shovel tests and a second test pit were sterile. A grid shovel testing program was implemented to assist in determining site size,

utilizing the southwest corner of test pit 1 as datum (N100/E100). Twenty-seven grid shovel tests were excavated, two of which (N102/E98, N102/E100) produced flakes at the contact between the organic silt and the Devil tephra, and within the Devil tephra (Table D.160). Observed site size based on the distribution of artifacts is 12 square meters (Table D.2).

Table D.160.

Artifact Summary, TLM 084

Provenience	Description
<u>Lithic Material</u>	
Subsurface:	
Test Pit 1	180 Basalt flakes
Shovel Test N102/E98	1 Basalt flake
Shovel Test N102/E100	2 Basalt flakes

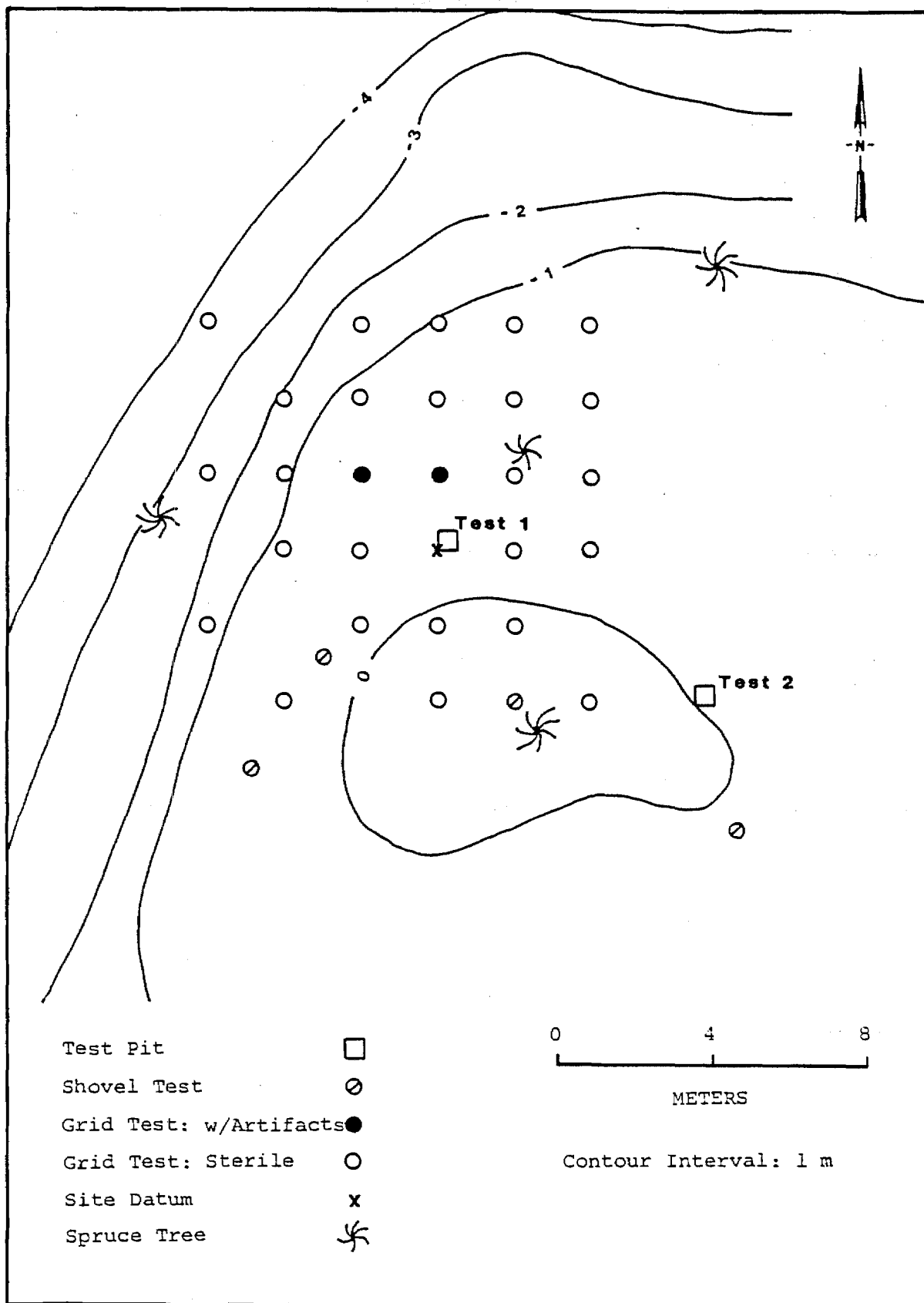


Figure D.113. Site Map, TLM 084

AHRS Number TLM 085; Accession Number UA81-240

Area: North of Tsusena Butte
Site Map: Figure D.114
Site Location Map: Figure E.275
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on a small kame east of Tsusena Creek at an elevation of ca. 743 m asl (altimeter: 2438 feet). The ca. 20 x 12 m kame is oriented north-south, and is immediately adjacent to a swampy flood plain which is 7 m lower in elevation and borders Tsusena Creek on the east side. East of the site are other kames and eskers which dominate the narrow, valley floor. The eastern valley wall is steep, with frequent intermittent drainage channels visible on the rocky slopes above tree line. One of the small drainages is located to the northeast. The site occurs on the southern portion of the kame which is separated from similar landforms on the east and south by low troughs. Being located at a bend in Tsusena Creek, the site commands an extended view of the creek along its course from the north, past the site on the east, and downstream to the south. The presence of spruce trees restricts views to the east and south. Other sites in the vicinity, on the east side of Tsusena Creek, are visible approximately 150 m to the northeast (TLM 084) and 100 m to the south (TLM 087) on similar kames. Low shrub vegetation consisting of dwarf birch, lichen, Labrador tea, and an assortment of berries occupies the intervening spaces between the sporadic spruce trees. Lush grasses and sedges occur in the wet regions adjacent to the creek and the moister troughs in the undulating landscape.

Testing:

No cultural material was observed on the surface of the kame. Test pit 1, located in the south half of the landform 50 m below the highest point, revealed 69 gray black chert flakes from a depth of 2-11 cmbs (Table D.161). The cultural material was found in a zone of gray (possible Devil) to light brown (possible Watana) tephra immediately above the reddish-orange glacial drift. Considerable mixing may be occurring in the less than 10 cm deep soil at the site. Test pit 2 and two initial shovel tests did not reveal additional subsurface material north of test pit 1. Sixteen grid shovel tests placed around test pit 1 were also sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.161.

Artifact Summary, TLM 085

Provenience	Description
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Lithic Material

Subsurface:

Test Pit 1	69	Chert flakes
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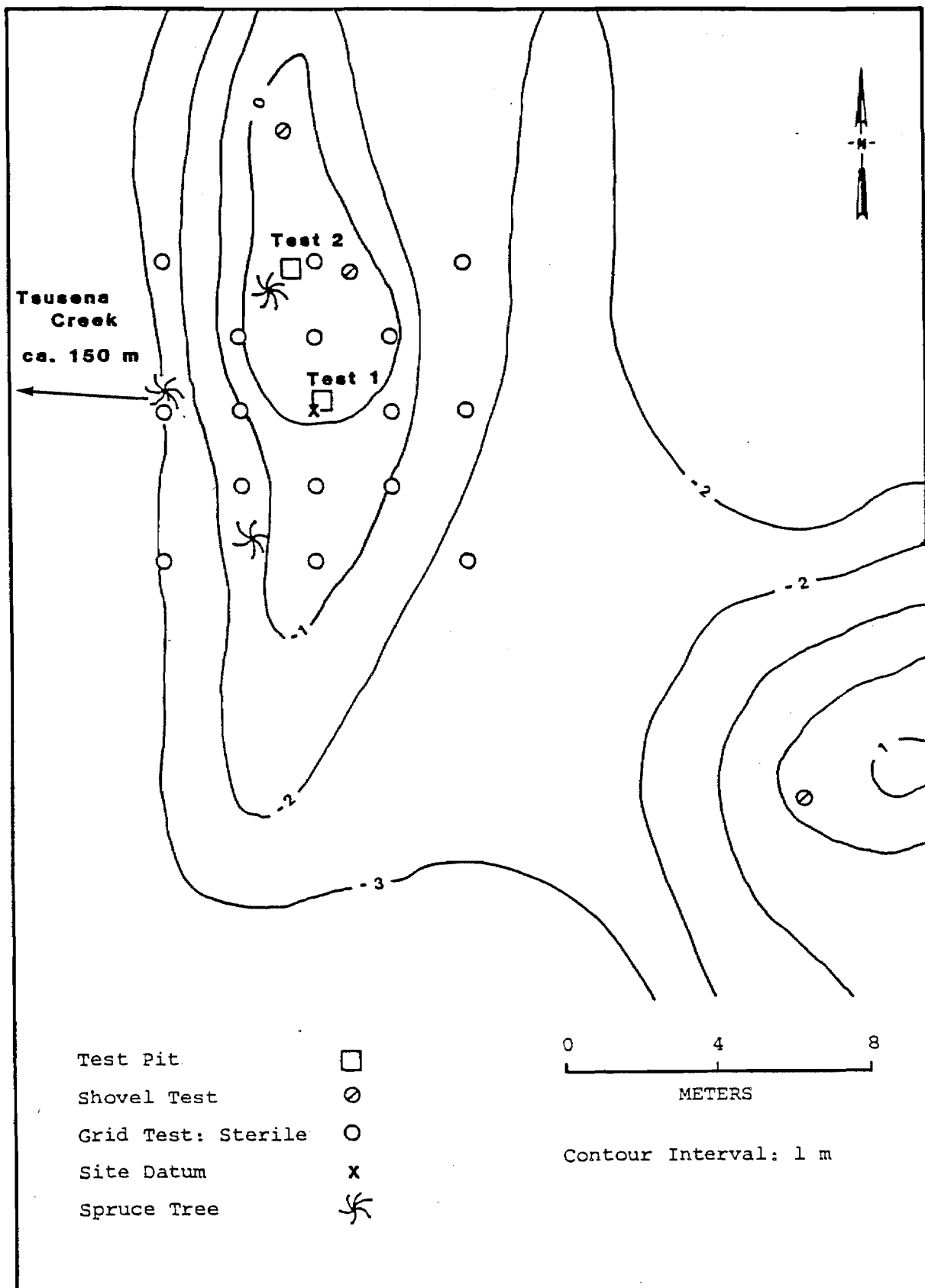


Figure D.114. Site Map, TLM 085

AHRS Number TLM 086; Accession Number UA81-241

Area: North of Tsusena Butte
Site Map: Figure D.115
Survey Locale: Proposed Borrow C, Figure E.276
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on the top of a small kame, at an elevation of 743 m asl (altimeter: 2438 feet), which is ca. 15 m above the level of Tsusena Creek to the west and immediately north of one of its clear water tributaries. The kame is part of the kettle and kame topography which forms a ca. 300 m wide strip from the prominent northwest ridge of Tsusena Butte north for approximately 6 km between Tsusena Creek and the steep slopes of the east valley wall. The top of the kame is roughly oval in shape being 6 x 12 m, with the principal axis being northeast-southwest. The sides of the kame are steep (ca. 30 degrees) to the west facing Tsusena Creek, to the south toward the tributary stream, and on the east side toward a trough separating it from an adjacent kame. The north side of the kame drops gently for ca. 2 m onto two eskers. One continues west-northwest for approximately 750 m, forming the southern border of two small kettle lakes 90 m distant. The other continues north-northwest for ca. 750 m to form the northeastern border of the two lakes. Spruce trees and the undulating topography to the east restrict the view from the site to the length of the esker to the north, the broad, open marsh which borders both sides of Tsusena Creek, and southward onto the tributary stream draining the mountains to the east. The view of the other site in the immediate vicinity (TLM 054), located on a kame 150 m east-northeast and north of the same stream which passes TLM 086, is obscured by the intervening vegetation. The general vegetation in the region consists of scattered spruce on the well-drained tops and sides of the kames and eskers, interspersed with dwarf birch and willow. Reindeer moss, sphagnum moss, lichens, Labrador tea, and a number of berry species comprise the surface cover. Sedges,

grasses, and wet-adapted low brush occupy the moist regions along the streams and in the troughs between the kames and eskers.

Testing:

Surface survey at the site located a single black chert flake from the site on a surface exposure on the south slope of the kame (Table D.162). Subsurface testing in the vicinity (test pit 1) did not reveal additional cultural material. Similar negative results were obtained from a shovel test 3 m to the north.

A grid shovel testing program was implemented to locate subsurface material and to assist in determining the areal extent of the site. Eleven grid shovel tests were excavated, but none contained cultural material. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.162.

Artifact Summary, TLM 086

Provenience	Description
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Lithic Material

Surface:	1 Chert flake
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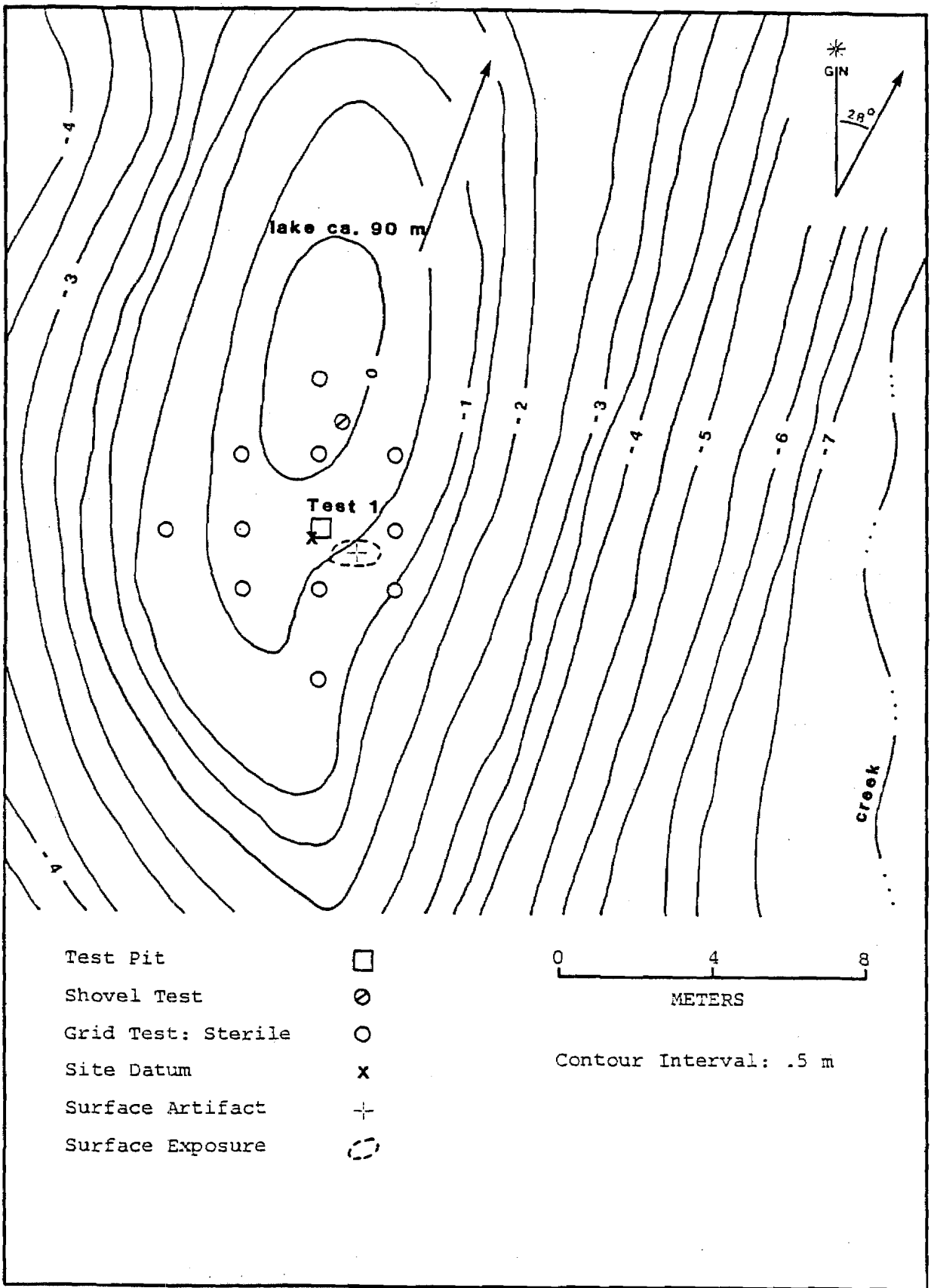


Figure D.115. Site Map, TLM 086

AHRS Number TLM 087; Accession Numbers UA81-242, UA84-222

Area: North of Tsusena Butte
Site Map: Figure D.116
Survey Locale: Proposed Borrow C, Figure E.275
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located, at an elevation 748 m asl (altimeter: 2455 feet), on the south half of a northeast-southwest oriented kame in the kettle and kame topography which borders Tsusena Creek north of Tsusena Butte. Sites TLM 087, TLM 084 (150 m to the north-northeast), and TLM 085 (100 m to the north-northwest) form a tight cluster of archeological sites 70-100 m east of an eastward bend in Tsusena Creek. Located 10-15 m above the level of the creek, the 6 x 10 m top of the kame is of sufficient relief to provide a 1 km view of the southward course of Tsusena Creek and adjacent open marshlands to the west. Although the surface of the site itself consists of only dwarf birch and other low bush vegetation species, the presence of scattered spruce trees on neighboring kames restricts the view of the local glacial features to the north, east, and south.

Testing:

TLM 087 was located by the presence of a gray basalt flake in an initial survey level shovel test. A second basalt flake was recovered during the expansion of this shovel test into test pit 1 in light grayish brown silt at a depth of 11 cmbs (Figure D.116; Table D.163). A second test pit was excavated (test pit 2) but failed to produce cultural material. A grid shovel testing program was implemented to assist in determining site size. Forty grid shovel tests were excavated, three of which produced lithic artifacts from the contact below the organic silt and above the Devil tephra. Observed site size based on the distribution of artifacts is 28 square meters (Table D.2).

Table D.163.

Artifact Summary, TLM 087

Provenience

Description

Lithic Material

Subsurface:

Test pit 1 2 Basalt flakes

Shovel test 9 Basalt flakes
N100/E96

Shovel test 1 Basalt flake
N102/E106

Shovel test 1 Basalt flake
N104/E104

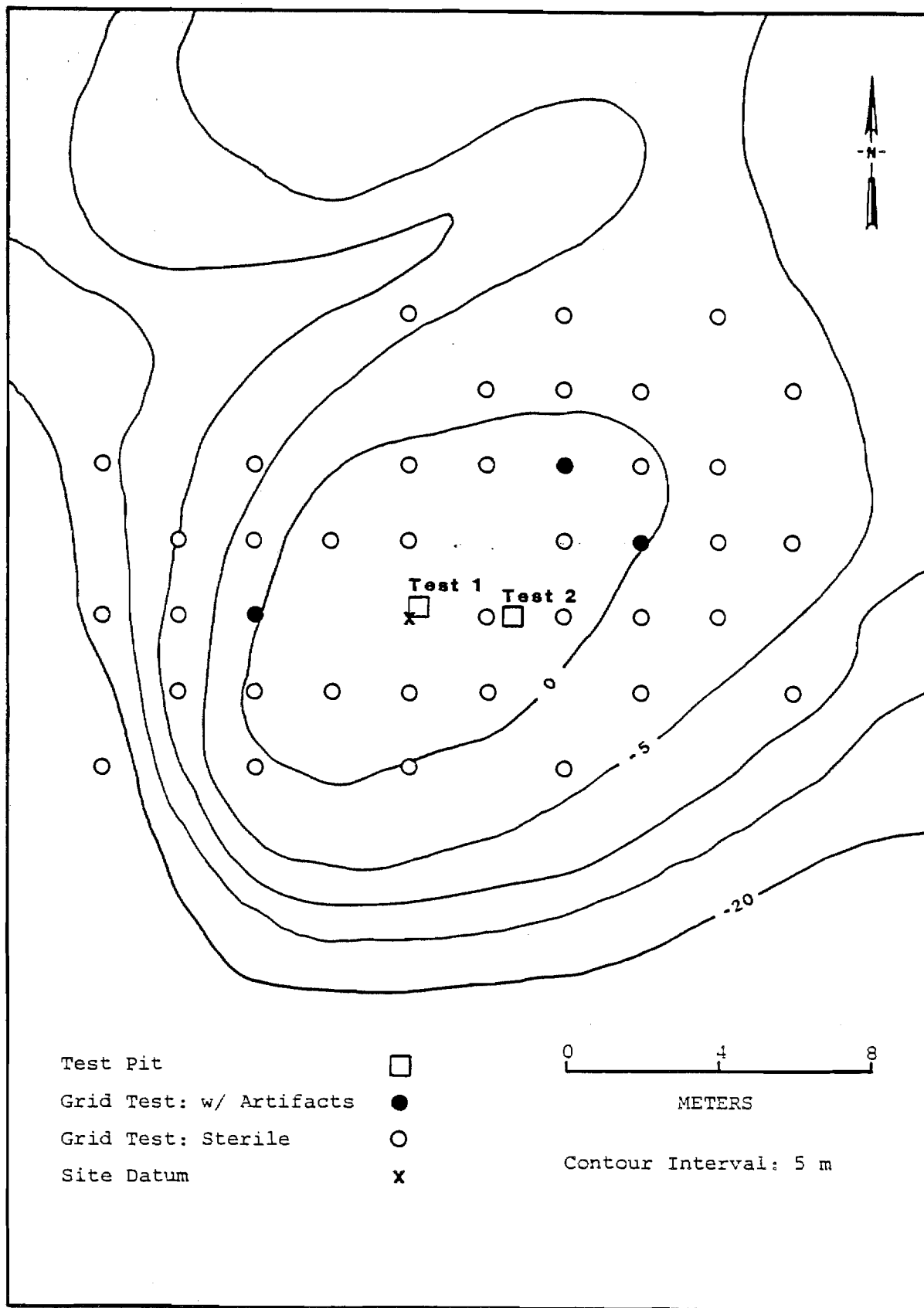


Figure D.116. Site Map, TLM 087

AHRS Number TLM 088; Accession Number UA81-248

Area: North of Tsusena Butte
Site Map: Figure D.117
Survey Locale: Proposed Borrow C, Figure E.276
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

Site TLM 088 is situated, at an elevation of 737 m asl (altimeter: 2418 feet), on an esker southeast of Tsusena Creek inside the right angle bend formed by the creek as it travels around the northwest slopes of Tsusena Butte. Tsusena Creek continues on its southward course west of the site. A series of three east-west oriented eskers are located north and northeast of the site, each with its northwest end truncated by Tsusena Creek. The highest feature in the immediate vicinity is an esker located ca. 30 m to the northeast of the site. This esker is ca. 2 m higher than the site and separated from it by a ca. 5 m deep trough.

The esker on which the site was found is ca. 80 m long, oriented northwest-southeast, tapering from approximately 20 m wide at its northwest terminus, about 7 m above the level of the creek, to only ca. 6 m wide ca. 40 m down its length, eventually merging with the north slope of Tsusena Butte. A ca. 30 m, brush-covered strip separates the north end of the esker from the creek. This low-lying strip, only ca. 2 m above stream level, is wider on the west side of the esker as Tsusena Creek assumes an indirect path to the southeast. The site occurs in 6 m section of the esker approximately 40 m southeast and 50 cm lower than the abrupt northwest terminus. The esker makes a 35-degree dogleg to the south-southeast in the vicinity of the lichen-covered, wide area of the site. Two additional sites are located in the region. TLM 097 is located ca. 250 m west on a bluff being eroded by the opposite side of Tsusena Creek. TLM 081 is located on a low kame ca. 80 m to the north, but is not visible from the site. Being

situated far back on the esker, the site affords a primary view to only the lower, brush-covered region to the south and west.

Vegetation at the site consists of an open lichen mat with Labrador tea, clumps of grass, blueberry, lowbush cranberry, sphagnum moss, and reindeer moss. The predominant plant species in the vicinity is dwarf birch with small white spruce beginning to invade the region.

Testing:

TLM 088 consists of a small 15 cm deep depression and subsurface lithics (Figure D.117; Table D.164). Feature 1, southeast of test pit 1, is a 1 m (northwest-southeast) x 80 cm (northeast-southwest) rectangular depression. Given the small size of the depression, an initial 25 cm diameter shovel test in the feature was reexcavated, but not enlarged. Although no cultural material was found in this reexcavated shovel test, the profile indicates considerable subsurface disturbance not reflected in nearby test pit 1. Beneath the organic level in feature 1 is a mixed coarse sand, silt, and gravel zone. No underlying tephra units were identified in the depression, although three tephra were discernable in test pit 1. Test pit 1 revealed 22 black basalt flakes at a depth of 8-15 cm, in the Oshetna tephra. The feature 1 depression represents reuse of the site after the formation of the lithic scatter. No surface lithics were found.

A grid shovel testing program was implemented to locate subsurface material and to assist in determining the areal extent of the site. Seven shovel tests and 15 grid shovel tests were excavated, none of which yielded cultural remains. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2.).

Table D.164.

Artifact Summary, TLM 088

Provenience

Description

Lithic Material

Subsurface:

Test pit 1

22 Basalt flakes

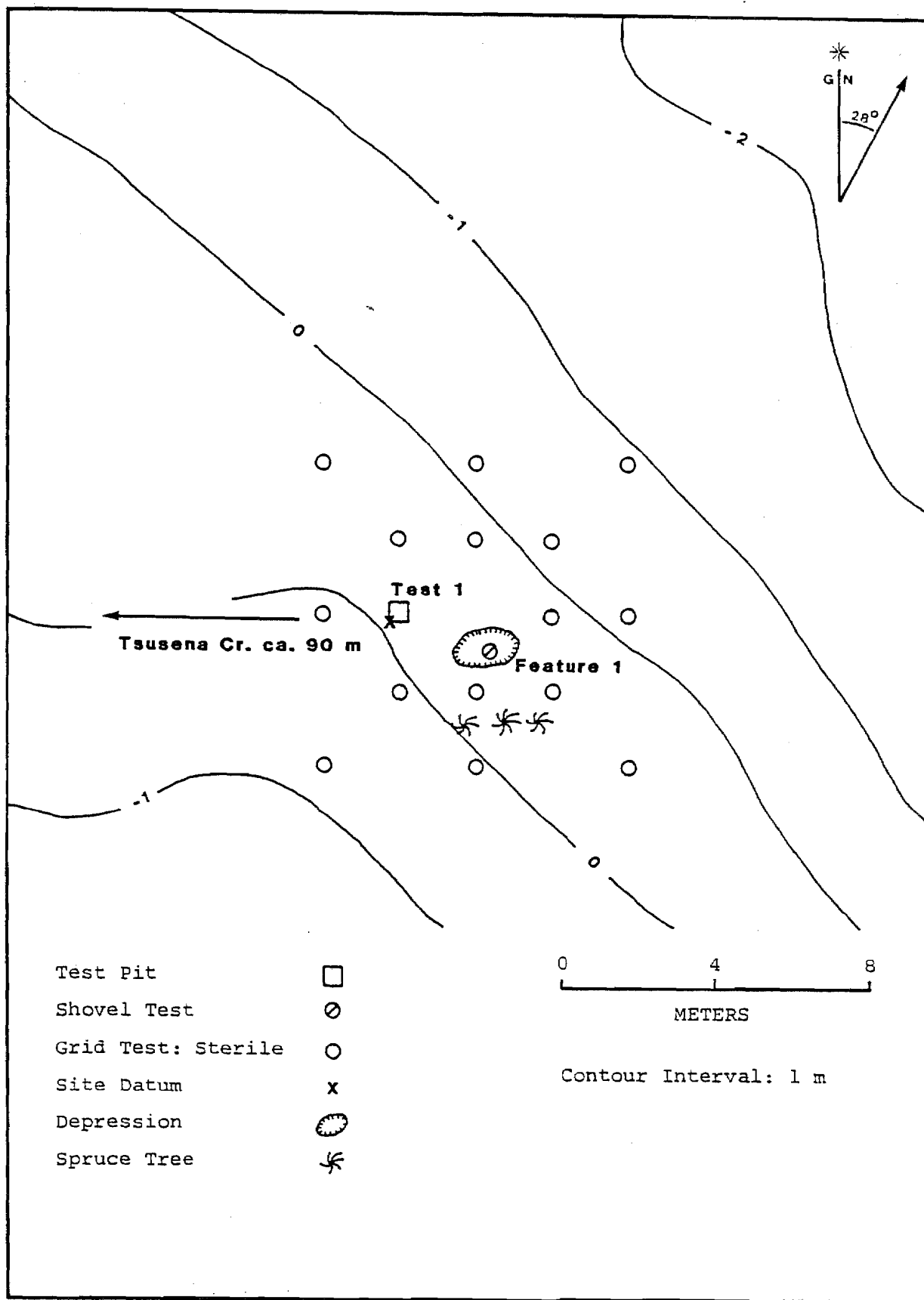


Figure D.117. Site Map, TLM 088

AHRS Number TLM 089; Accession Number UA81-247

Area: Tsusena Butte
Area Map: Figure D.118
Site Location Map: Figure E.276
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

TLM 089 is situated at approximately 807 m asl (2650 feet) on the northern ridge of Tsusena Butte, a 1314 m (4310 feet) high butte which dominates the local landscape. This ridge overlooks a 6 km stretch of the "U"-shaped valley to the north through which Tsusena Creek flows southward toward the Susitna River. Tsusena Creek is 100 m below the site with its length visible from 3 km north to where it makes a right angle southwards around the base of the butte, adjacent to sites TLM 081, TLM 088, and TLM 097. The major northern ridge crest passes to the west and is separated from the ridge section on which the site is found by a narrow ravine. The site sits on a ridge segment which is 20 m across at the point where it merges with the main ridge 50 m south of its terminal bluff face. This minor ridge tapers from an average width of 15 m to only 5 m across at its abrupt termination 5 m above a 30-degree slope running down to the kettle and kame topography at the base of the butte. A series of six exposures, numbered from north to south, occur next to exposed bedrock on the ridge crest. Each of the exposures contained surface artifacts. From its location on the east side of the northern ridge, the site overlooks a 500 m wide marsh 50 m below with adjacent low-rolling terrain at the eastern base of the ridge. The kilometer long marsh drains both into Tsusena Creek to the north and into the north arm of Tsusena Lake, visible 800 m to the southeast. Vegetation at the site consists of lichen, clumps of grass, bearberry, cranberry, and dwarf birch. Low brush with scattered white spruce typifies the low-lying, surrounding terrain. Spruce trees are just beginning to colonize at the level of the site.

Testing:

TLM 089 consists of artifact clusters from six sand and gravel exposures, as well as abundant faunal and lithic remains from test pit 1 (Figure D.118; Table D.165). The six discrete exposures are nested between bedrock outcroppings, with outer limits of 25 (north-south) x 15 m (east-west). The exposures range in size from 3 x 5 m for exposure 1 down to only a 2 m square for exposure 3. Exposure 1, located on the north slope near the termination of the ridge, shows extensive erosion with downslope displacement of artifacts. The exposures contained over a hundred black basalt flakes, the bulk of which were left in situ. A brown speckled, white chert biface fragment (UA81-247-3; Figure D.379b) was located in exposure 3. Other raw materials appearing on the surface are rhyolite and argillite of white, green, brown, and gray colorations. Test pit 1, located between exposures 3 and 4, uncovered a possible hearth containing numerous bone fragments and flakes in a thick charcoal unit and the overlying organic layers. The 40 x 40 cm test pit was reduced to 20 x 40 cm at the 15 cm level due to the large quantity of material being recovered. Approximately 4000 bone fragments were recovered from this test. Most of the bone fragments had dimensions of less than 5 mm, although phalanx and metapodial fragments were sufficiently preserved for identification as caribou (Rangifer tarandus). Over 500 flakes of argillite, basalt, chert, rhyolite, and chalcedony were also recovered from the test. Estimated site size based on the distribution of artifacts is 375 square meters (Table D.2)

Table D.165.

Artifact Summary, TLM 089

Provenience	Description
<u>Lithic Material</u>	
Surface:	8 Argillite flakes
	1 Basalt flake
	1 Rhyolite flake
	1 Chert biface fragment (UA81-247-3)
	100+ Basalt flakes (uncollected)
Subsurface:	
Test pit 1	514 Argillite flakes
	33 Basalt flakes
	1 Chalcedony flake
	4 Chert flakes
	4 Rhyolite flakes

Table D.165. (Continued)

Provenience	Description
<u>Faunal Material</u>	
Subsurface:	
Test pit 1	<ul style="list-style-type: none"> 1 Carpal or tarsal fragment, calcined, possibly caribou (<u>Rangifer tarandus</u>) 1 Vestigial metapodial fragment, calcined, caribou (<u>Rangifer tarandus</u>) 1 Medial phalanx fragment, calcined, probably caribou (<u>Rangifer tarandus</u>) 3 Vestigial phalanx fragments, calcined, caribou (<u>Rangifer tarandus</u>) 4 Tooth fragments, calcined, artiodactyl 1 Distal fragment medial phalanx, calcined, artiodactyl 1 Possible cranial fragment, calcined, medium-large mammal 3 Long bone shaft fragments, calcined, medium-large mammal 1 Unidentifiable fragment, calcined, cut mark, medium-large mammal 3,085 Long bone and unidentifiable fragments, calcined, medium-large mammal 4 Unidentifiable fragments, calcined, small mammal 800 Long bone and unidentifiable fragments, calcined, mammal 1 Unidentifiable fragment, calcined, bird

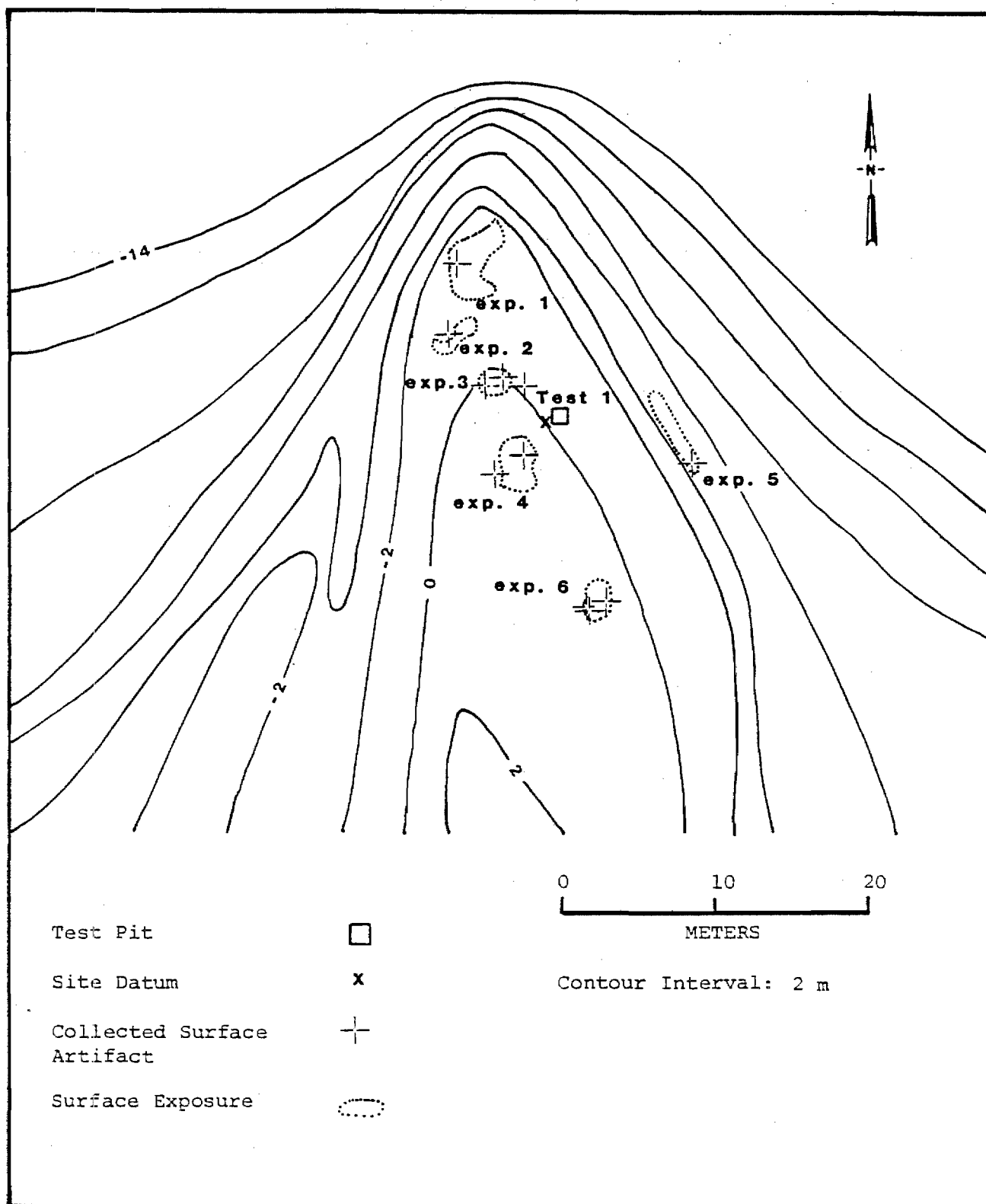


Figure D.118. Site Map, TLM 089

AHRS Number TLM 090; Accession Number UA81-253

Area: Tsusena Butte
Site Map: Figure D.119
Site Location Map: Figure E.276
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located at ca. 853 m asl (2800 feet) on a level bench of the north ridge of Tsusena Butte, a prominent 1314 m high mountain overlooking the Tsusena Creek valley. Situated on a surface exposure on the eastern edge of a 20 x 40 m, level stretch of the ridge, the site offers a vantage of the areas to the north, east, and southeast. A 2 m high bedrock ridge in the western portion of the bench obstructs the view to the west in the vicinity of the exposure. However, from the top of this ridge, it is possible to follow the course of Tsusena Creek as it bends southward around the northwest base of the butte. Sites TLM 081, TLM 088, and TLM 097 are clearly visible to the west and 130 m below the ridge. Tsusena Creek's adjacent flood plain and kames and eskers east of the creek are visible for 2 km north of the terminus of the ridge. The northern arm of Tsusena Lake is visible to the southeast. The dominant view is of the 500 m wide, wet valley bottom 70-80 m below the site situated between the ridge and the 1676 m asl (5500 feet) high mountains to the east. The marsh is only 20-30 m higher than the level of Tsusena Lake and appears to drain both into the lake and northwest into Tsusena Creek. The view to the north-northwest includes a small 50 m long eastern extension of the main ridge 40-50 m below. TLM 089 is visible on the north terminus of this minor ridge. Site TLM 093 is visible on the knolltop just west of the camp.

Bearberry, cranberry, crowberry, Labrador tea, lichen, and scattered clumps of grass cover the ridgetop. Dwarf birch and willow comprise the only vegetation over 30 cm high with the birch being the predominant surface cover on the ridge. Spruce trees are just beginning to colonize

the level of the ridge. Alder thickets occur in drainage channels on the slopes. Tussock grasses and sedges occupy the marshlands to the east.

Testing:

Five black basalt flakes, one of which was collected, were found in a deflated area on the surface of a small 2.5 (north-south) x 1.3 m (east-west) exposure (Table D.166). Seven shovel tests placed in the vicinity and test pit 1 placed adjacent to the exposure were sterile. A zone of charcoal was found at 12-15 cmbs which could not be related to the cultural material in the exposure. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.166.

Artifact Summary, TLM 090

Provenience	Description
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Lithic Material

Surface:	1 Basalt flake
	4 Basalt flakes (uncollected)

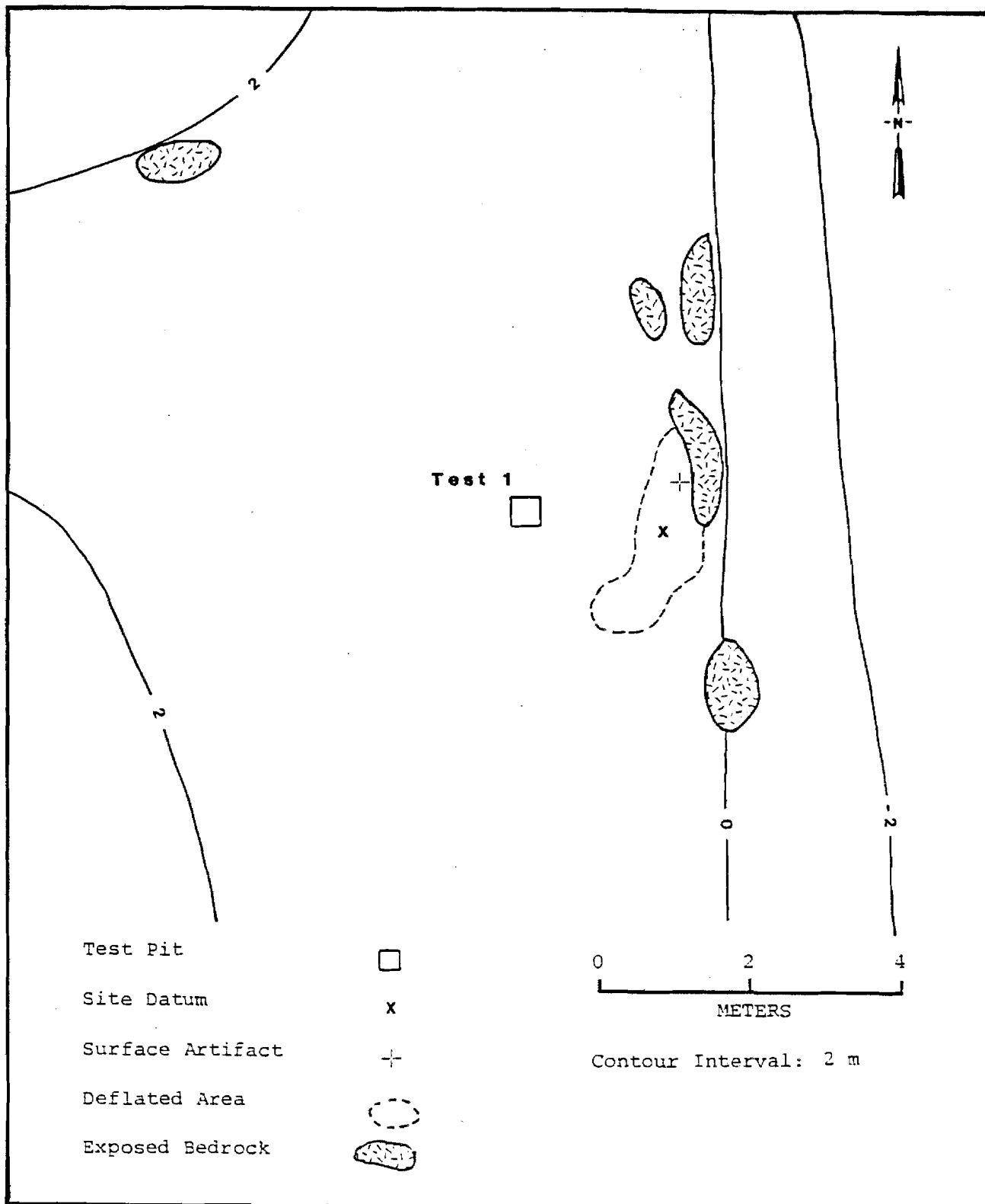


Figure D.119. Site Map, TLM 090

AHRS Number TLM 091; Accession Number UA81-254

Area: Tsusena Butte
Site Map: Locus A, Figure D.120
Site Location Map: Figure E.277
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

Site TLM 091 is located on the southern end of a 1 km long north-south trending narrow bedrock ridge, north (350 degrees) of the highest point of Tsusena Butte. The ridge, composed of exposed blocks of granite, slopes gradually but irregularly downwards to the north into the Tsusena Creek valley, and falls off steeply to both the east and west. The site, composed of two loci, is located at ca. 883 m asl (2900 feet) on two sides of a saddle separating the high point of the ridge from Tsusena Butte. The two loci, recorded as a single site, occupy two very different settings in the saddle.

Locus A: Locus A is situated 20 m north of the low point of the saddle, on the eastern edge of the ridge. It is on the southern edge of a gently undulating, crescent-shaped area 25 (northwest-southeast) x 17 m (northeast-southwest), which is separated from surrounding terrain by abrupt slopes dropping 3-25 m in all directions, steepest to the east. The surface of locus A is marked by numerous granite boulders and bedrock exposures, a small number of natural soil exposures, and a fairly continuous but low cover of lichens and dwarf birch.

Locus B: Locus B is located on the southern end of the saddle, ca. 100 m to the south of locus A. It is situated on a steep (35-degree) rocky slope, 20 m above the elevation of locus A. The slope rises to the uplands leading to Tsusena Butte to the south and it is composed of talus boulders eroding from a steep bedrock butte. In the vicinity of the locus the talus slope is heavily vegetated with creeping shrubs and lichens.

From the site, the northern part of Tsusena Lake and the swampy area north of it are easily visible. Ranges on both sides of the Tsusena Creek valley are also visible, but terrain to the north and south, and the Tsusena Creek valley to the west, are obscured by higher ground. East of the site a small seasonal drainage flows eastward.

Testing:

Locus A consists of 10 black basalt flakes located on the surface of a bedrock-soil exposure, in an area about 30 x 30 cm (Figure D.120, scatter 1). Three of these flakes were collected (Table D.167). Test pit 1, located 1 m to the south of site datum at scatter 1, contained no cultural material. Locus B consisted of an isolated black basalt lanceolate point tip (UA81-254-4; Figure D.379c). No mapping or subsurface testing was conducted at this locus. Estimated size for locus A based on the distribution of artifacts is 4 square meters. Estimated size for locus B based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.167.

Artifact Summary, TLM 091

Provenience	Description
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Lithic Material

Surface:

<u>Locus A.</u>	3	Basalt flakes
	7	Basalt flakes (uncollected)
<u>Locus B</u>	1	Basalt lanceolate point (UA81-254-4)

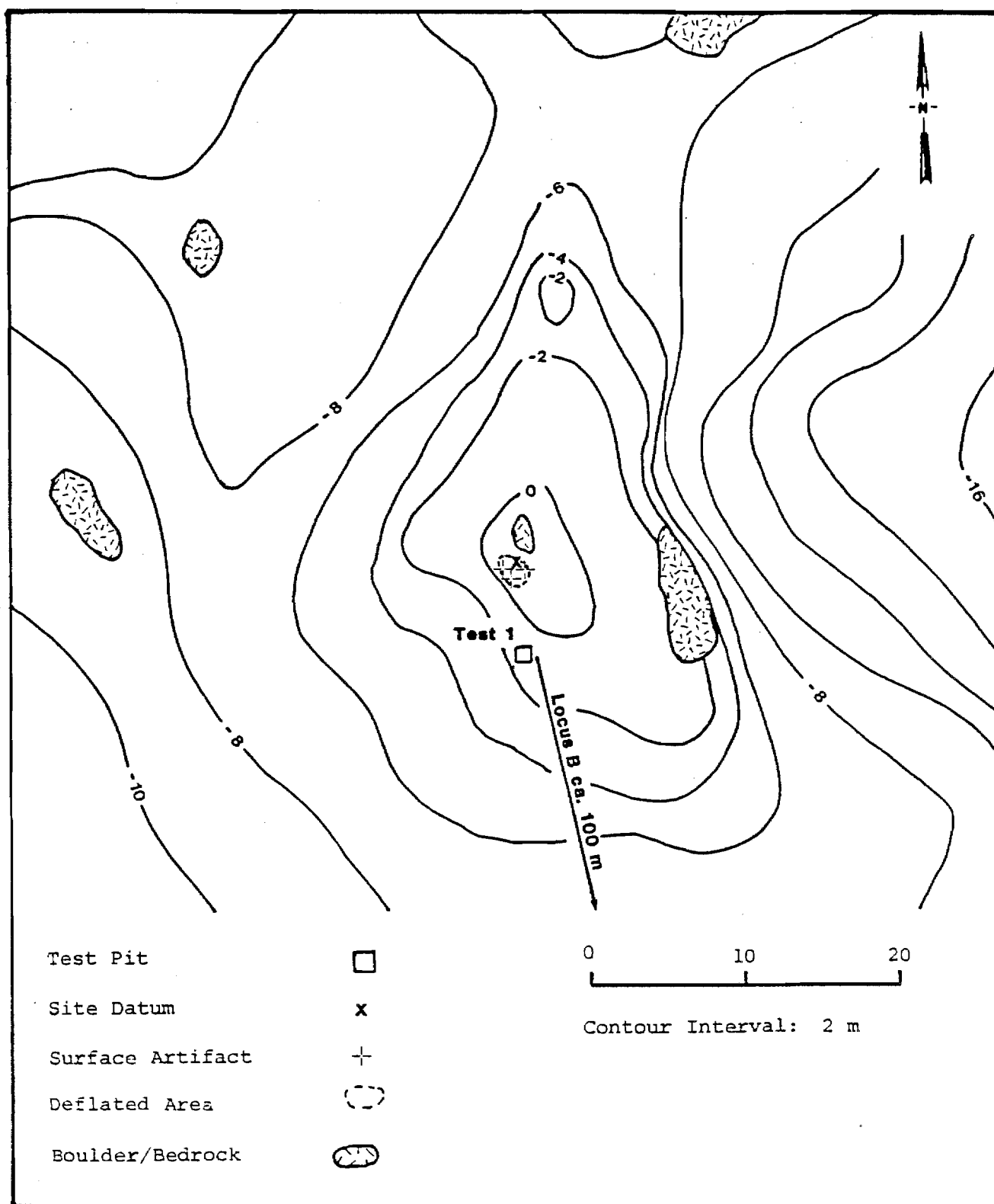


Figure D.120. Site Map, TLM 091 Locus A

AHRS Number TLM 092; Accession Number UA81-255

Area: Tsusena Butte
Site Map: Figure D.121
Site Location Map: Figure E.57
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site, located on a north-south oriented bedrock ridge at an elevation of ca. 823 m asl (2700 feet), is on the west side of the northern arm of a lake locally known as Tsusena Lake, which is immediately east of Tsusena Butte. The site is situated on a flat area (30 x 8 m) at the eastern edge of the southern end of the ridge where a bedrock exposure occurs. The terrain slopes 15-20 degrees on both the eastern and western sides of the ridge. To the north of the site, the terrain rises to two higher, prominent bedrock exposures, the most distant (60 m) is ca. 10 m higher than the site area and is the highest point on the ridge. To the south the terrain descends in several 5 m steps for a distance of 100 m, where the slope then drops down to the lake at an angle of 15-20 degrees. The view from the site is panoramic. The view southward encompasses Tsusena Lake, and westward Tsusena Butte is visible beyond a 100 m wide ravine which separates the ridge from the butte. The view to the east includes the lake as well as much of its adjoining flat margin. To the north the view is obscured by the rising terrain of the ridge. Tsusena Creek, located to the north, is not visible from the site but both the creek and Tsusena Lake are easily accessible. Vegetation at the site consists of a lichenous mat with cranberry, bearberry, and blueberry bordered by the bedrock outcrop. Adjacent to the site area are thick dwarf birch shrubs, both on the ridge and on all slopes nearby. The lake margin is swampy with grasses, muskeg, and willows present.

Testing:

The site consists of a surface lithic scatter in a soil exposure measuring 90 x 40 cm within a bedrock outcrop (Figure D.121; Table D.168). A total of three black fine-grained basalt flakes were surface collected from this blowout. No other cultural material was observed on the surface. Test pit 1, excavated 30 cm northwest of the soil exposure, did not reveal any other subsurface cultural material. Large bedrock boulders and fractured rock were present in the test below a depth of 10 cmbs. A charcoal concentration 7-13 cmbs was located in the southeast corner between a discontinuous upper whitish tephra (Devil) and a lower oxidized tephra (Watana). A charcoal sample was not collected since cultural material was not present in this test. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.168.

Artifact Summary, TLM 092

Provenience	Description
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Lithic Material

Surface:	3 Basalt flakes
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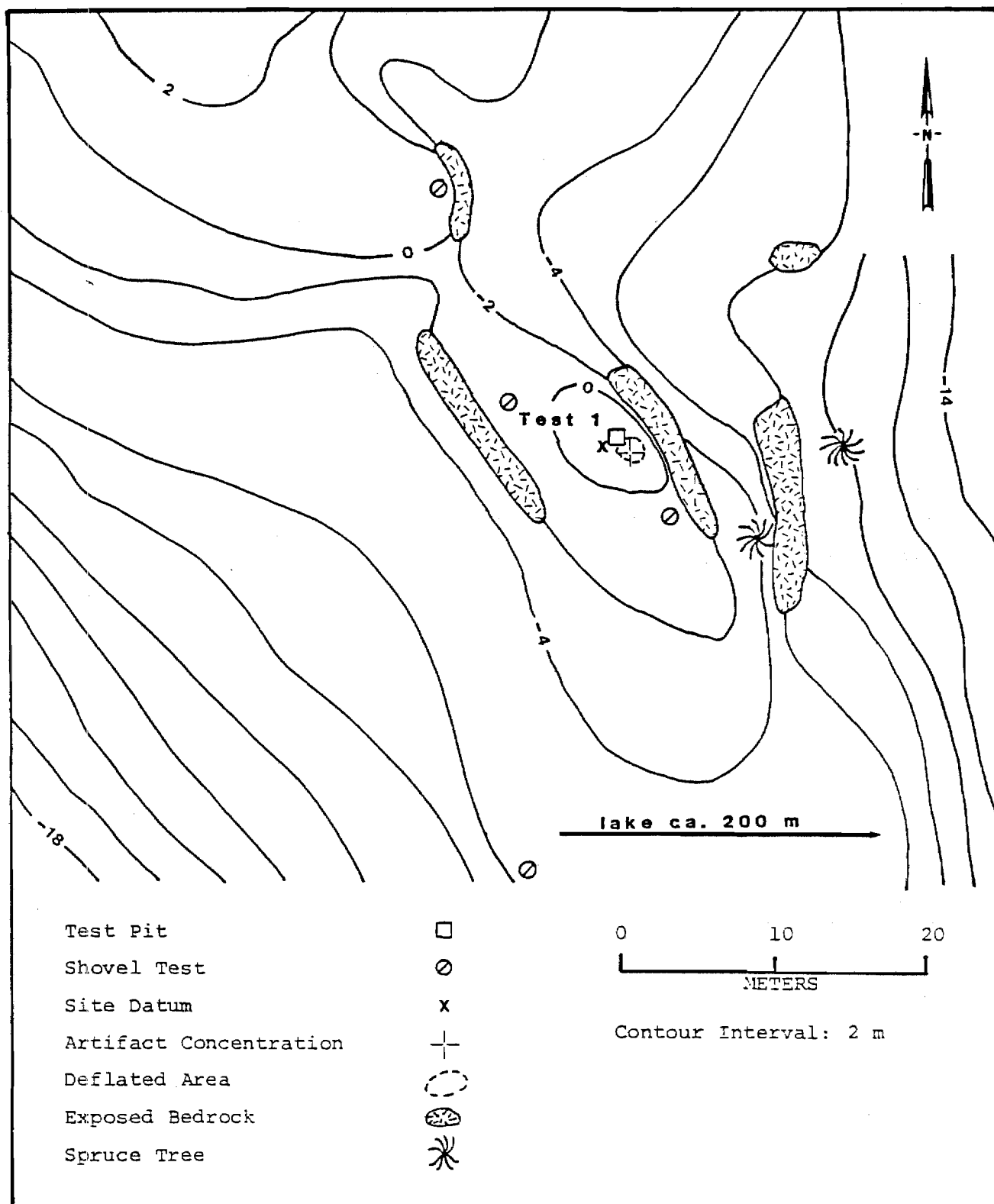


Figure D.121. Site Map, TLM 092

ARHS Number TLM 093; Accession Number UA81-256

Area: Tsusena Butte
Site Map: Figure D.122
Site Location Map: Figure E.57
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located southwest of the extreme northwestern end of a ca. 2.7 km long lake which lies northeast of, and adjacent to, Tsusena Butte. Situated on an exposed bedrock knob at an elevation of ca. 833 m asl (2700 feet), the site occupies the relatively level 20 x 35 m top of this outcrop located on the lower slopes of Tsusena Butte but separated from the main bedrock and talus slope by a northwest-southeast oriented ravine ca. 30-40 m lower in elevation. The knob is highest at its southeastern end and slopes gradually at a 5-10 degree angle in a drop of ca. 4 m to a broad, rounded ridge line which rises at a moderate slope to another lower, more rounded point to the northeast. At the eastern edge of the site a bedrock exposure drops vertically ca. 6 m after which the slope continues at an angle of 15-20 degrees to the west margin of the lake. The principal views from the site are to the north, encompassing a broad 700 m wide pass which leads into the Tsusena Creek valley, and to the east, encompassing the east and west margins of the narrow 100 m wide northernmost end of the lake. This site is an outstanding overlook with a panoramic view encompassing the entire surrounding area.

Numerous other exposed bedrock knobs and ridges are located in the immediate vicinity overlooking the same terrain features. Sites TLM 092, TLM 091, TLM 090, and TLM 089 are all located in the same general topographic context within a 1 km radius of site TLM 093. Vegetation in the site area is primarily low (50 cm) dwarf birch, bearberry, Labrador tea, and a generally thin moss and lichen mat overlying bedrock. A single white spruce occurs at the top of this knob. Shrub birch and

willow are present on the slopes of the knob, and scattered black and white spruce occupy the kettle and kame topography on the valley floor and the vicinity of the lake margins. The northern lake margin is marshy with grass and areas of standing water at the extreme northern end of the lake. Much of the surrounding higher elevation terrain is composed of vertical bedrock exposures and steep talus slopes.

Testing:

The site is located at the higher southeastern end of the ca. 20 x 35 m top of this bedrock knob. Both surface and subsurface cultural material are present with three clusters of surface flakes observed among bedrock exposures (Figure D.122; Table D.169). Seventy flakes were observed on the surface, of which 22 were collected. A gray basalt cortex modified flake with unifacial retouch along one margin (UA81-258-8) was collected from cluster 2. All other observed flakes were unmodified waste flakes.

Cluster 1 is exposed in a 1 x 1.6 m exposure and contains 15 flakes, seven of which were collected. Two brown argillite, 2 gray argillite, and 4 gray basalt flakes were left in place. Cluster 2 is exposed in a 50 x 70 cm exposure and contains four flakes, three of which (including the basalt retouched flake) were collected and a single gray basalt flake was left in place. Cluster 3 occurs in a 1.9 x 0.4 m wide exposure and was the greatest concentration of surface flakes at the site with 51 flakes visible, of which 12 were collected. The 39 flakes left in place at cluster 3 were all gray basalt. The raw materials of surface flakes collected from these three exposures include brown and gray argillite, gray and black basalt, and one chert flake from cluster 3. Intensive surface survey of the entire top of the knob did not reveal additional surface material.

Subsurface testing at the site included one 40 x 40 cm test pit (test pit 1) and eight shovel tests. Test pit 1 was excavated 2 m northeast of cluster 2 at the edge of a bedrock exposure. Thirty-three dark gray basalt flakes were excavated from 5-8 cmbs in this test. These flakes were associated with a dark brownish gray tephra (Devil) which occurred

directly below the organic mat and contained flecks of charcoal. An additional dark gray basalt flake was excavated 33 cmbs from a very dark grayish black silt or possible tephra which also contained charcoal flecks. The single lower flake is stratigraphically well below the other flakes present in test pit 1 and separated from them by a sterile tephra ranging in color from an oxidized dark red brown to a light medium brown (Watana). The fact that the flake is of the same material as the other flakes may indicate it is intrusive into the lower level.

All eight shovel tests dug at the top of the knob were sterile and it would appear the site is restricted to the immediate vicinity of the exposed surface flakes. Estimated site size based on the distribution of artifacts is 30 square meters (Table D.2).

Table D.169.

Artifact Summary, TLM 093

Provenience	Description
<u>Lithic Material</u>	
Surface:	
Cluster 1	3 Argillite flakes
	3 Basalt flakes
	1 Chert flake
	4 Argillite flakes (uncollected)
	4 Basalt flakes (uncollected)
Cluster 2	1 Argillite flake
	1 Basalt flake
	1 Basalt modified flake (UA81-256-8)
	1 Basalt flake (uncollected)
Cluster 3	1 Argillite flake
	9 Basalt flakes
	2 Chert flakes
	39 Basalt flakes (uncollected)
Subsurface:	
Test Pit 1	34 Basalt flakes

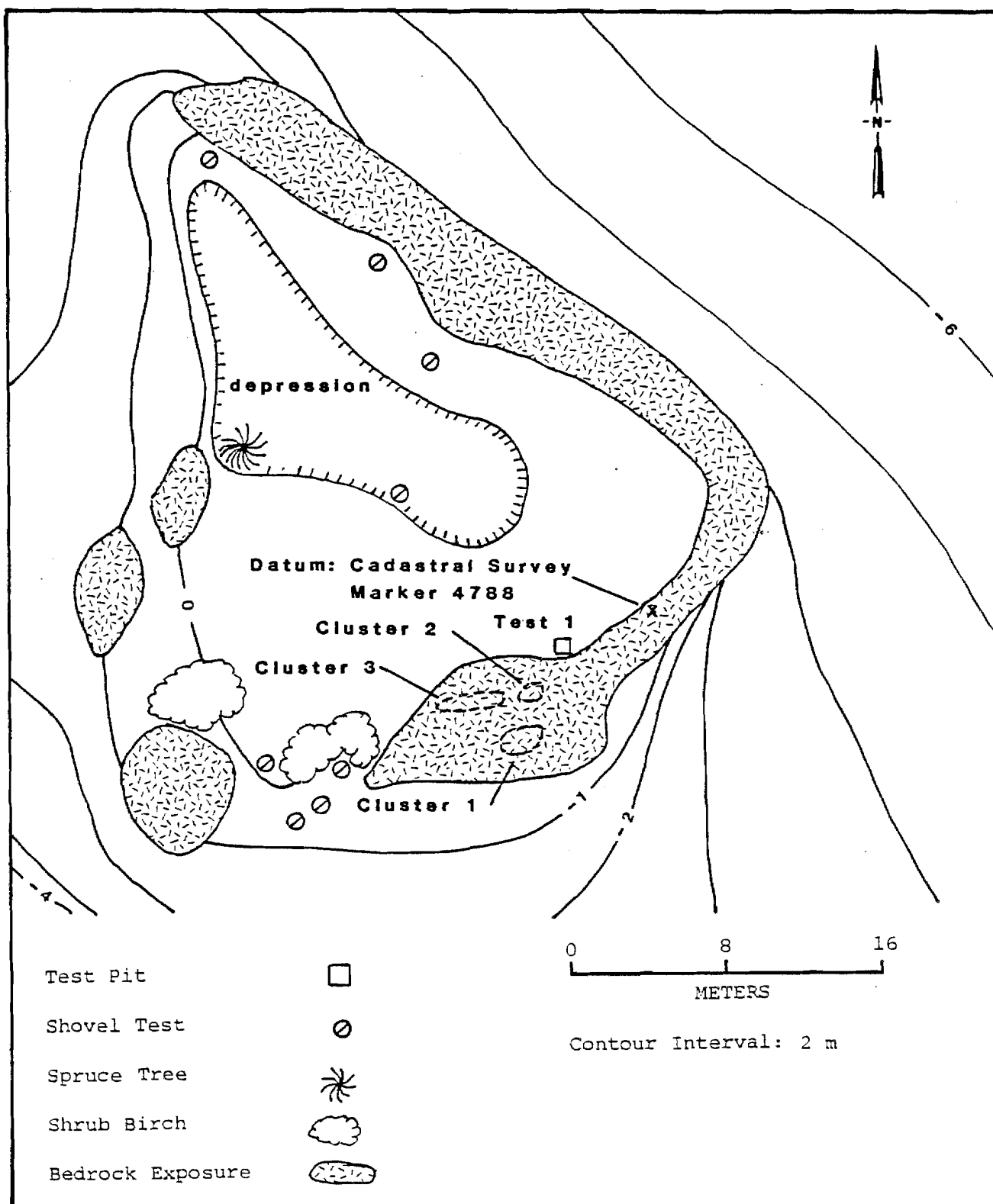


Figure D.122. Site Map, TLM 093

AHRS Number TLM 094; Accession Numbers UA81-251, UA84-227

Area: North of Tsusena Butte
Site Map: Figure D.123
Survey Locale: Proposed Borrow C, Figure E.275
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located west of Tsusena Creek and north of the northern base of Tsusena Butte. It is situated on the south end of a kame which rises about 5 m above the surrounding marshy flood plain, and is oriented 15 (east-west) x 5 m (north-south). To the north the kame descends to an area of lower knolls averaging about 2 m above the marsh. To the west, south, and east the kame descends steeply to the marsh. The site lies at an elevation of 746 m asl (altimeter: 2447 feet). It constitutes one of the higher kames on the valley floor west of Tsusena Creek. Visibility from the site is of the north-south corridor drained by Tsusena Creek. Site TLM 096 is visible on a knoll approximately 400 m west of TLM 094. TLM 095, TLM 084, TLM 085, and TLM 087 are barely visible through the spruce forest on the alluvial plain of Tsusena Creek. The creek itself is partially obscured to the east by the spruce forest. There is a presently flowing, braided creek at the eastern base of the kame. Vegetation at the site consists of lichen, moss, low heath, dwarf birch, and scattered spruce. Black spruce and muskeg characterize the surrounding vegetation.

Testing:

The site was recorded on the basis of the discovery of a flake scatter in a gravel exposure on the southwest end of the kame (Figure D.123, scatter 1). The twelve flakes located in the exposure comprise three types of raw material: argillite, basalt, and chert. Six of the twelve flakes were collected, including flake specimens of light brown patinated argillite, black and gray basalt, and two articulating pieces

of a gray basalt biface fragment (UA81-251-5; Figure D.379d). Three chert flakes and three basalt flakes remain uncollected. A 40 x 40 cm test (test pit 1) 1.5 m northeast of the surface scatter produced subsurface flakes: four translucent brown chalcedony flakes, from 3-7 cmbs, and one white chert flake from 4-7 cmbs. These flakes were associated with the contact of the humic unit and the upper Devil tephra unit. Two chert flakes were found from 4-10 cmbs in an oxidized Watana tephra. One black chert flake was recovered from 11 cmbs in a gray-brown silt (Oshetna tephra) below the oxidized tephra unit. The stratigraphy below approximately 5 cmbs shows considerable mixing, possibly due to cryoturbation; therefore, positive correlation of artifacts with depositional units is uncertain.

A grid shovel testing program was implemented to assist in site size determination. Twenty-one grid shovel tests were excavated around test pit 1 and the deflated area, but these did not produce additional cultural material. Cultural material was, however, noted on the surface and recovered from the major deflated area (Table D.170). Observed site size based on the distribution of artifacts is 20 square meters (Table D.2).

Table D.170.

Artifact Summary, TLM 094

Provenience	Description
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Lithic Material

Surface:	7	Argillite flakes
	6	Basalt flakes
	6	Chert flakes
	1	Quartzite flake
	2	Basalt biface fragments, articulating (UA81-251-5)

Subsurface:

Test pit 1	2	Argillite flakes
	2	Chalcedony flakes
	4	Chert flakes

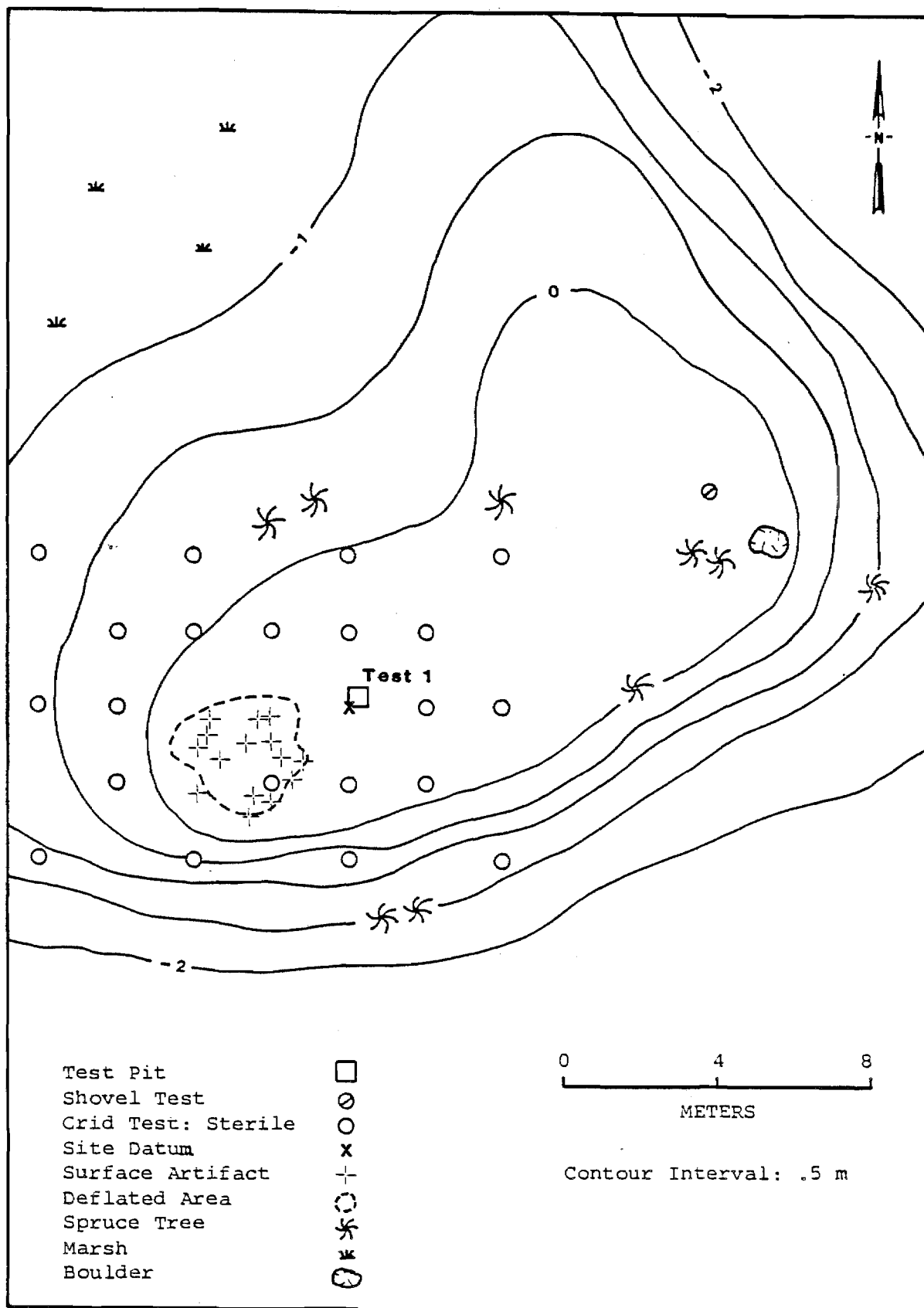


Figure D.123. Site Map, TLM 094

AHRS Number TLM 095; Accession Number UA81-229

Area: North of Tsusena Butte
Site Map: Figure D.124
Survey Locale: Proposed Borrow C, Figure E.275
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site, comprised of two loci (A and B), is located on the west side of Tsusena Creek north of Tsusena Butte in a confined, 1 km wide, north-south oriented glacial valley with steep talus slopes. The site is situated at 744 m asl (altimeter: 2442 feet) in kettle and kame topography on a discrete 6 m high kame which forms a low, rounded knoll covering an area approximately 60 m in diameter. This knoll, composed of two summits separated by a low, wet channel, slopes very gradually westward for a distance of ca. 30 m to a grassy marsh with areas of standing water ca. 4 m lower in elevation than the site. Eastward the knoll slopes gradually to a flat gravelly flood plain terrace ca. 8 m lower where a shallow, south-flowing creek is located ca. 100 m from the site. Present visibility from the site is restricted by forest cover to less than 300 m and Tsusena Creek, located ca. 400 m east of the site, is not in view. Without the present tree cover, the view would be greatly increased and would include Tsusena Creek and the entire width of the valley floor. The entire surface of the knoll is occupied by dense ca. 1 m high shrub birch and scattered black spruce. The ground surface is covered with a mat of moss and lichen with bog blueberry, bearberry, and Labrador tea. Shrub birch becomes less dense on the lower slopes of the knoll. A dense spruce forest is located to the east between the site and Tsusena Creek but spruce are absent to the west where marsh grass and standing water are present. Five additional sites (TLM 084, TLM 085, TLM 087, TLM 094, TLM 096) are located within a 1 kilometer radius of TLM 095 in the same general topographic setting.

Testing:

TLM 095 was located by the presence of a basalt flake in one of the four survey shovel tests placed at the northwestern end of the knoll (locus A, Figure D.124). The positive shovel test at locus A was expanded into test pit 1. Forty-five fine-grained black basalt flakes and five black chert flakes were excavated 5-12 cmbs within or slightly above the Oshetna tephra which directly overlies the glacial drift.

One of the three shovel tests dug at the southern end of the knoll (locus B) also revealed cultural material and was expanded into test pit 2. Twenty-two fine-grained black basalt flakes, similar to those from test pit 1, were excavated from 7-14 cmbs associated with dark red oxidized Watana tephra and the reddish brown oxidized glacial drift (Table D.171).

A grid shovel testing program was implemented to assist in determining site size and the distribution of cultural material. Sixteen grid shovel tests were placed around test pit 1 (locus A), but none produced cultural material. Fifteen grid shovel tests were placed around test pit 2 (locus B), but none produced cultural material. Three grid shovel tests placed in the low trough between the loci and investigations of deflated areas on other aspects of the knoll also proved unproductive. Observed site size based on the distribution of artifacts is 8 square meters (Table D.2).

Table D.171.

Artifact Summary, TLM 095

Provenience		Description
<u>Lithic Material</u>		
Subsurface:		
<u>Locus A</u>		
Test pit 1	45	Basalt flakes
	5	Chert flakes
<u>Locus B</u>		
Test pit 2	22	Basalt flakes

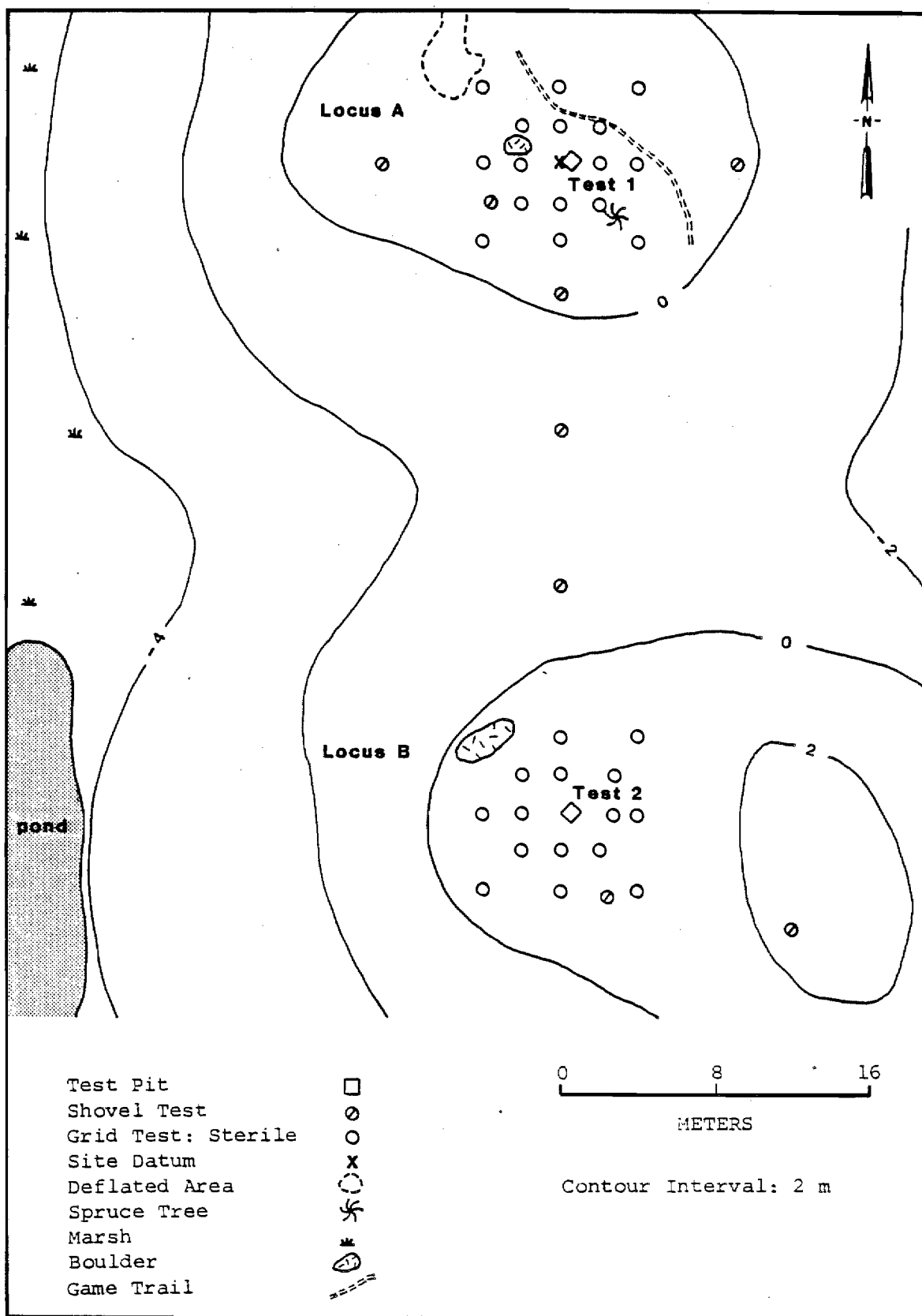


Figure D.124. Site Map, TLM 095

AHRS Number TLM 096; Accession Number UA81-250

Area: North of Tsusena Butte
Site Map: Figure D.125
Survey Locale: Proposed Borrow C, Figure E.275
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

This site is located north of Tsusena Butte and west of Tsusena Creek at the western edge of a marshy alluvial plain. It is situated on the top of a low, narrow, east-west trending ridge at an elevation of 744 m asl (altimeter: 2441 feet). The ridge is approximately 9 x 3.5 m and extends 35 m eastward into the surrounding flood plain. To the west the ridge rises gradually blending into the gentle slope (10 degrees) leading up to the base of the valley wall 200 m from the site. The creek valley east of the site is approximately 1 km wide and contains low ridges and kames on both sides of Tsusena Creek. Both the east and west valley walls are quite steep (30 degrees) rising ca. 609 m above the valley floor to an elevation greater than 1370 m asl (4500 feet).

Vegetation at the site consists of lichens, moss, blueberry, Labrador tea, and low dwarf birch. To the west on the lower valley slope and east along Tsusena Creek are dense stands of black spruce with occasional white spruce.

Testing:

No surface artifacts were observed at the site, however, one argillite waste flake was found in a shovel test. This test was expanded into a 40 x 40 cm test pit (test pit 1) and a second 40 x 40 cm test pit (test pit 2) was excavated 6 m to the northeast. Test pit 1 revealed two additional argillite flakes (Table D.172). These were found 6-9 cmbs in the uppermost of three tephras present in the test, a whitish gray tephra directly below the organic zone (Devil). A charcoal lens was

present at the contact between the middle light yellow brown tephra (Watana) and the lowest gray tephra (Oshetna). Charcoal sample (UA81-250-5) produced a date of 2750 ± 215 years: 800 B.C. (DIC-2285).

Test pit 2 was sterile of cultural material but also contained a charcoal lens at the contact between the two lower tephtras. Six shovel tests along the east-west top of the site knoll failed to reveal additional cultural material.

A grid shovel testing program was implemented to assist in determining the site size and distribution of cultural material. Sixteen grid shovel tests were placed around test pit 1, but none produced additional cultural material. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.172.

Artifact Summary, TLM 096

Provenience		Description
<u>Lithic Material</u>		
Subsurface:		
Test pit 1	3	Argillite flakes

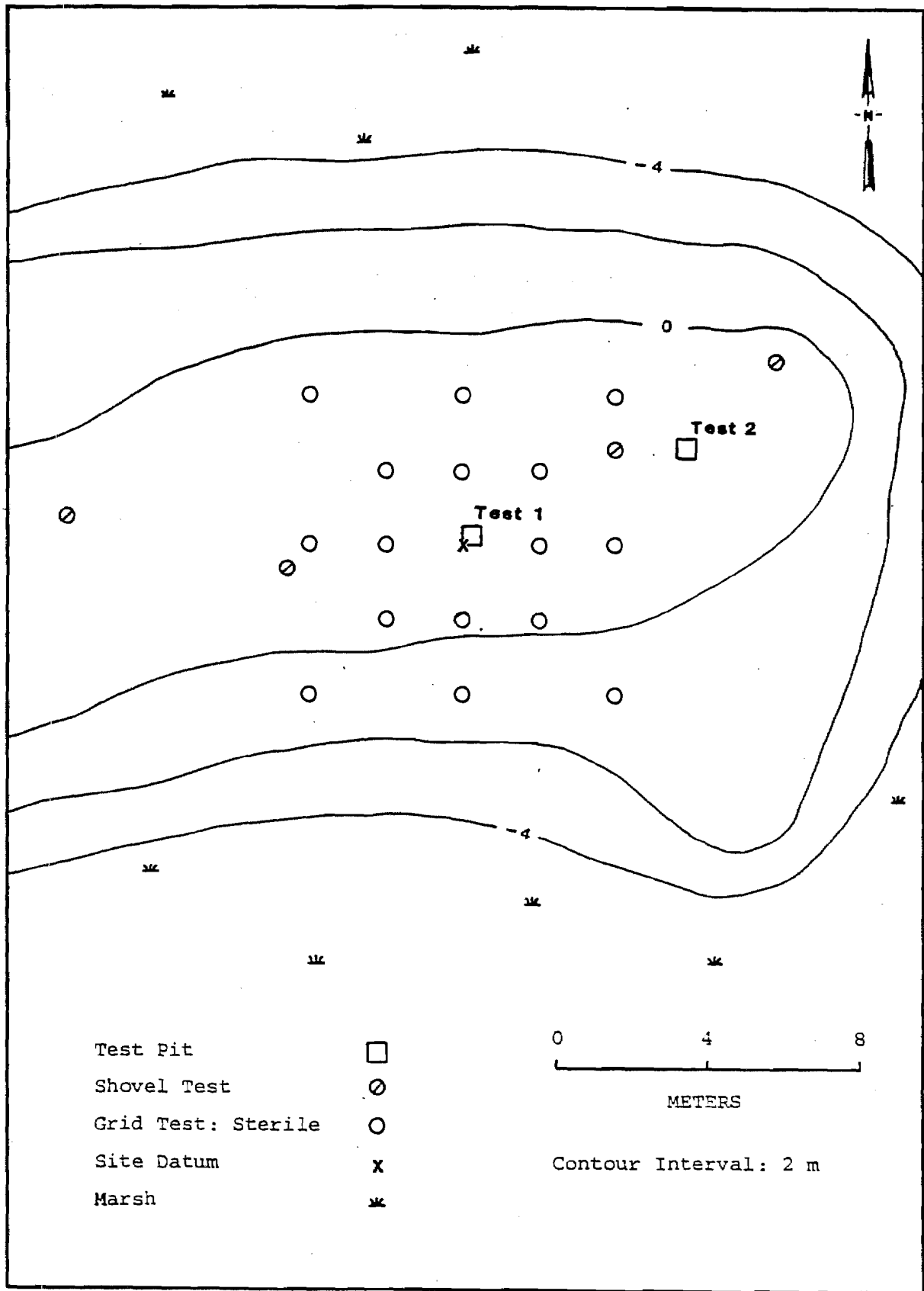


Figure D.125. Site Map, TLM 096

Area: Northwest of Tsusena Butte
Site Map: Figure D.126
Survey Locale: Proposed Borrow C, Figure E.276
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

This site is located in proposed Borrow Area C on the west side of Tsusena Creek northwest of Tsusena Butte. Located at the southern end of a 1 km wide north-south oriented glacial valley, the site is situated at an elevation of 750 m asl (altimeter: 2462 feet) at the top of an east-facing bluff which overlooks Tsusena Creek ca. 20 m lower in elevation. Terrain morphology in the site vicinity consists of kettle and kame topography with what appear to be north-south oriented eskers, associated with very irregular ridges and knolls on the east side of Tsusena Creek and a relatively level flood plain with only isolated kames on the west side of the creek. The valley walls rise steeply, at a greater than 35-degree angle, from ca. 762 m asl (2500 feet) to over 1371 m asl (4500 feet).

The landform on which the site is situated appears to be an outwash terrace which has been dissected by Tsusena Creek forming a steep east facing exposure. The steep valley wall begins ca. 100 m west of the site. The site directly overlooks Tsusena Creek and is located southwest of a sharp southeast bend in the creek channel. Access to the creek and the surrounding valley floor is excellent. Tsusena Creek is a clear 30-35 m wide smooth flowing channel less than 1 m deep with gravel bars and a slough visible northeast of the site. To the south drainages flow from the west wall of the valley forming a series of three confluences with Tsusena Creek. The northernmost of these confluences is southeast of the site. The field of view is panoramic with the depth of view greatest to the northeast overlooking a broad (300-400 m wide)

alluvial plain. Forest cover restricts the view somewhat to the north but the steepness of the slope immediately northeast of the site affords an excellent overlook in that direction. Sites TLM 081, TLM 088, TLM 089, TLM 090, and TLM 091 located within 1 km of TLM 097, are concentrated on knolls and ridges to the east and are visible from the site.

Site vegetation consists of dense shrub birch and scattered mixed black and white spruce, with blueberry, Labrador tea, and a continuous mat of moss and lichen forming the ground cover. Dense stands of black spruce occupy poorly drained areas north of the site while muskeg and marsh grass predominate to the northeast in poorly drained areas of the alluvial plain.

Testing:

TLM 097 was first recorded upon the discovery of a chert preform (UA81-252-1; Figure D.379g) lying on the eroded face of a southwest exposure of the bluff edge. The preform, which was basally ground and thinned, was complete except for a fragment broken off the distal end. Intensive surface survey of the exposed bluff face produced an additional gray basalt flake ca. 20 m to the north on a northeast facing exposure at approximately the same relative position on the slope. Both of these artifacts were surface collected.

During survey testing, twelve shovel tests were dug along the top of the bluff edge and up to 30 m in from the exposure. Two of these tests revealed subsurface cultural material and were expanded into 40 x 40 cm tests pits (Figure D.126). Test pit 1, 40 cm in from the bluff edge, produced a total of 46 flakes, 1 bone fragment, and 1 thermally altered rock.

Test pit 2, located 6.5 m southwest of test 1, produced only a single gray fine-grained basalt flake which was recovered from the initial shovel test backdirt and has no stratigraphic provenience.

During the initial phase of systematic testing, five 1 x 1 m test squares and 24 shovel tests were excavated. Three 1 x 1 m test squares (N104/E103, N103/E105, and N98/E105) were placed near the edge of the bluff where test pit 1 had produced subsurface cultural material. Another test square (N98.5/E100) was placed ca. 6 m from the bluff edge adjacent to test pit 2. One test square (N92.5/E80.5) was also placed ca. 30 m from the bluff edge between two shovel tests which produced cultural material. Shovel tests were dug at 5 m intervals on east-west transects in order to guide the placement of test squares and to help define the spatial extent and eastern boundary of the site.

Grid shovel testing was undertaken to assist in determining site size and distribution of cultural material. A total of 84 grid expansion shovel tests were excavated, ten of which produced cultural material.

Additional systematic testing at TLM 097 was undertaken to substantiate the existence and independence of two of the four cultural components initially identified at the site. A second goal of testing was retrieval of diagnostic artifacts from the upper cultural component represented by abundant basalt flakes, thermally altered rock, and hundreds of bone fragments. To carry out the testing, three additional squares were positioned in a checkboard fashion along the E104 grid line. These squares were designated N103/E104, N102/E103, and N101/E104.

Three concentrations of artifacts are evident from the tests that produced cultural remains. One concentration is located on the eastern portion of the terrace close to the creek. Two 40 x 40 cm test pits, seven 1 x 1 m test squares, and four shovel tests contained cultural material. A second concentration is located on the southwestern portion of the site. A single 1 x 1 m test square and five shovel tests were excavated in this portion of the site. The final concentration in the northwestern portion of the site is defined on the basis of five shovel tests which contained cultural material.

Discussion:

All eight of the test squares excavated during systematic testing produced cultural material. A total artifact inventory of 17 tools, 2392 pieces of lithic material ranging from flaking debitage to thermally altered rock, and over 475 specimens of burned and unburned bone were recovered from all phases of testing (Table D.174). The tool assemblage includes modified flakes, scrapers, corner-notched points, flake cores, and a preform. The lithic material is comprised primarily of basalt, representing 81% of all lithic specimens. A small portion of the faunal collection was identifiable, all of this being attributable to unburned caribou bone. At least three cultural components were identified at TLM 097 (Table D.176).

Stratigraphy at TLM 097 consisted of 22-36 cm of soil/sediments overlying glacial deposits. Eight units were defined (Figure D.127; Table D.173). Four of the units (units 3-6) relate to soil/sediments containing distinct tephra components. The units and their tephra designations are: unit 3 for the Devil tephra, unit 4 for the oxidized component of the Watana tephra, unit 5 for the unoxidized component of the Watana tephra, and unit 6 for the Oshetna tephra. The distinction between the oxidized (unit 4) and unoxidized (unit 5) components of the Watana tephra is based upon soil characteristics and not upon the volcanic sediments. Underlying the tephra units are glacial drift (7, 7a) and a coarse to medium sand (7b) which was encountered in only a few squares. Unit 8 refers to a mixed unit occurring in isolated pockets and probably resulting from rodent activity.

Upper Component: The upper component, present in five of the test squares, and in test pit 1 lies in the 02 horizon and at its contact with the Devil tephra. It was revealed by a dense concentration of basalt flakes with associated charcoal and burned earth, as well as argillite, chert, chalcedony, and rhyolite flakes, ca. 150 thermally altered rock, over 400 calcined bone fragments, and a basalt scraper (UA81-252-115; Figure D.379h). Two features, also attributable to the upper component, were recorded in two of these squares, N102/E103 and

N103/E104. Feature 1 consists of a concentration of 19 bones and bone fragments belonging to caribou (Rangifer tarandus) and a single basalt flake found in N103/E104. This feature may be a continuation of the calcined faunal material found in the adjacent N104/E105. Feature 2, at the same level in (N102/E103), is composed of pieces of thermally altered rock, and a bone fragment of caribou. Charcoal was abundant in both features. A radiocarbon date of 1400 ± 55 years: A.D. 550 (DIC-2245) originally obtained for this component compares favorably with the date of 1260 ± 80 years: A.D. 690 (Beta-7845) obtained from feature 1.

With the exception of 3 bones identifiable only as belonging to a medium-large mammal, all of the bones from features 1 and 2 are attributable to caribou (Rangifer tarandus), and in all likelihood belonged to a large adult. Included within the assemblage are bones from the forelimb, hindlimb, pelvis, and axial skeleton. Both the left and right sides of the body are represented. Except for the skull, portions of all major skeletal components are present suggesting that the animal was killed in close proximity to the site. Both butchering and gnawing marks are present.

Middle Component: One, or possibly two, middle components are found within the Devil tephra (unit 3) and at its contact with the Watana tephra (unit 3/4). They have been identified in the five test squares excavated during the initial systematic testing of the site. In contrast to the upper component, the middle components' lithic debitage includes a greater percentage of argillite than of basalt flakes, as well as chert flakes and a chalcedony flake. A modified basalt flake (UA81-252-126), a basalt flake core (UA81-252-52;), a brown chert "thumbnail" scraper (UA81-252-360; Figure D.379k), and thermally altered rock are also included in this assemblage. The possibility that two separate components lay within this middle stratigraphic context was suggested as brown chert appeared to be primarily associated with the Devil tephra, thus perhaps constituting an individual component. In most cases, however, the Devil and Watana tephras are heavily disturbed through cryoturbation and rodent activity making the assignment

to these units questionable. Also, a brown chert flake was recovered from the top of unit 6 (Oshetna tephra) in N103/E104 suggesting that this material is not an acceptable "marker" of a Devil tephra component. Thirty unidentifiable bone fragments have been found in association with units 2 and 3. These may be associated with this middle component but are more likely displaced from unit 2, where faunal material is relatively abundant (Table D.175). Although the independence of two separate components has not been fully resolved, it does appear to be doubtful.

Lower Component: The lower component at TLM 097 is well represented, occurring in all eight test squares primarily at the contact between the Watana and Oshetna tephras. Basalt is the predominant lithic material, accounting for 95% of the specimens from this contact and the Oshetna tephra. Tools attributed to the lower component include the following: 3 basalt modified flakes (UA81-251-65, 135, 264), 1 basalt corner-notched point base which is concave and shows evidence of basal grinding (UA81-252-159; Figure D.379f), 1 basalt flake core (UA81-252-160), 1 green argillite burinated, corner-notched point with a concave base and basal flaking (UA83-224-71; Figure D.379e), 1 argillite flake core (UA83-244-63), and 2 gray chert scrapers (UA83-224-11, 73; Figure D.379j,i). Two radiocarbon dates were obtained for this component. One was taken from the contact between the Watana and Oshetna tephras in N103/E105 and yielded a date of 4020 ± 65 years: 2070 B.C. (DIC-2283); the other was derived from the top of the Oshetna tephra in N102/E103 and dated to 4570 ± 100 years: 2620 B.C. (Beta-7844).

Evaluation:

The bluff overlooking Tsusena Creek, on which TLM 097 is situated, provides an excellent view to the north and south through a major valley and suggests the site functioned as a hunting camp from which game moving in the valley could be observed. The site is located at the narrowest corridor in the southern portion of the valley where game moving either northward or southward is concentrated into an area only a

few hundred meters wide. The discovery of other prehistoric sites located along a 6 km stretch of Tsusena Creek in this valley attests to the intensity of the prehistoric use of concentrated game resources.

The presence of endscrapers, a burinated projectile point, and the large amount of lithic debitage indicates that tool manufacture, repair, and possibly sharpening occurred at the site. Charcoal concentrations with thermally altered rock (possibly indicative of stone boiling) and calcined bone provide further indication that the site was used as a camp. No evidence of permanent or semipermanent structures was observed during testing. The presence of at least three components demonstrates repeated use during the past 4500 years. Many of the basalt flakes are decortication flakes indicating that basalt was locally obtained, possibly as cobbles from TLM 259, a quarry site near Fog Creek mouth.

TLM 097 is a highly significant multicomponent site. The oldest component not only yielded two notched points, hallmarks of the Northern Archaic tradition, but a radiocarbon determination which places the tradition to at least 2620 B.C. Two, and possibly three, subsequent occupations of the site hold critical data which may explain the transition (or lack thereof) between Northern Archaic tradition peoples and precontact Athapaskan culture. Athapaskan culture may be represented by the material cultural remains recovered from the upper component and dated to A.D. 550. Observed site size based on the distribution of artifacts is 185 square meters (Table D.2).

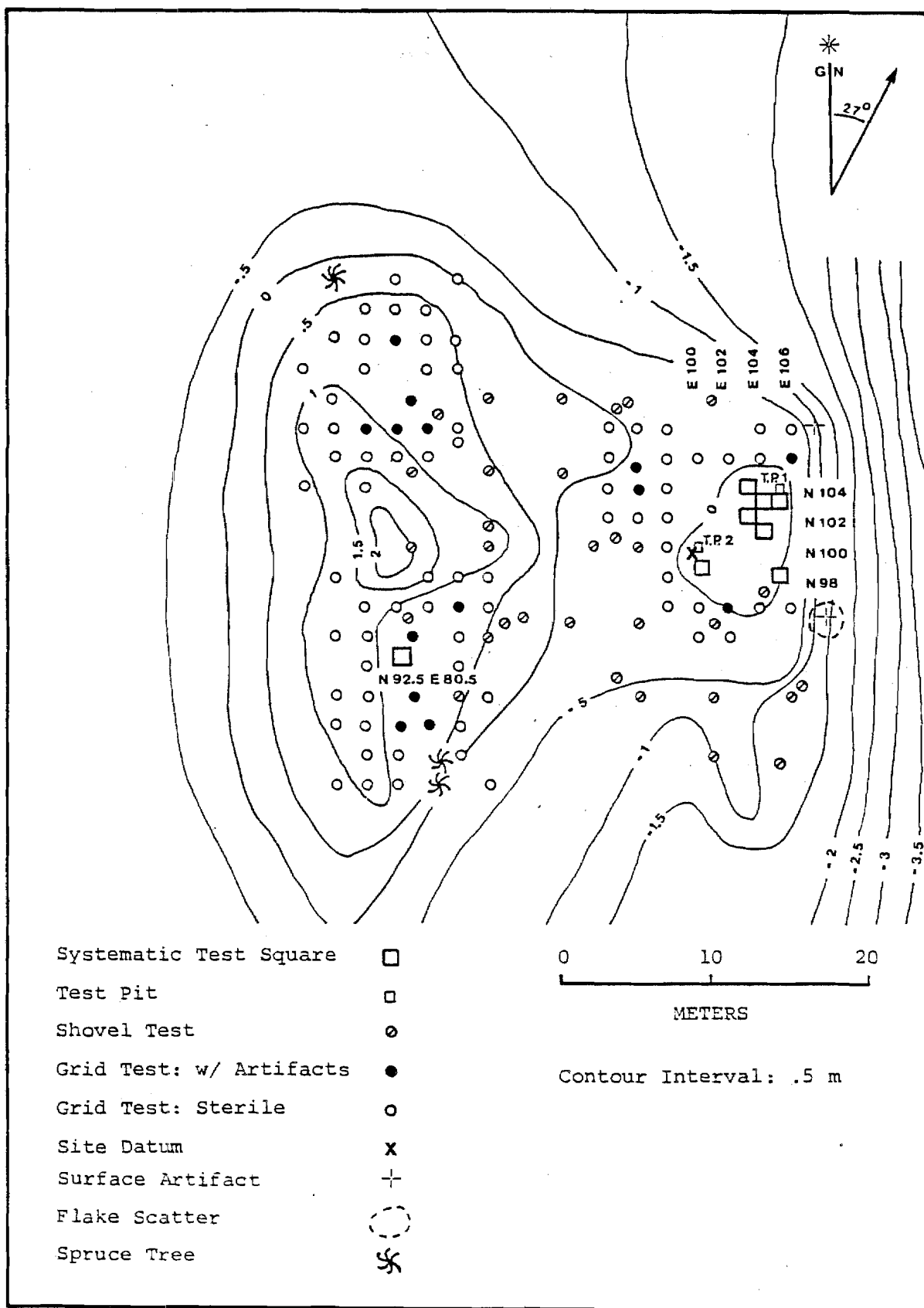


Figure D.126. Site Map, TLM 097

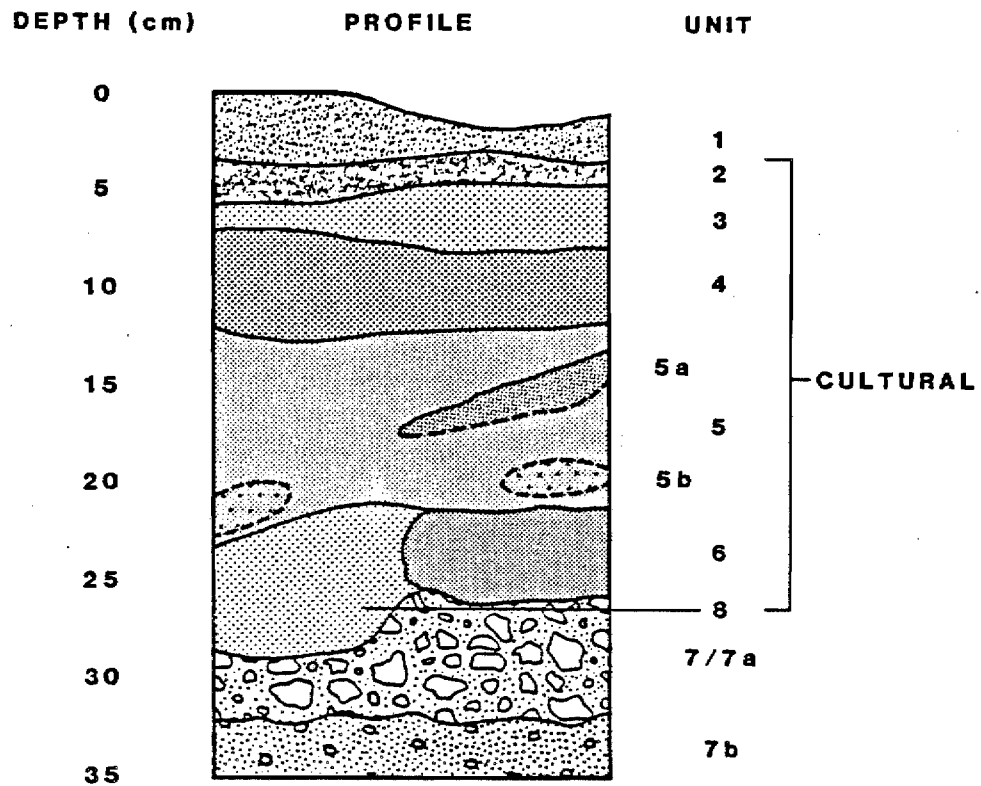


Figure D.127. Composite Profile, TLM 097

Table D.173.

Soil/Sediment Description for Composite Profile, TLM 097

Unit	Description
1	Surface organic mat consisting of sphagnum moss, dwarf birch roots, and peat. Varies from 1-19 cm in thickness. Lower contact abrupt and regular to wavy. 01 horizon.
2	Fine silty sand or silt loam with some clay; very dark gray (10YR 3/1). Generally very thin, between 0.5 cm and 6 cm thick. Possible 02, or humus, horizon. Well sorted with abundant humus and charcoal. Volcanic glass observed under 10 power magnification. Artifacts consist of sparse flakes, abundant charcoal, identifiable bone, and thermally altered rock.
3	Fine to coarse silt; color varies from pinkish gray (7.5YR 6/2) to dark brown (7.5YR 3/2). Ranges from 1-11 cm in thickness. Lower contact abrupt but often wavy and irregular. Tephra (Devil). Continuous across test squares. Well sorted and very friable. Contains many fine rootlets. Abundant volcanic glass; dries to a white powder.

Table D.173. (Continued)

Unit	Description
4	<p>Fine sand and silt; very dusky red (2.5YR 2.5/2). Thickness varies from 2-12 cm, generally being 4 cm. Lower contact is diffuse and gradational. Tephra (oxidized Watana); possibly a B2 horizon. Firm consistency with platy or granular structure. Moderately to well sorted, heavily oxidized. Volcanic glass observed. Rare basalt and chert flakes, possibly due to postdepositional movement from other strata.</p>
5	<p>Fine sand and silt, but with occasional granules; yellowish red (5YR 4/6). Thickness varies from 0.1-10 cm and is often interrupted by numerous rodent and root disturbances. Lower boundary often clear and nonwavy. Tephra (unoxidized Watana). Discontinuous. Generally well sorted but may contain coarse sand or granule size clasts. Very friable and dries rapidly to a fine powder. Volcanic glass observed. Rare basalt, argillite or gray chert flakes, possibly derived from other strata.</p>
5a	<p>Sandy silt with charcoal flecking and rootlets; dark brown (7.5YR 3/4). Discontinuous stringers of 1-2 cm thickness in N101/E104 and N102/E103. Contacts are poorly defined. Possibly the result of oxidation staining or rodent activity. Volcanic glass observed. Rare basalt flakes, probably derived from other strata.</p>

Table D.173. (Continued)

Unit	Description
5b	Fine silt lenses; red (2.5YR 4/8). Generally 1 cm thick, ranging up to 5 cm. Present at or near the base of unit 5 in N101/E104, and as diffuse staining in N103/E104. Volcanic glass observed.
6	Sandy silt containing occasional granules and pebbles; grayish brown (10YR 5/2). Thickness of 2-10 cm, being generally 5 cm. Contact with unit 5 usually abrupt and wavy; contact with unit 7 abrupt to diffuse and regular to wavy. Often seems to be mixed with unit 7. Tephra (Oshetna). Discontinuous. Friable; poorly or very poorly sorted. Volcanic glass observed. Charcoal, abundant lithics found on or in this unit.
7	Gravelly sand and silts with numerous granules, pebbles, and cobbles; strong brown (7.5YR 4/6). Contact with unit 6 usually clear and regular, contact with unit 7a gradational. Glacial drift. Poorly sorted and friable.
7a	Same as unit 7, but often highly weathered and/or oxidized; very dusky red (2.5YR 2.5/4). Gradational upper contact, base of unit unexposed. Present in N102/E103 and N102/E104. Weathered and/or oxidized glacial drift.

Table D.173. (Continued)

Unit	Description
7b	Loosely consolidated coarse to medium sand with occasional pebbles; strong brown (7.5YR 4/6) to yellowish brown (10YR 5/4). Fluvial. Not present in all units.
8	Sandy silt containing granules, pebbles, some charcoal flecking, and organic debris; strong brown (7.5YR 4/6). Most contacts sharp and clear. Occurs as isolated pockets, probably the result of rodent activity: krotovina. Sparse cultural material present, probably derived from other strata.

Table D.174.

Artifact Summary, TLM 097

Tools

7	Modified flakes
	1 Argillite (UA81-252-306)
	4 Basalt (UA81-252-65, 126, 135, 264)
	1 Chalcedony (UA81-252-363)
	1 Rhyolite (UA81-252-128)
4	Scrapers
	1 Basalt (UA81-252-115)
	3 Chert (UA81-252-360; UA83-224-11, 73)
1	Preform
	1 Chert (UA81-252-1)
2	Notched points
	1 Argillite (UA83-224-71)
	1 Basalt (UA81-252-159)
3	Flake cores
	1 Argillite (UA81-252-63)
	2 Basalt (UA81-252-52, 160)

Table D.174. (Continued)

Lithic Material

219	Argillite flakes
1,952	Basalt flakes
4	Chalcedony flakes
47	Chert flakes
1	Obsidian flake
4	Rhyolite flakes
163	Thermally altered rocks
2	Rock fragments

2,392

Other

1	Ochre piece
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Faunal Material

ca. 475	Burned and unburned bones and bone fragments
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Table D.175.

Faunal Material by Stratigraphic Unit, TLM 097

Unit	Description
2 02 horizon	ca. 415 Long bone and unidentifiable bone fragments, heavily burned and calcined, medium-large mammal 10 Unidentifiable bone fragments, calcined, mammal
2 Features 1 and 2	1 Left radius/ulna shaft fragment, unburned, caribou (<u>Rangifer tarandus</u>) 1 Left distal radius/ulna shaft fragment, unburned, caribou (<u>Rangifer tarandus</u>) 1 Possible right radius shaft fragment, unburned, caribou (<u>Rangifer tarandus</u>) 1 Left innominate (ischium) fragment, unburned, caribou (<u>Rangifer tarandus</u>) 1 Right patella, unburned, caribou (<u>Rangifer tarandus</u>) 1 Left proximal metapodial fragment (forelimb), unburned, caribou (<u>Rangifer tarandus</u>) 1 Metapodial shaft fragment (forelimb), unburned, caribou (<u>Rangifer tarandus</u>) 1 Left unciform, unburned, caribou (<u>Rangifer tarandus</u>) 1 Left unciform, unburned, caribou (<u>Rangifer tarandus</u>)

Table D.175. (Continued)

Unit	Description
	<ul style="list-style-type: none"> 1 Left magnum, unburned, caribou (<u>Rangifer tarandus</u>) 1 Proximal phalanx (in 2 fragments), unburned, caribou (<u>Rangifer tarandus</u>) 1 Distal fragment proximal phalanx, unburned, caribou (<u>Rangifer tarandus</u>) 2 Proximal fragments middle phalanx, unburned, caribou (<u>Rangifer tarandus</u>) 1 Distal phalanx fragment, unburned, caribou (<u>Rangifer tarandus</u>) 1 Rib fragment, unburned, probably caribou (<u>Rangifer tarandus</u>) 3 Long bone fragments, unburned, medium-large mammal
2/3, 3 02 horizon Devil tephra contact and in Devil tephra	ca. 30 Long bone and unidentifiable bone fragments, heavily burned and calcined, medium-large mammal
Unknown (Survey testing)	1 Rib fragment, unburned, large mammal

Table D.176.

Artifact Summary by Stratigraphic Unit, TLM 097

Unit		Description
Surface	7	Argillite flakes
	1	Basalt flake
	1	Chert preform (UA81-252-1)
1/2	3	Basalt flakes
Contact between organic mat and 02 horizon		
2	51	Argillite flakes
02 horizon	9	Basalt flakes
	5	Chert flakes
	1	Basalt scraper (UA81-252-115)
	153	Thermally altered rocks
	1	Rock fragment
2/3	1	Argillite flake
Contact between 02 horizon and Devil tephra	330	Basalt flakes
	2	Chalcedony flakes
	5	Chert flakes
	1	Rhyolite flake
	1	Thermally altered rock

Table D.176. (Continued)

Unit		Description
3	65	Argillite flakes
Devil tephra	22	Basalt flakes
	26	Chert flakes
	1	Basalt modified flake (UA81-252-126)
	1	Basalt flake core (UA81-252-52)
	4	Thermally altered rocks
	1	Rock fragment
3/4	37	Argillite flakes
Contact between	8	Basalt flakes
Devil and	1	Chalcedony flake
Watana tephra	3	Chert flakes
	1	Chert scraper (UA81-252-360)
	5	Thermally altered rocks
4	2	Argillite flakes
Oxidized Watana	323	Basalt flakes
tephra	1	Chert flake
	1	Ochre piece
4 and/or 5	34	Argillite flakes
Oxidized and	39	Basalt flakes
unoxidized	4	Chert flakes
Watana tephra	1	Argillite modified flake (UA81-252-306)
	1	Rhyolite modified flake (UA81-252-128)

Table D.176. (Continued)

Unit		Description
5	1	Argillite flake
Unoxidized	16	Basalt flakes
Watana tephra	1	Chert flake
4/6	10	Argillite flakes
Contact between	438	Basalt flakes
Watana and	1	Obsidian flake
Oshetna tephra	2	Rhyolite flakes
	1	Basalt modified flake (UA81-252-264)
	1	Basalt notched point base (UA81-252-159)
	1	Basalt flake core (UA81-252-160)
4, 5, and 6	2	Basalt flakes
Watana and Oshetna tephras mixed		
5/6	1	Basalt flake
Contact between unoxidized Watana tephra and Oshetna tephra		
6	7	Basalt flakes
Contact between Paleosol and Oshetna tephra		

Table D.176. (Continued)

Unit	Description
6 Oshetna tephra	7 Argillite flakes 691 Basalt flakes 1 Chalcedony flake 2 Chert flakes 1 Rhyolite flake 2 Basalt modified flakes (UA81-252-65, 135) 2 Chert scrapers (UA83-224-11, 73) 1 Argillite notched point (UA83-224-71) 1 Argillite flake core (UA81-252-63)
8 Rodent burrow fill	45 Basalt flakes 1 Chalcedony modified flake (UA81-252-363)
Unknown Subsurface (Survey testing and backdirt)	4 Argillite flakes 17 Basalt flakes

AHRS Number TLM 098; Accession Number UA81-261

Area: Southwest of Deadman Lake Outlet
Site Map: Figure D.128
Site Location Map: Figure E.58
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located near the center of an elongated kame east of a major northern tributary of Deadman Creek and north of the confluence of the two streams. The 200 m long kame is oriented north-northwest by south-southeast at an elevation of ca. 930 m asl (3050 feet). The site is located on the southern end of a rounded knob, which is 25 m south of and 2 m lower than the summit of the kame. TLM 098 occurs within a region of undulating topography consisting of a series of north-south oriented kames marking the southwestern extension of Deadman Mountain before being truncated by Deadman Creek and its northern tributary. The site kame possesses slightly higher relative relief than the regions to the north but the view to the south is obstructed by the southern portion of the kame. The clear water tributary of Deadman Creek has cut a steep channel 20 m below the site and separates it from a similar kame to the west on which TLM 117 occurs. The surface lithic scatter which defines the site occurs in the northeast portion of an amorphous 5 (north-south) x 15 m (east-west) area of exposed angular pebbles. From the vicinity of the site, it is possible to view the west slope of a ca. 10 m higher kame 100 m to the east where TLM 099 is situated as well as, the highest kame in the region (ca. 50 m higher) with HEA 180 to the northeast, and southwest over the low slopes adjacent to Deadman Creek below the confluence. The position of the site affords shelter from the force of the wind and noise of the streams is noticeably lessened. Shrub birch dominates the low-lying regions between the kames. Lichens, grasses, and berries cover the vegetated portions of the kame tops, being frequently interspersed with exposed boulders and angular pebbles.

Testing:

TLM 098 is a surface lithic scatter consisting of two patinated argillite flakes (Figure D.128; Table D.177). Surface survey and subsurface testing at test pit 1 failed to reveal additional cultural material. The two flakes, separated by 1 m, were found in a region of exposed angular pebbles. Only one of these flakes was collected. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.177.

Artifact Summary, TLM 098

Provenience	Description
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Lithic Material

Surface:	1	Argillite flake
	1	Argillite flake (uncollected)

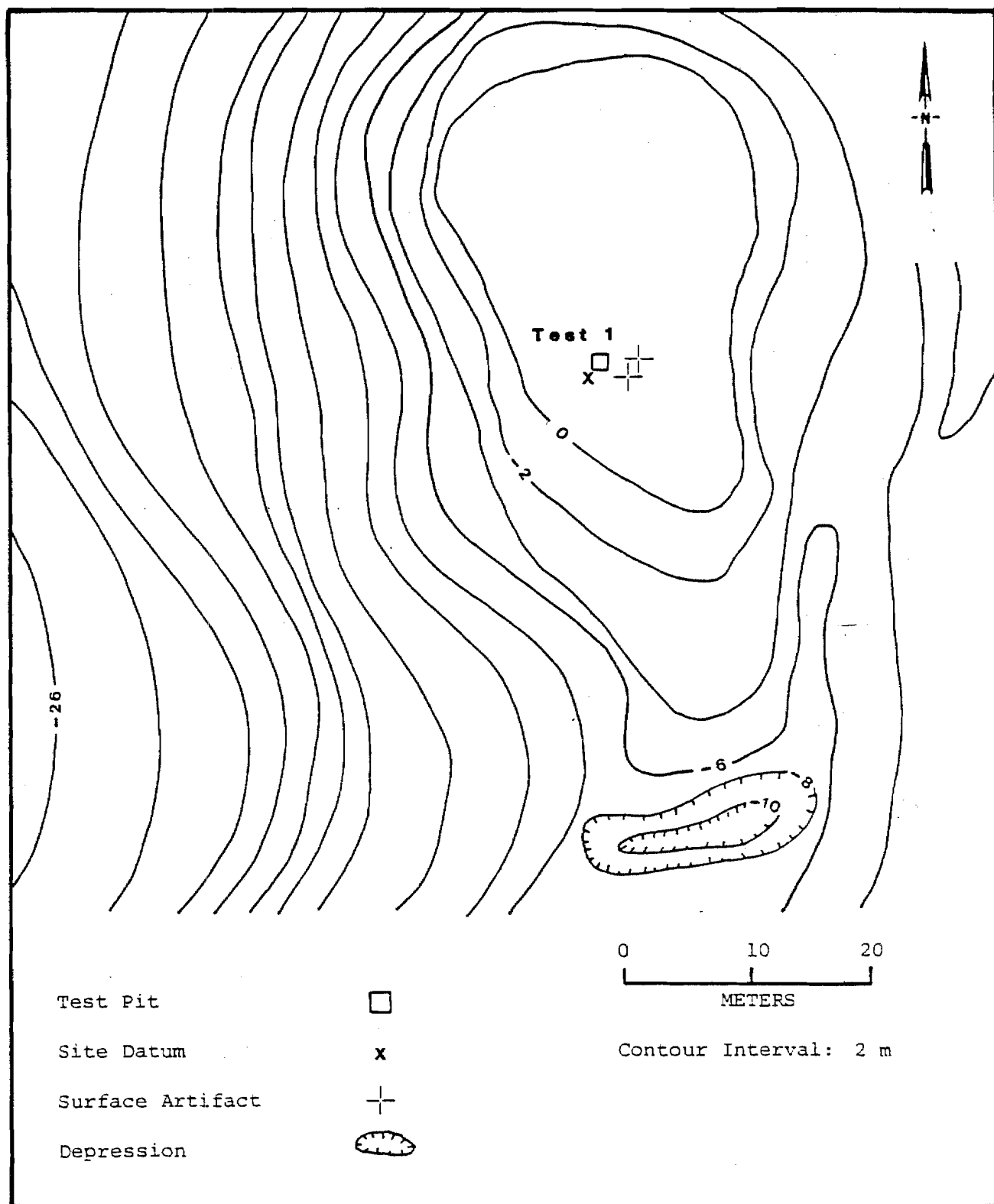


Figure D.128. Site Map, TLM 098

AHRS Number TLM 099; Accession Number UA81-264

Area: Southwest of Deadman Lake Outlet
Site Map: Figure D.129
Site Location Map: Figure E.58
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

This two loci (A and B) site is located on two adjacent knolls southwest of Deadman Lake and north of the confluence of Deadman Creek with one of its northern tributaries. Situated at an elevation of ca. 945 m asl (3100 feet), the knolls are part of the undulating terrain which is bordered by Deadman Creek, on the north and are confined by Deadman Lake and Deadman Mountain to the east and northeast, and by the tributary stream 400 m to the west. The rolling terrain continues for 1 km north culminating in a high knoll to the north which dominates the local landscape with site HEA 180 on its broad, level top. Farther north is the 1 km wide valley lying between Deadman Mountain on the east and an unnamed 1524 m asl (5000 foot) mountain on the west through which the tributary of Deadman Creek meanders southward. The valley to the north and the low, broad valley of Deadman Creek below the confluence with the tributary stream possess stepped slopes resulting from a combination of solifluction and minor drainage channels which have dissected the region into numerous small benches. Two additional archeological sites occur on the knolls to the west at approximately the same level forming the moderate highlands overlooking the north side of Deadman Creek and its confluence with its northern tributary. TLM 098 occurs on a low knoll 200 m to the west, adjacent to the tributary. TLM 117 occurs 500 m west on the other side of the tributary opposite TLM 098. The two loci of TLM 099, 73 m apart, are separated by a north-south oriented trough which is 10 m wide at the base. The view from both loci is similar but is better at the eastern locus B which is 6-8 m higher. To the west are the rolling knolls, the tributary (not visible), and the undulating slopes in the distance. To the south is the confluence of Deadman

Creek, its tributary, and adjacent open wetlands. The south end of Deadman Lake is visible to the northeast across fairly level lowlands and a wet marshy area. Both loci occur on the south slope of the knolls but still offer a limited view of the high knoll with HEA 180 and intervening low brush to the north. Low brush characterizes the regional vegetation. Brush birch, mosses, and lichens occur adjacent to the rock exposures in which the flakes were located.

Testing:

Surface cultural material was found in two loci (Figure D.129). Locus B, the larger of the two loci, is 73 m north-northeast of locus A. Fourteen black flecked argillite flakes were located on the surface of locus A. Three were collected, including one possessing retouch flaking (UA81-264-5). Only two flakes were found at locus B, a white patinated argillite flake and a black basalt flake; both were collected (Table D.178). A 30 x 30 cm test at locus A and a 30 x 40 cm test at locus B failed to reveal subsurface artifacts.

Estimated site size for locus A based on the distribution of artifacts is 10 square meters. Estimated site size for locus B based on the distribution of artifacts is 16 square meters (Table D.2).

Table D.178.

Artifact Summary, TLM 099

Provenience	Description
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Lithic Material

Surface:

<u>Locus A</u>	2	Argillite flakes.
	1	Argillite modified flake (UA81-264-5)
	11	Argillite flakes (uncollected)
<u>Locus B</u>	1	Argillite flake
	1	Basalt flake

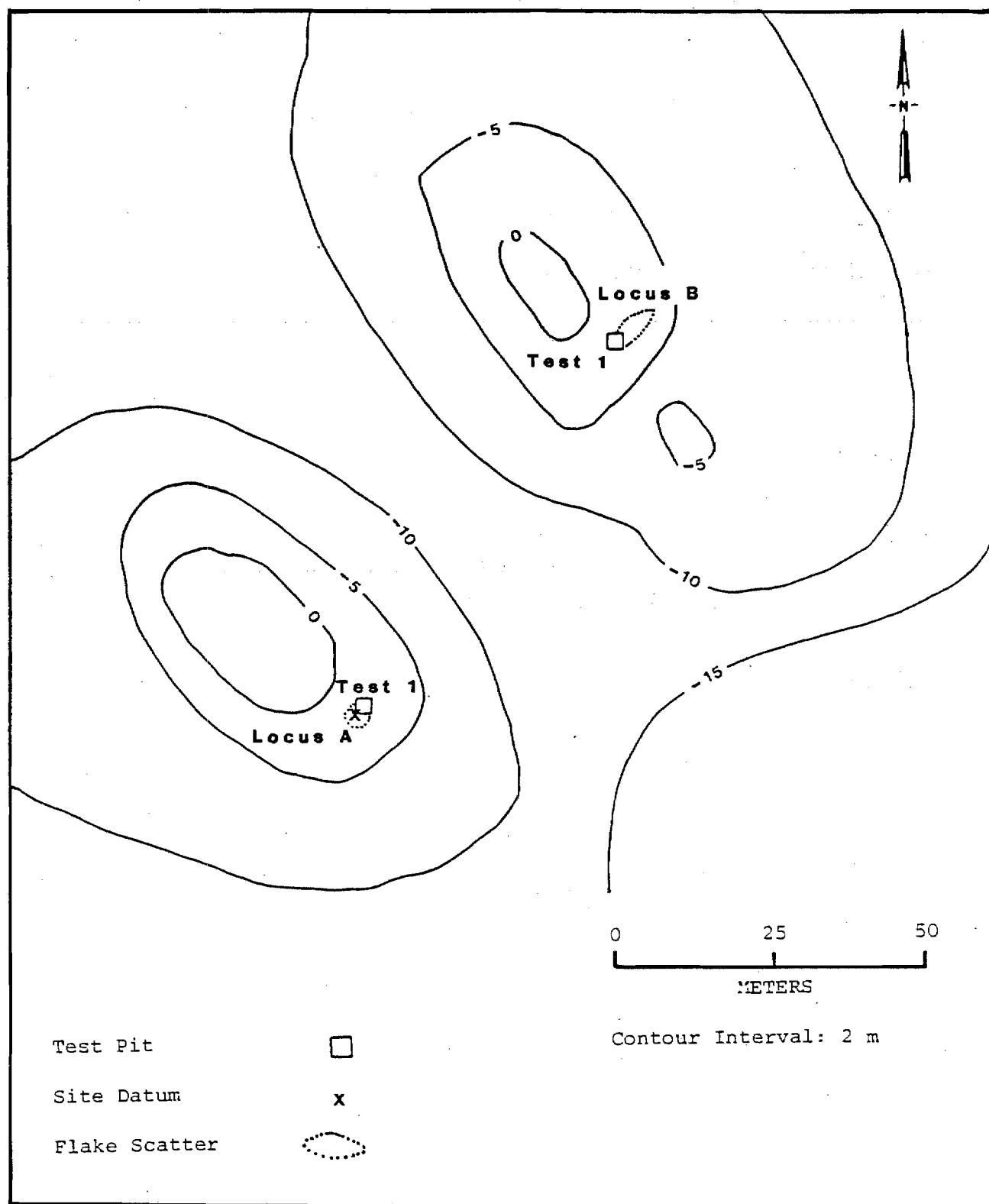


Figure D.129. Site Map, TLM 099

AHRS Number TLM 100

Area: Clarence Lake Outlet
Site Map: Locus A, Figure D.130
Locus B, Figure D.131
Site Location Map: Figure E.59
USGS Map: Talkeetna Mts. C-2, Figure E.7
Site Location: Appendix F

Setting:

This site, consisting of two loci (A and B), is located at the western end of Clarence Lake near Gilbert Creek, the lake outlet stream feeding into Kosina Creek. Kosina Creek is a major tributary of the Susitna River. The site consists of 13 rectangular, square, or round depressions on terrain features slightly elevated above lake level and the lake margin. Elevation at the site is estimated to be 876 m asl (2875 feet).

Locus A: This locus consists of 11 depressions of variable shape and size on the western shore of Clarence Lake, overlooking the Gilbert Creek outlet, to the southeast. The largest of these depressions, feature 1, measures 6 x 6.5 m oriented basically northwest-southeast. Seven depression features, none larger than 4 x 4 m are clustered approximately 40 m northeast of feature 1 overlooking the lake at a distance of about 7 m from the shoreline. These features are oriented as a group basically north-south, the three northernmost being circular, the others square or rectangular. Two other depressions, 33 m southeast of feature 1, lie west of the lake shore and northwest of the outlet. These features are situated on slightly elevated terrain between 1.5 and 3 m above the lake level. All features are between 20 and 110 cm deep with fairly vertical walls and thick sphagnum moss growth dominating the vegetation on the depression bottoms. Visibility is unobstructed to and across Clarence Lake and to the surrounding hills. Vegetation of the locus A area is dominated by dwarf birch with moss and lichens covering areas without brush vegetation. Drainage is good relative to the

surrounding lake margin, where marsh grasses, tussocks, and some low brush characterize poorly drained areas with standing water.

Locus B: This locus consists of two depressions near the southern end of a northwest-southeast oriented low ridge, 200 m southwest of locus A. The larger of the two measures 4 x 4 m oriented northwest-southeast, and is about 23 m northwest of the smaller, which is a 1.3 x 1.1 m rectangle, oriented basically the same. The depressions on this small ridge are approximately 2 m above the wet marshy margins of the Gilbert Creek outlet stream, which flows to the west, south of the locus. Sphagnum moss is also thick in the bottoms of these depressions, and dwarf birch dominates the vegetation at the locus. Visibility from locus B is good in all directions. Clarence Lake to the east is only partially obscured by brush and low rolling terrain. Drainage is good off this low ridge, becoming marshier east towards the lake and south towards the outlet stream channel. Vegetation around locus B is similar, with dwarf birch dominant, and moss and lichens covering ridge and knoll tops. Tussocky marsh grasses and low brush dominate the less well drained stream and lake margins.

Testing:

Recording of this site was carried out, but no subsurface testing was done due to the number and integrity of extant features. A site map was drawn for both loci in relation to each other and to features within the loci. Specifications of all features were also recorded. No collections were made. Estimated size for locus A based on the distribution of artifacts is 4,200 square meters. Estimated size for locus B based on the distribution of artifacts is 80 square meters (Table D.2).

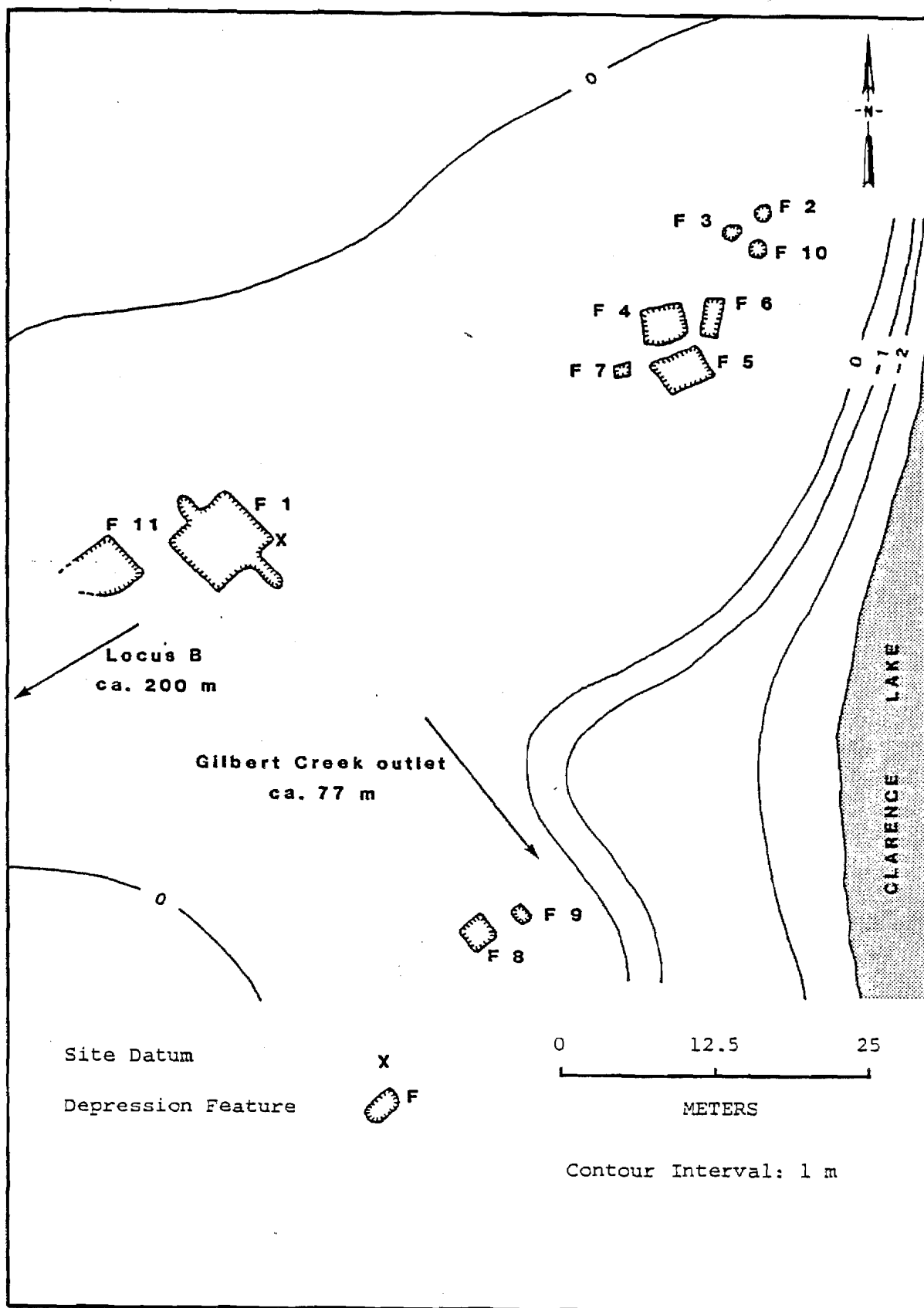


Figure D.130. Site Map, TLM 100 Locus A

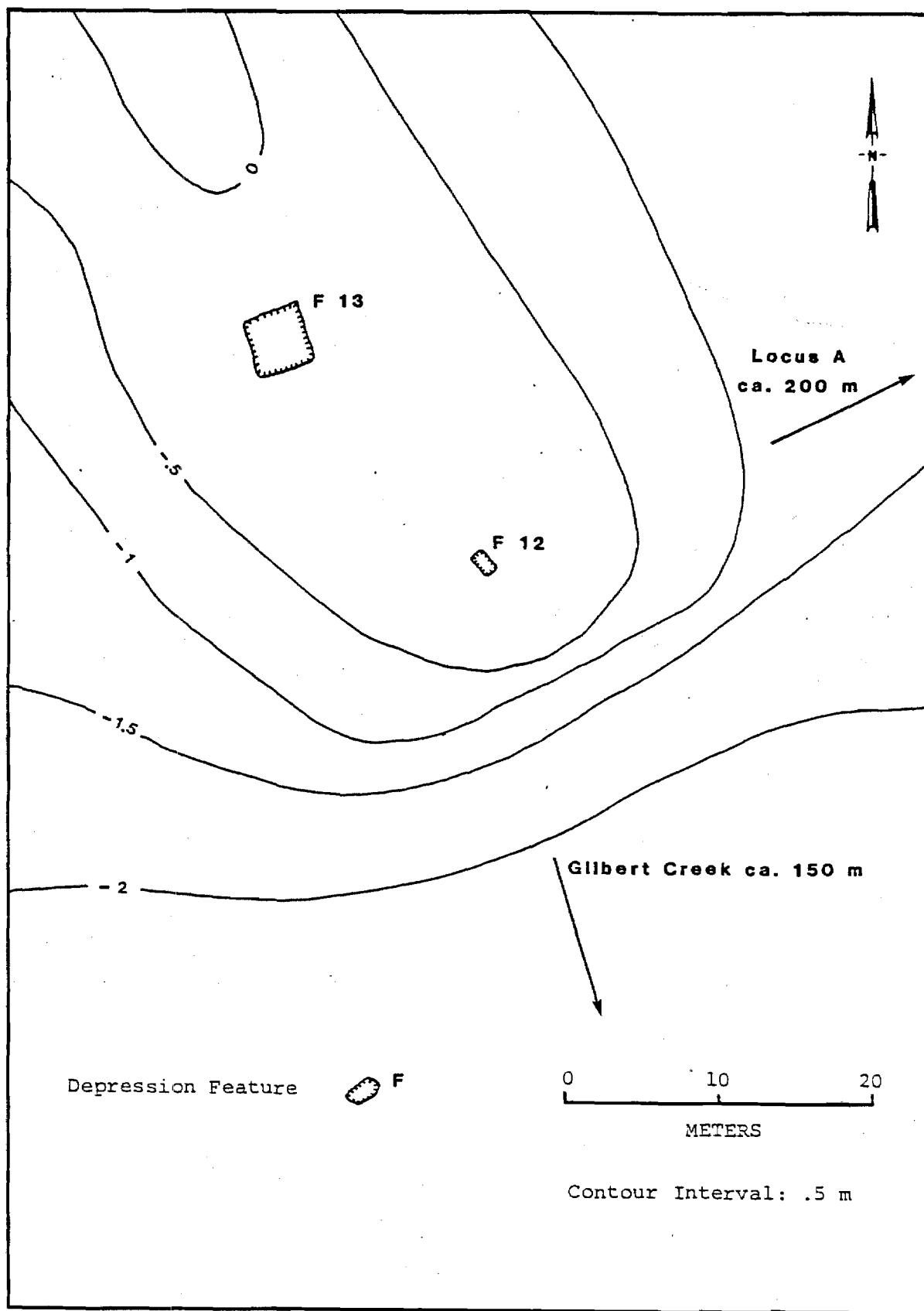


Figure D.131. Site Map, TLM 100 Locus B

AHRS Number TLM 101; Accession Numbers UA81-270, UA84-103

Area: North of Devil Creek Mouth
Site Map: Figure D.132
Site Location Map: Figure E.60
USGS Map: Talkeetna Mts. D-5, Figure E.1
Site Location: Appendix F

Setting:

The site is located on the southern edge of a large north-south trending terrace, east and north of Devil Creek mouth. The terrace is approximately 400 (north-south) x 200 m (east-west) at an elevation of 762 m asl (altimeter: 2499 feet), 91 m above Devil Creek. It is part of a ca. 1 km long ridge which follows the eastern edge of the serpentine Devil Creek. The terrace is relatively flat topped, with moderate to steep slopes on all sides, and is surrounded by ca. 10 m lower terrain on the east and south sides, and by approximately 90 m lower terrain to the north and west. The entire terrace top is visible from the site to the north, while lower terrain of the broader ridge is visible to the south and southwest. Uplands are visible to the east and west. Natural gravel exposures are common around the terrace and its rims. Low tundra vegetation covers most of the terrace; an occasional spruce or thicket of alders occurs on the terrace rim. Two other sites are located to the northeast on the terrace rim. These are TLM 114 and TLM 103, lying 385 m and 250 m, respectively, from the site.

Testing:

The site was located when a modified argillite flake (UA81-270-1) was found on the surface of a gravel exposure on the southern end of the terrace (Table D.179). A subsequent, intensive surface survey of the exposures revealed an additional basalt flake. A 40 x 40 cm test pit (test pit 1) was excavated 6 m west-southwest of these finds in an undeflated area. Test pit 1 revealed a 30 cm deep sequence of tephra

and sandy silt layers deposited overlying the glacial drift. No cultural materials were found in this test.

A grid shovel testing program was implemented to locate subsurface cultural material and to assist in determining the areal extent of TLM 101. Shovel tests were excavated in the location of surface artifacts and around the datum (test pit 1). Twenty grid shovel tests were excavated but did not produce additional artifactual materials. Observed site size based on the distribution of artifacts is 8 square meters (Table D.2)

Table D.179.

Artifact Summary, TLM 101

Provenience	Description
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Lithic Material

Surface:	1 Basalt flake
	1 Argillite modified flake (UA81-270-1)

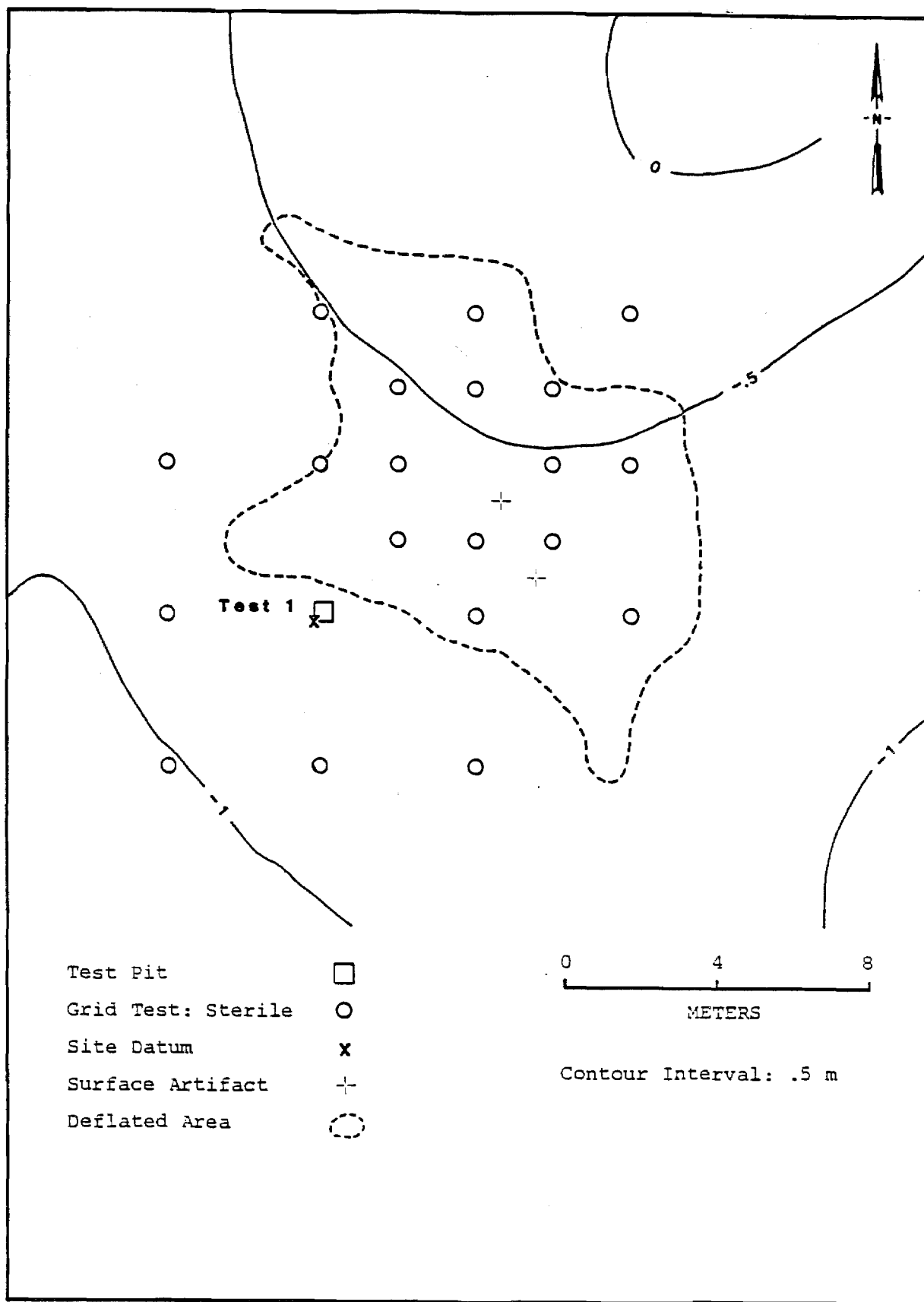


Figure D.132. Site Map, TLM 101

AHRS Number TLM 102; Accession Numbers UA81-260, UA84-124

Area: North Side of Susitna River, West of Kosina
Creek Mouth
Site Map: Figure D.133
Survey Locale 77: Figure E.151
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 102 is located at an elevation of 518 m asl (altimeter: 1701 feet) on the western end of a ridge crest on the northern side of the Susitna River, downriver from the mouth of Kosina Creek. This ridge extends and widens for several hundred meters to the east and is oriented parallel to the river. The site is located approximately 60 m east of the western end of the ridge. The degree of slope varies from a maximum slope of about 30 degrees south toward the river, to an average slope of about 10 degrees on the ridge top. The site directly overlooks the river to the south but visibility is obscured by forest growth to the east and west. The view to the north is limited by a vegetated higher terrace at a distance of about 150 m, separated from the site ridge by a ravine. An absence of vegetation would allow visibility of the Susitna River for ca. 0.5-1 km both upstream and downstream. Access to the river is easy to the west down the more gentle slopes at the end of the ridge. A game trail passes along the ridge crest, through the site, and down the end of the ridge to a gravel bar approximately 100 m west of the site. Vegetation in the vicinity of the site is upland spruce-hardwood forest with scattered mixed spruce and birch on the ridge top. Understory species which characterize the site and the surrounding vegetation include dwarf birch, willow, Labrador tea, blueberry, crowberry, lowbush cranberry, low heath, sphagnum moss, and lichens. Black spruce and some marsh grasses also occur in more poorly drained surrounding areas.

Testing:

TLM 102 was located when a shovel test situated on the game trail at the crest of the ridge produced a basalt flake in the backfill. This shovel test was expanded into a 40 x 40 cm test (test pit 1), which produced another three flakes. One basalt flake was encountered at 15 cmbs at the contact between the organic silt and the Devil tephra (unit 1b/2) and two additional flakes were found at 30 cmbs in the oxidized Watana (unit 3a). Two other shovel tests were excavated on the ridge crest, with negative results.

A grid shovel testing program was implemented to assist in determining the site size and the number and placement of test squares. Sixteen grid shovel tests were excavated. No evidence of cultural material was found. One 1 x 1 m test square (N100/E102) was therefore placed directly west of test pit 1, overlapping its northwest corner.

Discussion:

Testing at TLM 102 included the excavation of 1 test pit, 2 survey shovel tests, 16 grid shovel tests, and 1 test square. The cultural remains recovered from this site consisted of 5 basalt flakes, 1 chert flake, and 2 chert modified flakes. The inventory of artifacts is summarized on Table D.181, and the distribution by stratigraphic unit is summarized on Table D.182.

Six soil/sediment stratigraphic units are identified at TLM 102 (Figure D.134; Table D.180). A general stratigraphic section consists of glacial drift (unit 5) represented in an oxidized context at the sterile extent of the excavation. Above the oxidized drift in the west half of the south wall of the test square, there was an oxidized silt (unit 6) that had not been previously identified in the project area. This small (6 x 1 cm) deposit occurs above the oxidized drift and below the Oshetna tephra, and is thought to possibly represent an isolated occurrence of oxidized Oshetna tephra. The Oshetna tephra (unit 4) overlies the oxidized drift throughout the test square except in the southwest

corner. Above the Oshetna tephra is the unoxidized and oxidized Watana tephra (unit 3b and 3a, respectively). Above the Watana tephra lies the Devil tephra (unit 2). Above these volcanic sediments is a humic, carbonaceous organic silt layer (unit 1b) that represents the 02 horizon of the contemporary root mat which caps the sequence. This thick organic mat contains plant debris.

Natural processes of cryoturbation and bioturbation are evident in the test square. The displacement of numerous large cobbles and small boulders in the lower extent of the test squares indicates movement of sediments. These boulders are lying on the drift, but extend up through the stratigraphic sequence to the oxidized Watana tephra. Some shifting of the Watana and Oshetna tephras was evident around the perimeter of the boulders.

The single cultural component at TLM 102 can be correlated to the contact between the organic silt and the Devil tephra (unit 1b/2). Two basalt flakes and three chert flakes, two of which are modified (UA84-124-1, 2) were recovered from this stratigraphic context during survey and systematic testing. Two additional basalt flakes were found in the oxidized Watana tephra (unit 3a) during survey testing but may have been displaced by cryoturbation. The position of the basalt flake found in the backfill of a shovel test during survey testing is stratigraphically unknown. Very small amounts of scattered charcoal flecks mixed with a fine silt comprise the matrix of the cultural contact.

Evaluation:

TLM 102 is situated on the western end of the crest of a ridge on the north side of the Susitna River downriver from the mouth of Kosina Creek. Visibility from the site is restricted to the Susitna River to the south and a higher ridge terrace separated by a ravine to the north. The view is limited for the most part by dense forest growth. 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 silt and the Devil tephra. Processes of cryoturbation have caused some movement of artifactual material at the site. Based on the systematic recovery of lithic material at this site, it would appear that the small artifactual assemblage represents a post-Devil tephra occupation. Observed site size based on the distribution of artifacts is 8 square meters (Table D.2).

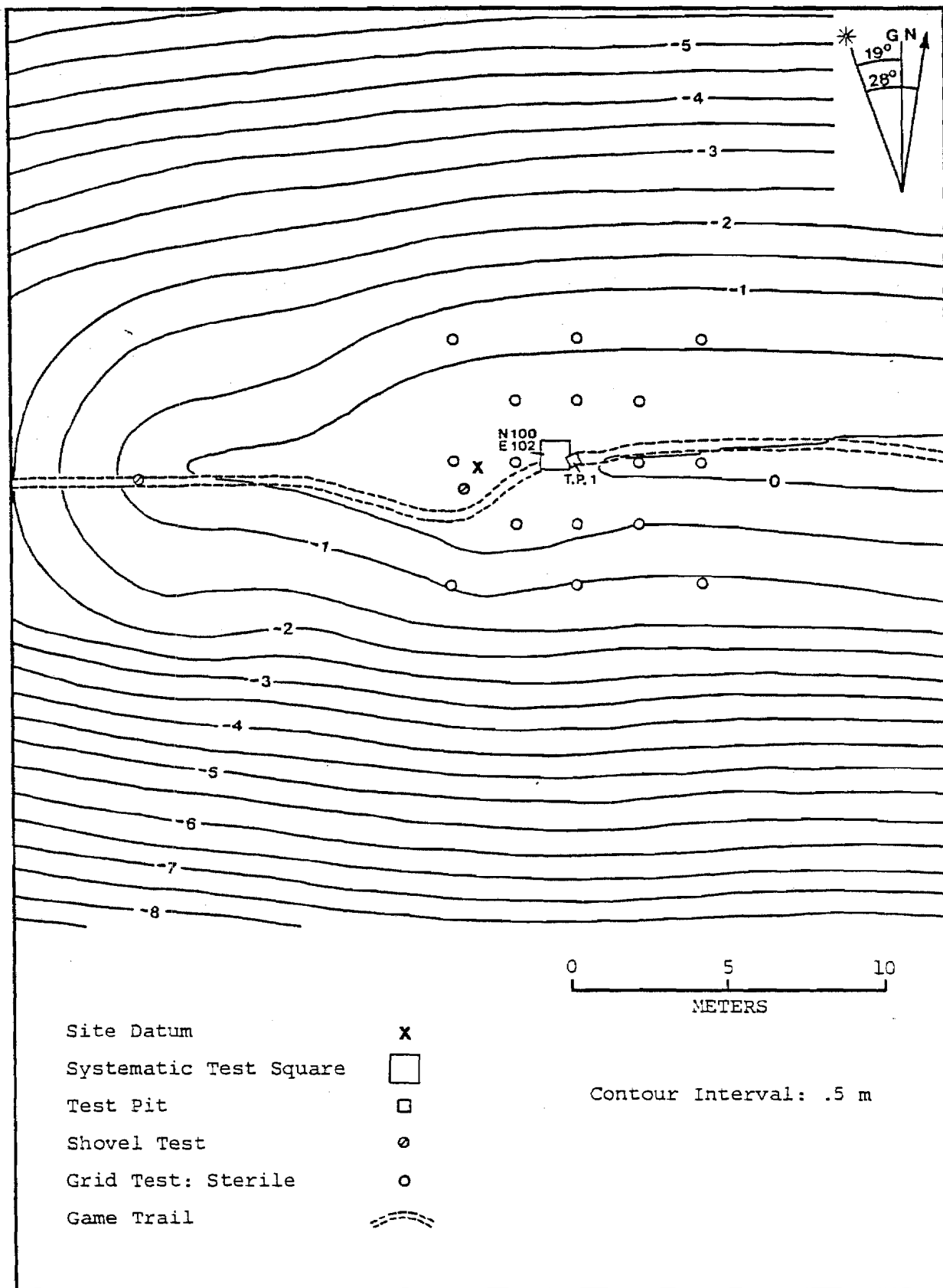


Figure D.133. Site Map, TLM 102

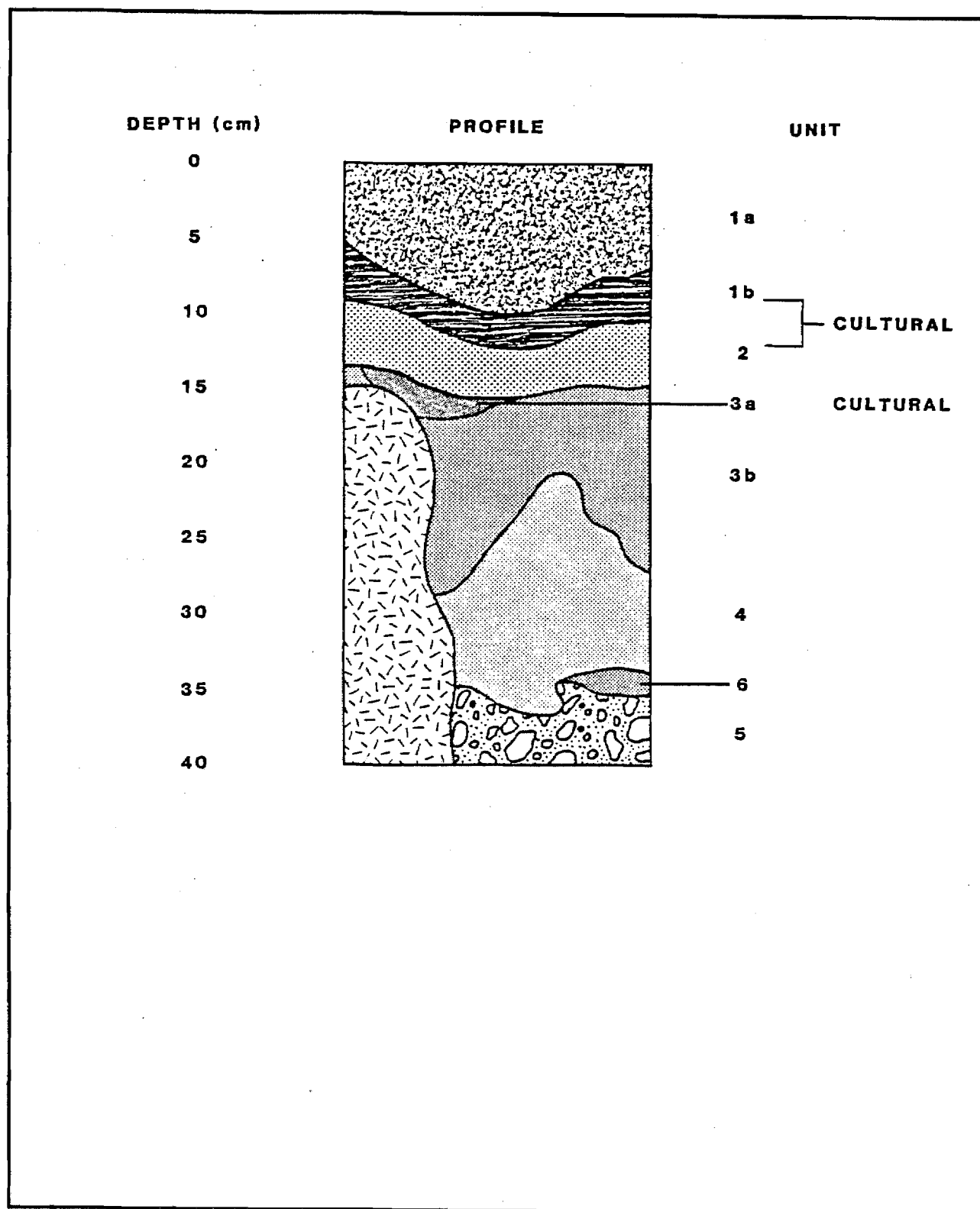


Figure D.134. Composite Profile, TLM 102

Table D.180.

Soil/Sediment Description for Composite Profile, TLM 102

Unit	Description
1a	Surface organic layer: thick fibrous root mat with living and partially decomposed plant material. Varies in thickness from 2-11 cm, but usually 5 cm. Lower boundary clear and smooth. Continuous. 01 horizon.
1b	Very fine silt with decomposed plant fragments; reddish black (10R 2.5/1). Varies in thickness from 1-6 cm, usually 2-4 cm. Lower boundary clear and smooth to wavy. Continuous. 02 horizon. Tiny flecks of charcoal present. Cultural material occurs at lower contact with unit 2.
2	Fine-grained silt size particles mixed with tiny flecks of charcoal; pinkish gray (5YR 6/2) to reddish gray (5YR 5/2). Ranges in thickness from 1-10 cm, but generally 5 cm. Lower boundary wavy but fairly distinct. Devil tephra; eluvial A horizon. Fairly continuous. Root penetration and cryoturbation evident. Cultural material found at the upper contact.
3a	Fine to medium silt size particles; dark reddish brown (5YR 3/3). Ranges in thickness from 1-5 cm, but generally 3 cm. Lower contact with 3b is gradual to diffuse. Watana tephra; illuvial B2 horizon. Discontinuous; root penetration, mottling, and cryoturbation evident. Oxidized.

Table D.180. (Continued)

Unit	Description
3b	Very fine silt size particles; brownish yellow (10YR 5/6) to yellowish brown (10YR 5/6). Ranges in thickness from 1-18, but generally 10-12 cm thick. Lower boundary clear, abrupt, and very wavy. Watana tephra; illuvial B2 horizon. Discontinuous. Disturbed by root penetration and cryoturbation.
4	Fine silt size particles; gray (10YR 5/1). Varies in thickness from 1-14 cm, and generally follows the contours of the large cobbles located in the test square. Lower boundary abrupt to clear and irregular. Discontinuous. Oshetna tephra; buried eluvial A horizon. Cryoturbation evident.
5	Sand and silt size particles; yellowish red (5YR 5/6) to (5YR 4/6). Oxidized glacial drift. Large rounded cobbles present, ranging from 50 cm in diameter. This unit determines the extent of excavation.
6	Very fine silt size particles; dark red (2.5YR 3/6). Thickness of unit is 6-12 cm. This unit occurs in one deposit below unit 4 and above unit 5 in the west half of the south wall. Contacts clear and smooth. Discontinuous. Possible oxidized Oshetna tephra.

Table D.181.

Artifact Summary, TLM 102

Tools

2	Modified flakes
	2 Chert (UA84-124-1, 2)

Lithic Material

5	Basalt flakes
1	Chert flake

6

Table D.182.

Artifact Summary by Stratigraphic Unit, TLM 102

Unit	Description
1b/2	2 Basalt flakes
Contact between	1 Chert flake
organic silt	2 Chert modified flakes (UA84-124-1, 2)
and Devil tephra	
3a	2 Basalt flakes
Oxidized Watana	
tephra	
Unknown	1 Basalt flake
(Survey)	

Area: North of Devil Creek Mouth
Site Map: Figure D.135
Site Location Map: Figure E.60
USGS Map: Talkeetna Mts. D-5, Figure E.1
Site Location: Appendix F

Setting:

The site is located on the eastern edge of a 400 (north-south) x 200 m (east-west) terrace north of the confluence of Devil Creek with the Susitna River. This relatively flat terrace lies at 768 m asl (altimeter: 2520 feet), 91 m above Devil Creek, at the southern terminus of the small glacial valley through which Devil Creek flows. To the south the terrace continues approximately 600 m at a lower elevation, along the east side of the constricted Devil Creek valley. The site overlooks a channel to the east, which drains south into Devil Creek, and which separates visible upland hills from the site. In other directions, the view encompasses much of the terrace, including site TLM 101, to the southwest, and a slight rise in the terrace beyond which TLM 114 is located. Uplands are visible to the east, north, west, and southwest. To the south, the Devil Creek valley is visible for a distance of about 1 km. Vegetation at the site consists of lowbush cranberry, blueberry, Labrador tea, lichens, dwarf birch, and alder surrounding a gravel blowout approximately 15 x 5 m in area at the edge of the terrace. Occasional scattered spruce constitute the arboreal vegetation southeast of the site.

Testing:

Five basalt flakes and a chert biface fragment (possible point tip) (UA81-271-1; Figure D.380a) were collected from a small lithic scatter on a gravel deflated area (Figure D.135; Table D.183). A 40 x 40 cm test pit (test pit 1) was excavated ca. 2 m north of the scatter near the edge of the vegetation cover. Three tephra horizons were

identified; no charcoal or cultural material was present in the test. A grid shovel testing program was undertaken to determine the site size. Twenty-one shovel tests were excavated during this program. Only shovel test 1, less than 1 m north of the flake scatter, yielded cultural remains. A single basalt flake was recovered from the surface of this shovel test. Observed site size based on the distribution of artifacts is 14 square meters (Table D.2).

Table D.183.

Artifact Summary, TLM 103

Provenience		Description
<u>Lithic Material</u>		
Surface:	6	Basalt flakes
	1	Chert biface fragment (UA81-271-1)

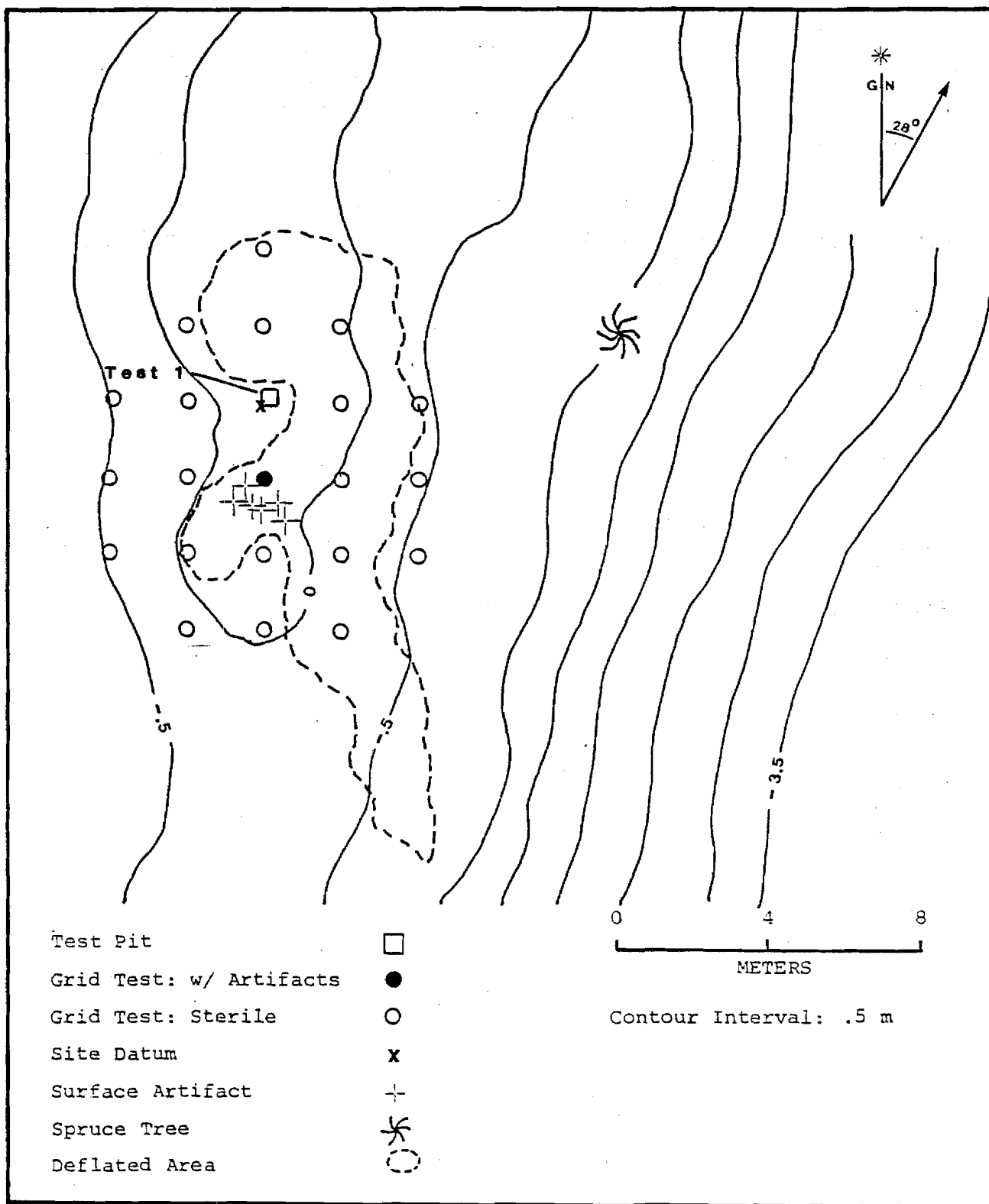


Figure D.135. Site Map, TLM 103

AHRS Number TLM 104; Accession Numbers UA81-274, UA84-63

Area: North of Watana Creek Mouth
Site Map: Figure D.136
Excavation Plan View, Figure D.137
Survey Locale 22: Figure E.99
USGS Map: Talkeetna Mts D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 104 is located west of Watana Creek and northwest of the confluence of Watana Creek with the Susitna River. The terrain bordering the lower west side of the Watana Creek valley consists of undulating glacial kames, eskers, and small lakes. TLM 104 is situated on a southern slope at the southwestern end of a northeast trending kame which curves around the northern edge of an ephemeral 2 ha lake at 544 m asl (altimeter: 1817 feet). The site is about 36 m from the edge of the lake and 11 m above it. Visibility is restricted by dense vegetation on the slopes of the kame to about 50 m to the southwest and southeast toward a low, presently marshy area and the lake. To the northeast and northwest, the view is limited by the rising slope of the kame. An open forest of white spruce and birch covers the site and surrounding terrain. Labrador tea, lowbush cranberry, blueberry, and dwarf birch cover a thick ground mat of sphagnum moss, heath, and lichens.

Testing:

TLM 104 was initially located during survey with the discovery of a 65 cm deep rectangular depression (feature 1) measuring 1.4 (east-west) x 1.2 m. During survey testing of the site a 40 x 40 cm test pit (test pit 1) was expanded from an initial shovel test about 70 cm southeast of the depression, which revealed charcoal and gravel matrix beneath the moss cover and two unburned bone fragments. Two additional shallow depressions (features 2 and 3) were located approximately 2.5 m and 4 m, respectively, northeast of feature 1. Both

depressions measure approximately 50 x 75 cm. Five shovel tests were placed within 2 m of features 1 and 2, all with negative results.

Systematic testing at TLM 104 consisted of five 1 x 1 m test squares. N98/E99 and N99/E98 were initially excavated to expose the eastern half of feature 1 and the berm area to the north of the depression. Remains of several wooden structural members were exposed in both squares along the northern and southern sides of the depression. Two additional test squares (N98/E98 and N99/E99) were excavated in an effort to define the perimeter of feature 1 and the extent of the structural remains. N99/E100 exposed the southern half of feature 2 in an attempt to determine a cultural association. Feature 3 was not tested. A grid shovel testing program was implemented, placing 17 shovel tests around the features. These shovel tests failed to produce cultural material.

Discussion:

Survey testing and systematic testing resulted in an artifact assemblage of eight bone fragments (Table D.186). In addition, three features are identified at the site. The feature 1 depression is approximately 65 cm deep, and overgrown with sphagnum moss which contains a white spruce tree (15 cm in diameter) growing in the southwestern corner. A poorly defined berm, varying in height from ca. 5-15 cm, is visible on all but the northwestern side. A charred spruce log is partially exposed on the surface abutting the southwest side of the tree.

Testing indicates that TLM 104 contains evidence of a single component postdating the Devil tephra fall. Four radiocarbon samples were collected from the surface and from a sand and gravel matrix mixed with organics (unit 5a, 5b, 5c) in feature 1 (N98/E98 and N98/E99). One sample from unit 5a was submitted which resulted in a modern date (BETA-10793). A spruce tree in the southwest corner of the depression was cored and contained 94 rings. The site presumably was occupied before the tree took root. This argues for a relatively late occupation of the site.

Fifteen stratigraphic units are identified at TLM 104 (Figure D.138; Table D.184). The stratigraphic history of feature 1 is best illustrated as a series of natural and cultural events. These stratigraphic events consist of the deposition of glacial drift (units 10a and 10b), and a series of volcanic ash falls consisting of the Oshetna (unit 9), Watana (unit 7), and Devil (unit 6). A paleosol (unit 8), represented as a faint carbon stain, is discontinuous, but occasionally appears between the Oshetna and Watana tephras. At some time after the Devil tephra was deposited, the depression (feature 1) was excavated through the tephras and into the drift. The excavated sediments were then deposited around the perimeter of the depression which was apparently never backfilled by the original excavators.

Wooden structural members and discontinuous layers of birch bark were exposed in the bottom and on the northern side of the depression (feature 1) in a drift matrix characterized by mixed sand, pebbles, organic materials, and cobbles (unit 5c, 5b, and 5a). Four stratigraphic units (4b, 4a, 3, and 2), overlying the structural remains and comprised of mixed tephra units, and sand and gravel, probably represent fill material from the excavation of the depression (feature 1). A thick organic mat (unit 1a) associated occasionally with an underlying organic silt (unit 1b) overlies the sand and gravel matrix (unit 2) north of the depression and has loosely formed over the sandy organic layer (unit 5c) in the bottom of the depression (Table D.184).

The majority of cultural material at TLM 104 is associated with a semisubterranean structure of sod, birch bark, and pole construction. This feature contains evidence of a discontinuous birch bark lining at a depth of 1 m below the surface. Remnants of five east-west oriented burned beams are at the bottom of feature 1 exposed in a sandy organic matrix (unit 5c) and within the extensive root structure of the spruce tree (Table D.187). A carbonized beam, possibly an upright support, is exposed in the southern wall of the pit and appears to have been disturbed by the roots of the tree. A possible posthole (2 x 3 cm), located in the northwestern corner of the depression (N98/E98) near the western extent of two beams, is surrounded by a matrix rich in charcoal

(unit 5b). The matrix of the possible posthole is a sand and gravel layer (unit 5c) and is less compacted, containing no evidence of carbonization characteristic of the surrounding matrix. Another possible upright post that has been thoroughly carbonized and is surrounded by a unit 5c matrix may represent a central support for the roof. It is located along the east side of the depression.

Additional east-west oriented beams were exposed in a sand and gravel matrix (unit 5a). One of these beams was located on the southern side of the depression, and nine others, thought to be structural members of a roof, were exposed on the northern side of the depression. They extend across the entire length of three test squares (N99/E98, N99/E99, and N99/E100). The roof construction consists of seven of these linear beams that are capped with discontinuous layers of birch bark underlying an organic sod. The western extent of these beams is not determined because they continue further west of the limit of excavation. The eastern extent of these seven beams end at the east wall of N99/E99. The two other beams, lying over the seven linear beams, may possibly represent upright pole supports.

The southern boundary of a shallow circular depression (feature 2) was exposed along the north wall of N99/E100. No evidence of cultural material was exposed in this depression; however, due to its close association with the structure, it is presumed to be cultural.

The faunal material recovered from the site occurred in three distinct stratigraphic units (Table D.186). Five of the eight unburned rib fragments were found in unit 5c in the bottom of the deep depression (feature 1). These bones were associated with structural members and discontinuous layers of birch and spruce bark. One other unburned rib fragment was found in a mottled organic silt mixed with Devil tephra (unit 3). The remaining two unburned rib fragments were collected from a sand and gravel matrix (unit 2) in test pit 1. All eight bones appeared to be associated with the single cultural component on the site.

Evaluation:

TLM 104 is situated on the southern slope of a northeast-southwest trending kame feature which curves around the northern edge of a small ephemeral lake. Visibility from the site area is restricted to ca. 50 m to the southwest and southeast toward a low-marsh area which surrounds the lake. Views to the northeast and northwest are limited by dense vegetation and the rising slope of the kame.

Testing at TLM 104 indicates that cultural activity is restricted to the area immediately surrounding three cultural depressions (features 1, 2, and 3) and is presumably affiliated with the late Athapaskan tradition of Interior Alaska. TLM 104 represents a single component site based on the stratigraphic context of faunal material and structural remains.

The site is believed to represent a seasonally occupied semisubterranean temporary shelter built of sod, birch bark, and pole construction. The shelter has been constructed by excavation into the drift to a depth of ca. 1 m below the surface forming a rectangular depression (1.4 x 1.2 m) defined as feature 1. This depression shows evidence of a discontinuous birch bark lining in association with both horizontal and upright structural members, possible postholes, unburned bone, and charcoal. The roofing material is represented by east-west oriented beams which are capped with discontinuous layers of birch bark and sod. Observed site size based on the distribution of artifacts is 24 square meters (Table D.2).

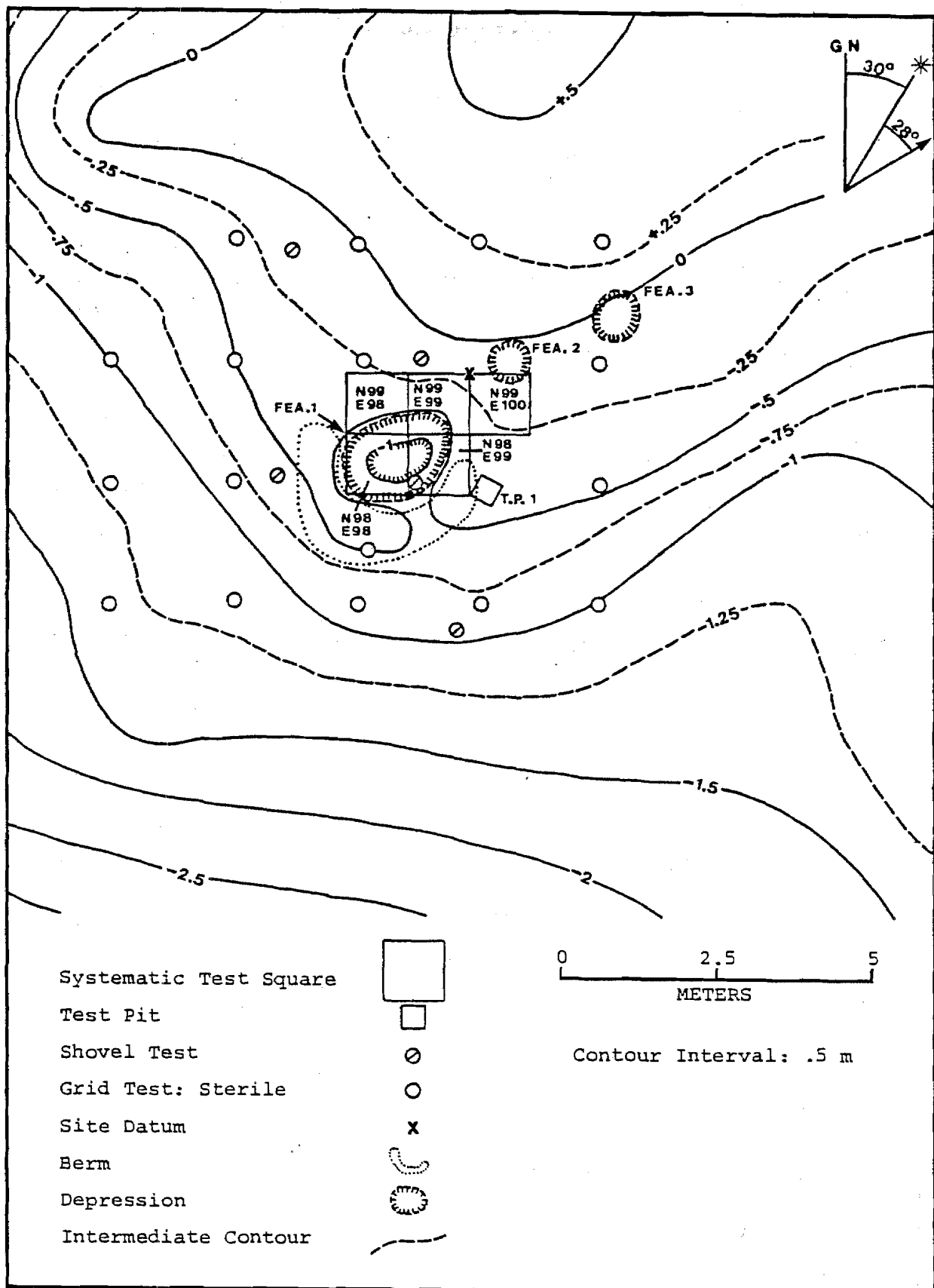
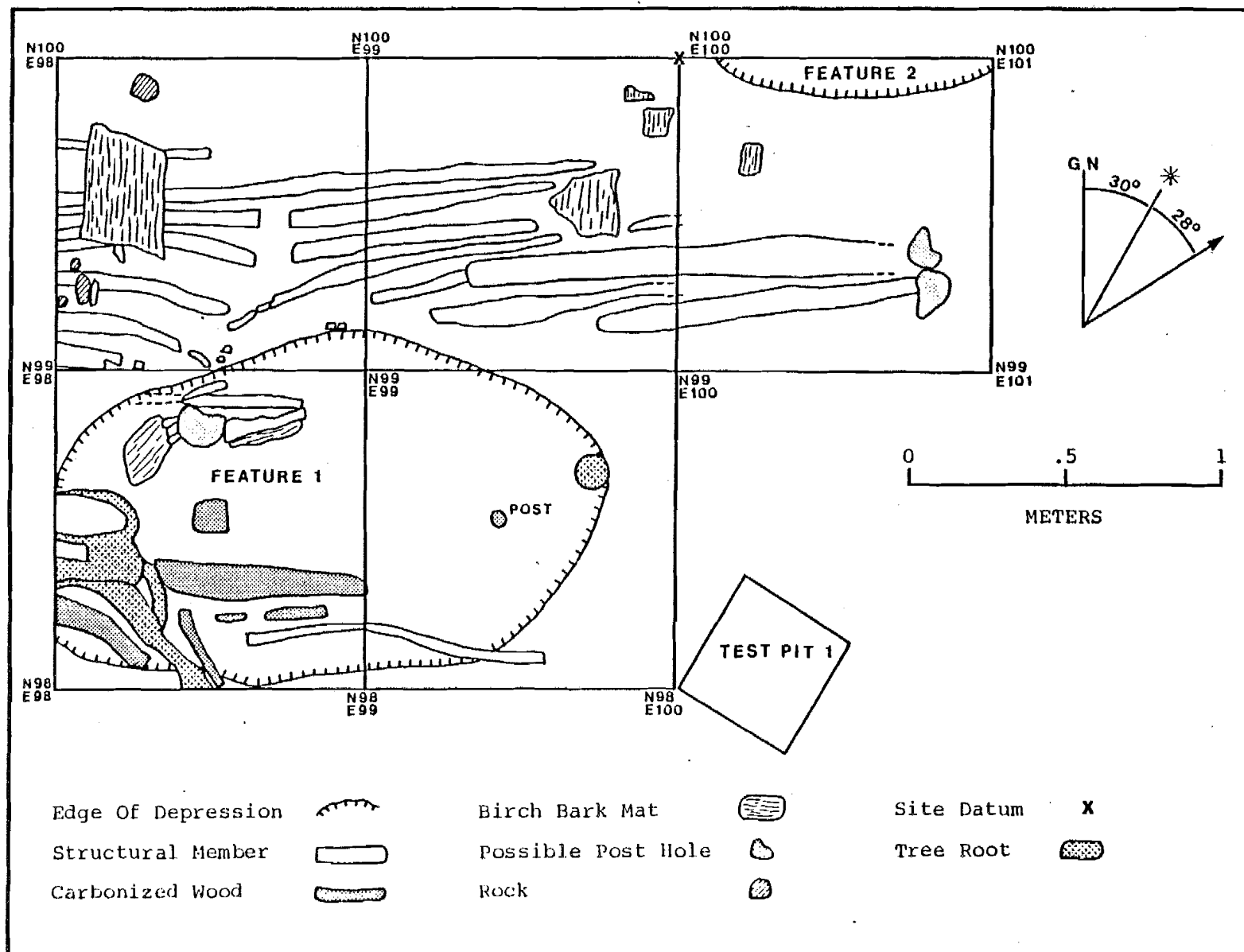


Figure D.136. Site Map, TLM 104

Figure D.137. Excavation Plan View, TLM 104



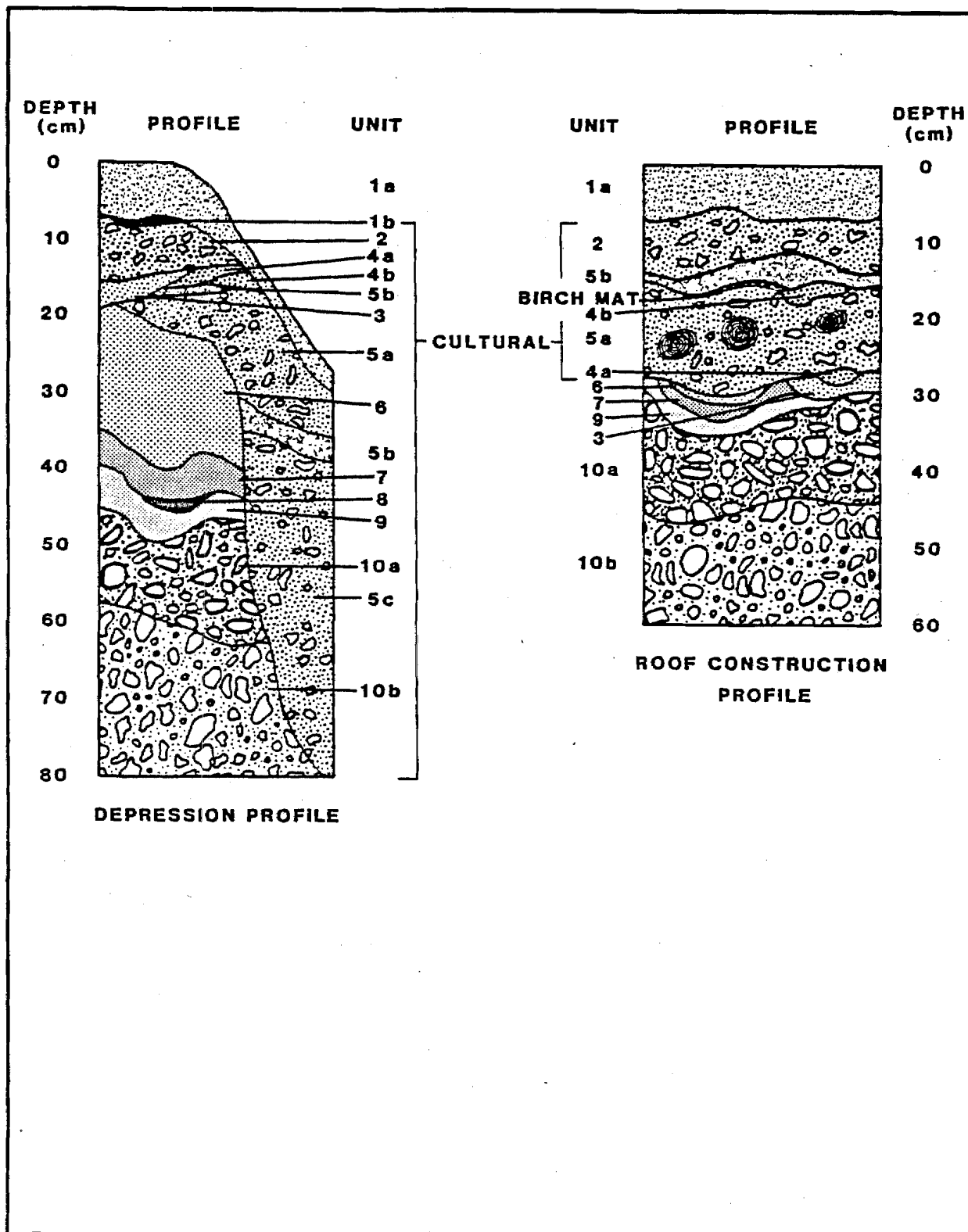


Figure D.138. Composite Profile, TLM 104

Table D.184.

Soil/Sediment Description for Composite Profile, TLM 104

Unit	Description
1a	Surface organic layer; roots and plant material from Labrador tea, lowbush cranberry, blueberry, dwarf birch, sphagnum moss, heath, and lichen from the surface. Varies in thickness from 3-16 cm. but is generally 6 cm. Lower boundary is clear and wavy. Nonmineral O1 horizon. Continuous.
1b	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 is diffuse and irregular. Discontinuous, O2 or humus horizon with charcoal present. Roots present.
2	Sand and silt with gravels; pale brown (10YR 6/3). Fill material from original excavation of deep depression (feature 1). Varies in thickness from 3-18 cm, generally 8 cm. Clear to wavy lower boundary. Continuous in all squares except N99/E100. Roots common.
3	Compact, mottled fine-grained silt size particles; grayish brown (10YR 5/2). Mottled organic silt mixed with tephra (Devil). Fill material from original excavation of deep depression (feature 1). Varies in thickness from 1-7 cm, usually 3 cm. Diffuse to irregular lower boundary. Discontinuous. Organics and small flecks of charcoal present. Root penetration.

Table D.184. (Continued)

Unit	Description
4a	Mottled fine to medium silt size particles; pinkish gray (7.5YR 6/2) to strong brown (7.5YR 5/8). Mottled tephra (Devil) mixed with tephra (Watana). More Devil than Watana tephra. Fill material from original excavation of deep depression (feature 1). Varies in thickness from 1-13 cm, generally 6 cm. Gradual to broken lower boundary. Discontinuous. Roots present.
4b	Mottled fine to medium silt size particles; pinkish gray (5YR 6/2) to yellowish red (5YR 5/8). Slight variation of unit 4a. Mottled tephra (Devil) mixed with tephra (Watana). More Watana than Devil tephra. Fill material from excavation of deep depression (feature 1). Varies in thickness from 1-12 cm, usually 4 cm. Gradual to broken lower boundary. Discontinuous. Roots present.
5a	Sand and silt with pebbles and cobbles; dark yellowish brown (10YR 4/4). Coarse sand. Varies in thickness from 4-10 cm, usually 7 cm. Gradual to smooth lower boundary. Matrix of structural members. Continuous where cultural material occurs. Cobble size is 5-8 cm in diameter. Charcoal present.

Table D.184. (Continued)

Unit	Description
5b	Organic sod layer mixed with silt and fine sand size particles; very dark brown (10YR 2/2). Varies in thickness from 1-7 cm, generally 4 cm. Gradual to irregular lower boundary. Occurs above and below unit 5a. Cultural placement of organic sod layer over structural members. Discontinuous. Charcoal present.
5c	Sand and silt mixed with pebbles, cobbles, and organics; dark brown (10YR 5/3). Varies in thickness from 40-56 cm, generally 50 cm. Gradational lower boundary. Continuous within vicinity of deep depression (feature 1). Cobble size is 5-8 cm in diameter. Charcoal and cultural material present.
6	Fine grained silt size particles; pinkish gray (7.5YR 7/2). Ranges in thickness from 2-5 cm. Tephra (Devil). Diffuse to irregular to broken lower boundary. Discontinuous, occurring only in small pockets.
7	Fine to medium silt size particles; strong brown (7.5YR 4/6) to yellowish brown (10YR 5/4). Ranges in thickness from 2-15 cm, generally 5 cm. Tephra (Watana), unoxidized. Diffuse to wavy to broken lower boundary. Continuous where it is exposed.

Table D.184. (Continued)

Unit	Description
8	Fine silt with faint carbon stain; very dark grayish brown (10YR 3/2). Generally 1 cm thick. Diffuse to broken lower boundary. Discontinuous. Faint carbon stain.
9	Fine silt to sand-size particles; gray (10YR 5/1). Ranges in thickness from 2-11 cm, generally 4 cm. Tephra (Oshetna). Continuous where it is exposed.
10a	Sand and silt mixed with pebbles and cobbles; yellowish brown (10YR 5/8) to dark yellowish brown (10YR 4/4). Gradational lower boundary. Glacial drift. Poorly sorted. Oxidized.
10b	Fine to medium sand size particles with pebbles and cobbles; pale brown (10YR 6/3). Lower boundary extent of excavation. Glacial drift. Poorly sorted. Unoxidized. Pebble size 5-8 cm in diameter.

Table D.185.

Artifact Summary, TLM 104

Faunal Material

8 Bone fragments

Other

1 Wooden structural member (UA84-63-10)

Table D.186.

Faunal Material by Stratigraphic Unit, TLM 104

Unit	Description
2 Sand and Gravel	2 Rib fragments, unburned, large mammal
3 Compact mottled organic silt/ Devil tephra	1 Rib fragment, unburned, large mammal
5c Sand, gravel, and organics	4 Rib fragments, unburned, large mammal 1 Probable rib fragment, unburned, large mammal

Table D.187.

Artifact Summary by Stratigraphic Unit, TLM 104

Unit	Description
5c Sand, gravel, and organics	1 Wooden structural member (UA84-63-10)

AHRS Number TLM 105; Accession Number UA81-276

Area: North Shore of Clarence Lake
Site Map: Figure D.139
Site Location Map: Figure E.59
USGS Map: Talkeetna Mts. C-2, Figure E.7
Site Location: Appendix F

Setting:

TLM 105 is located on the southern edge of the summit of a broad, flattened hill on the north shore of Clarence Lake, west of the mouth of a small creek which feeds into the north shore of the lake. The hill stands at ca. 876 m asl (2875 feet), about 20 m above the level of Clarence Lake and north of the lake shore. The hill is roughly rectangular, 100 (east-west) x 50 m (northeast-southwest) at the top, with gradually sloping stepped sides to the east and west, and steeper slopes to the north and south. The hill is 5-20 m higher than the surrounding topography, and is the highest landform in the immediate vicinity of Clarence Lake. Clarence Lake and adjacent low-lying swampland are completely visible to the south, east, and west. Site TLM 100, a site with several housepits on the Gilbert Creek outlet, is visible to the west. The small creek to the east is visible until it passes from sight in the gently rolling uplands to the northeast. These uplands dominate the view to the north, northeast, and northwest, as well as beyond Clarence Lake to the south.

A continuous low mat of lichens, cranberry, and dwarf birch covers the entire site, except for two artificially exposed surfaces on the southern edge. These two rectangular areas, both approximately 3 x 4 m in area, were cleared of soil. One is a dump site, the other may be a tent pad. Upturned sod segments are scattered about this area. Vegetation of the surrounding region is similar to that onsite, except in poorly drained lowlands, which are swampy.

Testing:

The cleared level area thought to be a tent or house pad (scatter 1) contains a lithic scatter with approximately 85 flakes observed of four different material types (Figure D.139; Table D.188). An additional 20 flakes were observed in the upturned sod pieces. Thirty flakes were collected from this scatter and disassociated sods. No other artifacts were noted on the surface. Test pit 1, situated 60 cm north of scatter 1, contained one black basalt flake at 18 cmbs at the contact between yellow brown silt (possible tephra) and coarse sand with gravel. Test pit 2, 30 m west of site datum contained 30 small white argillite waste flakes at 0-5 cmbs. A shovel test was placed on the hilltop, with negative results. Estimated site size based on the distribution of artifacts is 150 square meters (Table D.2).

Table D.188.

Artifact Summary, TLM 105

Provenience		Description
<u>Lithic Material</u>		
Surface:		
Scatter 1	8	Argillite flakes
	10	Basalt flakes
	1	Chalcedony flake
	6	Chert flakes
	ca. 60	Flakes (uncollected)
Isolated find	1	Basalt flake
Subsurface:		
Test 1	1	Basalt flake
Test 2	30	Argillite flakes
Disturbed context (overturned sod)	1	Argillite flake
	1	Basalt flake
	2	Chert flakes
	16	Flakes (uncollected)

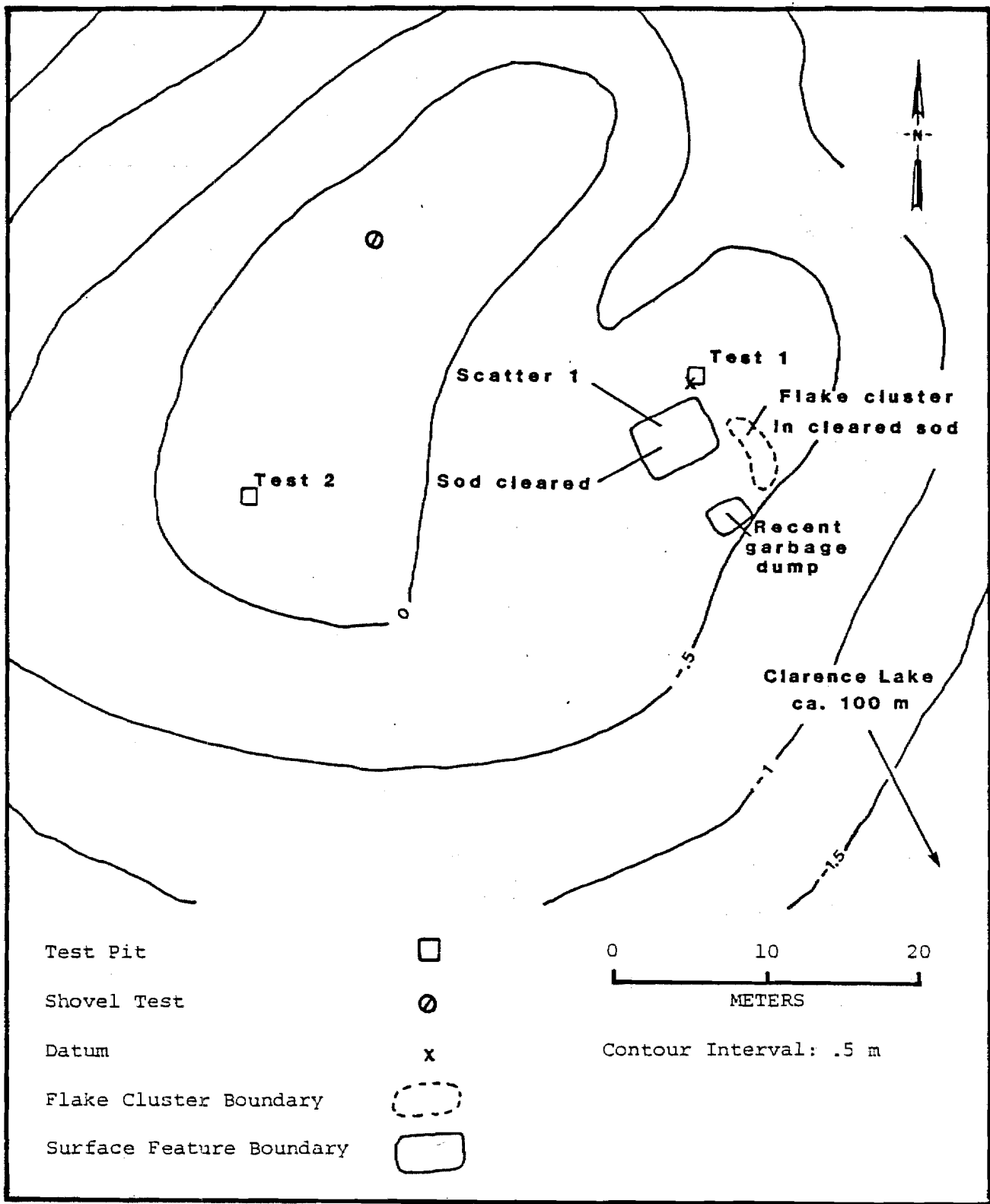


Figure D.139. Site Map, TLM 105

AHRS Number TLM 106; Accession Number UA81-265

Area: Northwest of Tsusena Creek Mouth
Site Map: Figure D.140
Site Location Map: Figure E.61
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

TLM 106 is located at 946 m asl (altimeter: 3105 feet) on a prominent knoll centrally located on an esker ridge, east-southeast of a lake, locally known as Swimming Bear Lake, overlooking the valley of a creek to the south which flows southeast into the Susitna River. The esker ridge is oriented approximately east-west and is divided into sections by small creek drainages. The knoll, ca. 80 (northwest-southeast) x 60 m (northeast-southwest), is bounded ca. 30 m to the west by a steep, narrow valley (approximately 10 m deep) containing a creek which drains a 1 ha pond located north of the site. It is bounded ca. 30 m to the northeast by an arm of the pond. The southern and eastern sides of the knoll, facing the valley, are steep slopes dropping ca. 30 m before grading into the valley bottom. Thus, a panoramic view of the creek valley to the east, south, and southwest may be obtained from the site. To the north and northwest hilly uplands are in full view. The pond is visible to the north, but the creek valley to the west is not. The view to the northeast is impaired by a slightly higher knoll ca. 50 m away. The site is located above tree line. The southeast face of the knoll is free of vegetation, consisting of a large gravel exposure, while the top and northwest portions are more or less continuously covered by a mat of lichen, heath, and low dwarf birch, with small gravel exposures present.

Testing:

The site consists of a single gray chert biface midsection (UA81-265-1; Figure D.380b) located on the surface near the top of the knoll, where the large southeastern exposure begins (Figure D.140; Table D.189). Visual survey of this surface and other exposures was conducted. No other surface artifacts were found. Test pit 1, located near the artifact in vegetation on top of the knoll, revealed an organic layer underlain by a gray silty possible tephra unit and oxidized glacial drift. A grid shovel testing program was implemented to assist in determining the distribution of cultural material and the areal extent of TLM 106. Sixteen shovel tests were excavated during this program. No subsurface artifacts were encountered. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.189.

Artifact Summary, TLM 106

Provenience

Description

Lithic Material

Surface:

1 Chert biface fragment (UA81-265-1)

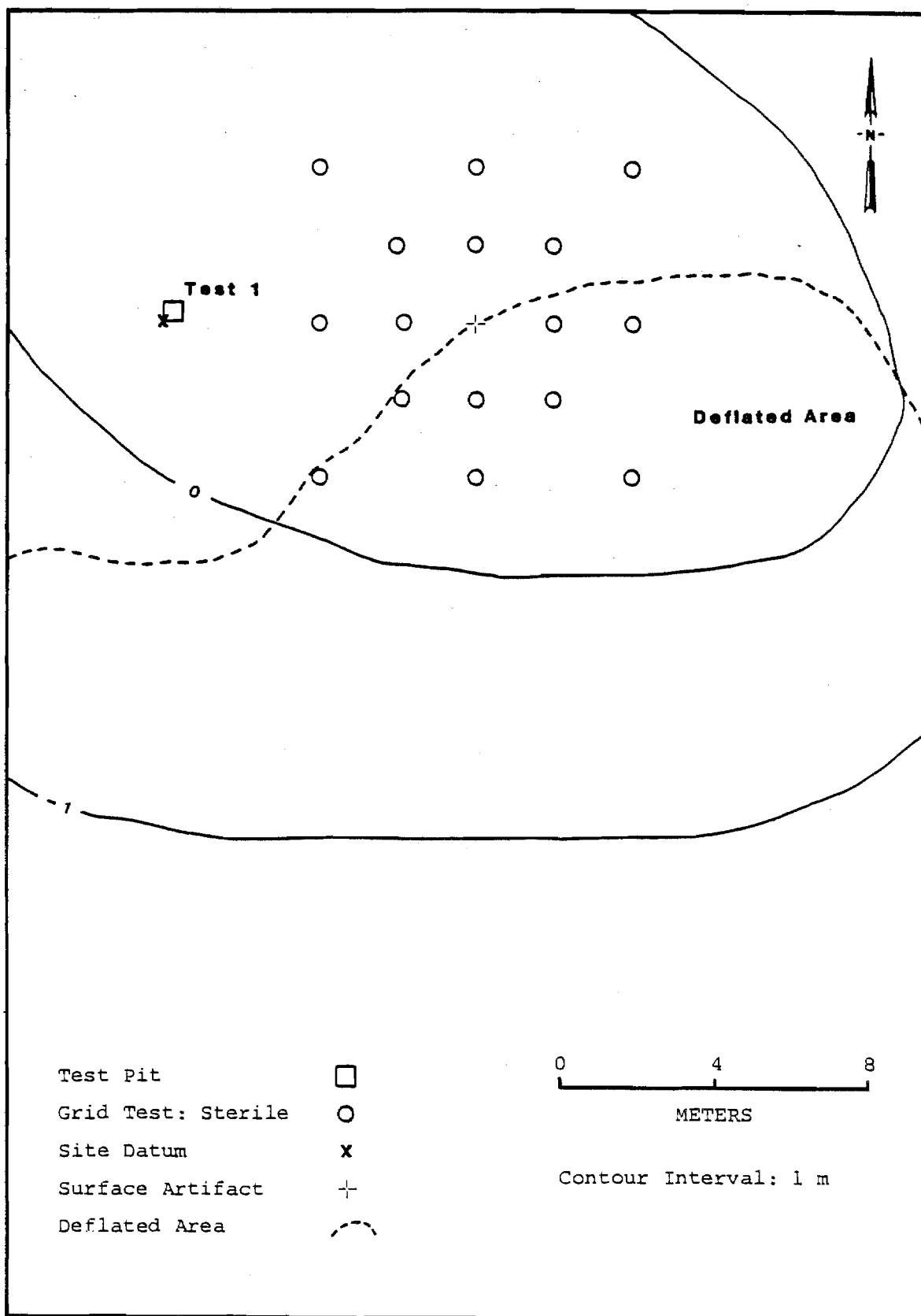


Figure D.140. Site Map, TLM 106

AHRS Number TLM 107; Accession Numbers UA81-266, UA84-105

Area: Northwest of Tsusena Creek Mouth
Site Map: Figure D.141
Site Location Map: Figure E.61
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located northwest of the confluence of Tsusena Creek with the Susitna River, at an elevation of 965 m asl (altimeter: 3165 feet), on a west-northwest to east-southeast trending terrace on the southern slope of a minor glacial valley. The sandy gravel-covered terrace is dissected in several places by drainage creeks running south to the Susitna River. The terrace appears as a series of knolls, the western ones being rounded and higher in elevation, the eastern end flattening somewhat about 15 m lower than the highest knoll. The site is situated near the western end of the terrace on the highest knoll of the system. The site extends 150 m down the terrace to the east of the knoll and about 12 m downslope to the west. A creek cuts through the terrace west of the site; another creek runs parallel to the terrace on the north side, flowing east. A small marshy pond is east of this site, on the north side of the terrace. Site TLM 106 is adjacent to this pond. The view from the site is extensive in all directions. From the lower, eastern part of the site visibility to the west is hindered somewhat by the knoll.

Vegetation on the site consists of low dwarf birch, heath, lichens, and sedges, interrupted by extensive areas of sand and gravel. In the lower, more moist areas south of the site, willows and alders occur. The site is above treeline, although spruce can be seen in the lower reaches of the valley.

Testing:

The site is defined by the extent of surface artifacts occurring along a 160 m length of the terrace (Figure D.141; Table D.190). Datum was placed on the highest point of the site around which the artifacts were located. All but three artifacts were observed within 17 m of datum. They are an argillite modified flake (UA81-266-9) at 56 m southeast of the datum, an uncollected argillite flake at 133 m southeast of the datum, and a collected argillite flake at 149 m southeast of the datum. These argillite artifacts constitute the farthest extent of the site. Seventeen additional argillite flakes (seven of which were collected), 2 basalt flakes, 1 basalt modified flake (UA81-266-43), 1 argillite biface (UA81-266-1; Figure D.380e), and 1 argillite biface fragment (possible point midsection) (UA81-266-2; Figure 380c) were found within 17 m of the datum. A 40 x 40 cm test (test pit 1) was excavated on the knoll top where the vegetation mat allows for soil deposition. No artifacts or charcoal were recovered.

A grid shovel testing program was implemented to further define the extent of the site. Shovel testing extended out from the previously described surface finds. Fifty-two shovel tests were excavated during this program. A chert lanceolate point base (UA84-105-1; Figure D.380d) was recovered from the surface of one of these shovel tests, approximately 6 m southeast of the site datum. No other cultural remains were encountered. Due to the extensive deflated nature of the gravel surface, the site is regarded as primarily a surface lithic scatter. Observed site size based on the distribution of artifacts is 84 square meters (Table D.2).

Table D.190.

Artifact Summary, TLM 107

Provenience

Description

Lithic Material

Surface:

- | | |
|----|--|
| 8 | Argillite flakes |
| 2 | Basalt flakes |
| 1 | Argillite modified flake (UA81-266-9) |
| 1 | Basalt modified flake (UA81-266-43) |
| 1 | Argillite biface (UA81-266-1) |
| 1 | Argillite biface fragment (UA81-266-2) |
| 1 | Chert lanceolate point base (UA84-105-1) |
| 11 | Argillite flakes (uncollected) |

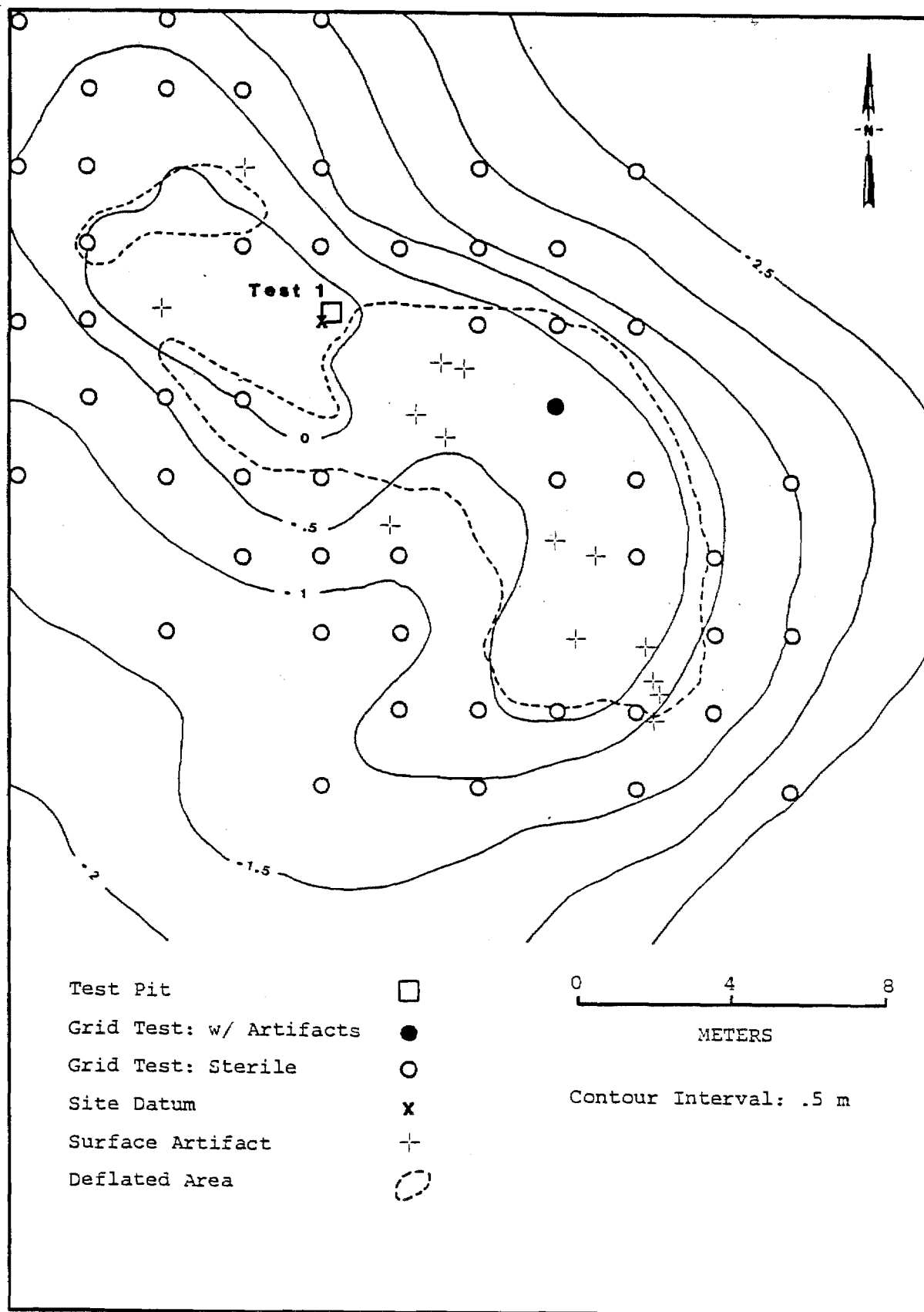


Figure D.141. Site Map, TLM 107

AHRS Number TLM 108; Accession Number UA81-267

Area: Northwest of Tsusena Creek Mouth
Site Map: Figure D.142
Site Location Map: Figure E.62
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

TLM 108 is located on a prominent terrace at 973 m asl (altimeter: 3193 feet), southeast of a lake locally known as Swimming Bear Lake, along an unnamed stream. The terrace lies northeast of the confluence of a large, south-flowing creek with the unnamed stream, in a broad, sloping, and irregularly surfaced valley. The terrace is oriented approximately northeast-southwest, and stands 5-10 m higher than the surrounding terrain. The terrace slopes downward gradually to the northeast, but has moderate to steep sides to the east, south, and west. The site is located on the flat, oval-shaped, exposed top on the high southern end of the terrace, overlooking the creek and associated small marshes to the south and west. The gradually rolling and stepped uplands to the north, east, and west are also visible and easily accessible. The site area is approximately 40 (northeast-southwest) x 25 m (northwest-southeast), and is predominantly exposed sand and gravel. A discontinuous mat of vegetation, composed chiefly of cranberry, bearberry, and lichens, make up the sparse vegetation cover which occurs on the sides of the terrace and in the southwest quarter of the terrace top. Shrub cover, composed of dwarf birch, blueberry, and willow, dominates the off site vegetation. A survey monument (R & M 32-511, 1981) is located on the site.

Testing:

A lithic scatter consisting of over 100 observed flakes was found at the site. The scatter consists of large black basalt flakes, tiny resharpening flakes, and a few gray chert flakes (Table D.191). The

flakes are concentrated in the northern quarter of the terrace top, but the scatter extends over the entire exposed surface. No finished tools were observed, many of the flakes show cortex, and only two show signs of unifacial retouch. A total of 14 black basalt, 2 gray chert flakes, and 2 basalt modified flakes (UA81-267-1, 3) were collected from the surface. Test pit 1, located near the lithic concentration in a small vegetated hummock, consisted of coarse silty sand and drift below a thin layer of humus. A grid shovel testing program was implemented to assist in determining the areal extent of TLM 108. Eighty-nine grid shovel test were excavated during this program. No subsurface artifacts were encountered; however, two grid shovel tests had surface flakes, which were not collected. Observed site size based on the distribution of artifacts is 270 square meters (Table D.2).

Table D.191.

Artifact Summary, TLM 108

Provenience	Description
<u>Lithic Material</u>	
Surface:	14 Basalt flakes
	2 Chert flakes
	2 Basalt modified flakes (UA81-267-1, 3)
	ca. 100 Flakes (uncollected)

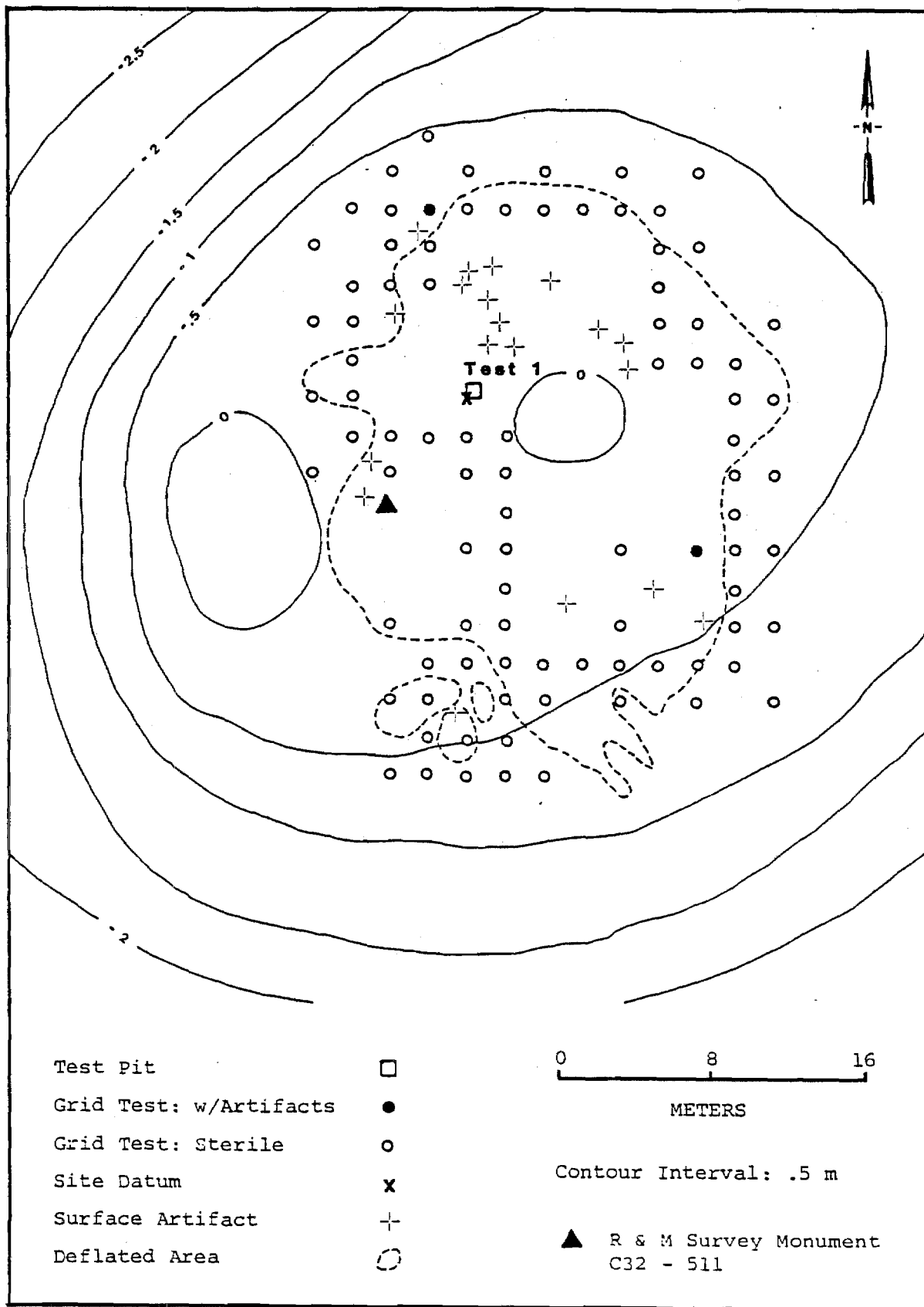


Figure D.142. Site Map, TLM 108

AHRS Number TLM 109; Accession Numbers UA81-268, UA84-107

Area: Northwest of Tsusena Creek Mouth East
Site Map: Figure D.143
Site Location Map: Figure E.62
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

TLM 109 is located on a terrace at the east end of a lake, locally known as Swimming Bear Lake, north of the most narrow point in the lake. The site is situated on top of the low, north-south trending lake terrace at 1017 m asl (altimeter: 3336 feet), ca. 7 m above the lake level. The lake lies to the northwest. The terrace, 5-10 (east-west) x 50 m (north-south), is surrounded by terrain, 3-4 m lower in elevation. Numerous glacial features occur throughout this area. Between the terrace and the lake to the west is a relatively flat bench 3-4 m higher than the lake. A small 50 cm high circular rise 5 m in diameter occurs on the edge of this bench, 72.5 m west of the site datum. The area is above timberline, and the ground surface is covered by lichens, mosses, Labrador tea, bearberry, crowberry, lowbush cranberry, blueberry, grasses, alpine azalea, dwarf birch, and willow with occasional small exposures and rock outcrops.

Testing:

The lithic material recovered from the site was found in two exposures (Figure D.143; Table D.192). The first is 2.3 m south (170 degrees) of datum, near the center of the terrace, and contained two gray chert flakes. The second is located 20.9 m south (165 degrees) of datum and consisted of two brown chert flakes. These artifacts were collected. Test pit 1, at datum, yielded no cultural material. Several survey shovel tests in the area also yielded no cultural material. The small circular rise located 72.5 m west of datum was thought to be a house

mound, but seven shovel tests around it revealed no evidence of cultural activity.

A grid shovel testing program was initiated around the datum area. A total of 40 grid shovel tests were excavated during this program. Twenty-four grid shovel tests were excavated in the vicinity of the northern surface exposure, but only one of these contained cultural material. Shovel test 1 yielded one chert modified flake (UA84-107-1) in a sandy silt matrix which lies between the root mat and the drift. Sixteen grid shovel tests were excavated around the second surface exposure; however, none produced cultural remains. Observed site size based on the distribution of artifacts is 13 square meters (Table D.2).

Table D.192.

Artifact Summary, TLM 109

Provenience		Description
<u>Lithic Material</u>		
Surface:	4	Chert flakes
Subsurface:		
Shovel test 1	1	Chert modified flake (UA84-107-1)

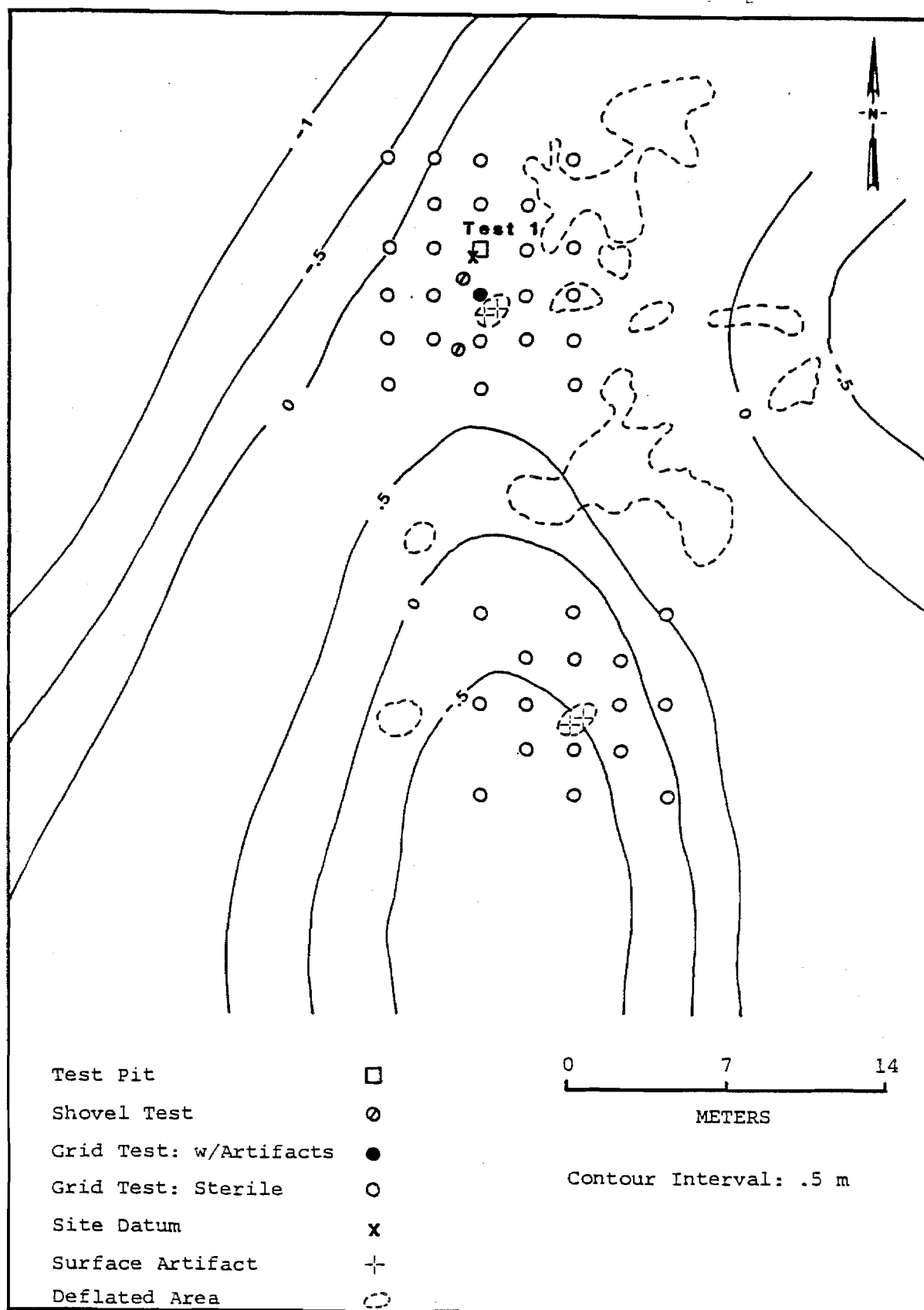


Figure D.143. Site Map, TLM 109

AHRS Number TLM 110; Accession Numbers UA81-269, UA84-108

Area: Northwest of Tsusena Creek Mouth, Northwest
Shore of a Lake
Site Map: Figure D.144
Site Location Map: Figure E.62
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on the crest of an east-west oriented ridge on the northwest side of a ca. 65 ha lake (locally known as Swimming Bear Lake), northeast of the confluence of Devil Creek with the Susitna River. The site is located at 1042 m asl (altimeter: 3420 feet) and is about 30 m above the lake. This lake is the largest lake within a 7 km radius and spans a drainage divide between Devil Creek to the northwest and Warren Creek to the southeast. West of the site, an outlet stream drains the lake at its northwestern end. The confluence of this outlet stream with Devil Creek is northwest of the site, about 229 m lower in elevation. The view from the site is panoramic with the lake and surrounding terrain for at least 2 km entirely visible. Vegetation on the site is composed of mosses, lichens, and grasses on thin humic soils over bedrock and glacial drift. Willow, blueberry, bearberry, lowbush cranberry, and crowberry also occur frequently in the surrounding area. Exposed soil, bedrock, and glacial drift are found on and surrounding the crest of the ridge on which the site is located.

Testing:

One chalcedony biface fragment (UA81-269-48; Figure D.380f) was collected by a nonarcheologist project member; its exact provenience is unknown. The site is comprised of a surface lithic scatter on deflation exposures of the ridge crest, and subsurface lithics from a 40 x 40 cm test (test pit 1) (Figure D.144; Table D.193). The surficial material included 2 argillite flakes, 21 black basalt flakes, 3 gray

chert flakes, 1 rhyolite flake, and 1 chalcedony biface fragment (UA81-269-48). Test pit 1, excavated at the highest point on the ridge, revealed a total of 32 artifacts of varying lithic types. Six black basalt flakes were found between 0-5 cmbs; 10 black basalt and 1 black chert flakes were found between 5-10 cmbs. Six black basalt and 3 black chert flakes were found between 10-15 cmbs; 1 black basalt flake, 1 black basalt biface fragment (UA81-269-43), and 2 gray chert flakes were found between 15-20 cmbs. Two black basalt flakes were found between 20-25 cmbs. These lithics were present in four stratigraphic units from 0-25 cmbs, composed of a humic and organic mat near the surface, a dark red brown humic deposit, a red brown silt, and a reddish yellow brown sandy silt with small gravels.

A grid shovel testing program was implemented to locate subsurface material and to assist in determining the areal extent of TLM 110. Fifty-two grid shovel tests were excavated during this program. Two argillite flakes and one chert flake were recovered in three of these shovel tests. Observed site size based on the distribution of artifacts is 52 square meters (Table D.2).

Table D.193.

Artifact Summary, TLM 110

Provenience	Description
<u>Lithic Material</u>	
Surface:	2 Argillite flakes 21 Basalt flakes 3 Chert flakes 1 Rhyolite flake 1 Chalcedony biface fragment (UA81-269-48)
Subsurface:	
Test pit 1	25 Basalt flakes 6 Chert flakes 1 Basalt biface fragment (UA81-269-43)
Shovel test 1	1 Argillite flake
Shovel test 2	1 Chert flake
Shovel test 3	1 Argillite flake

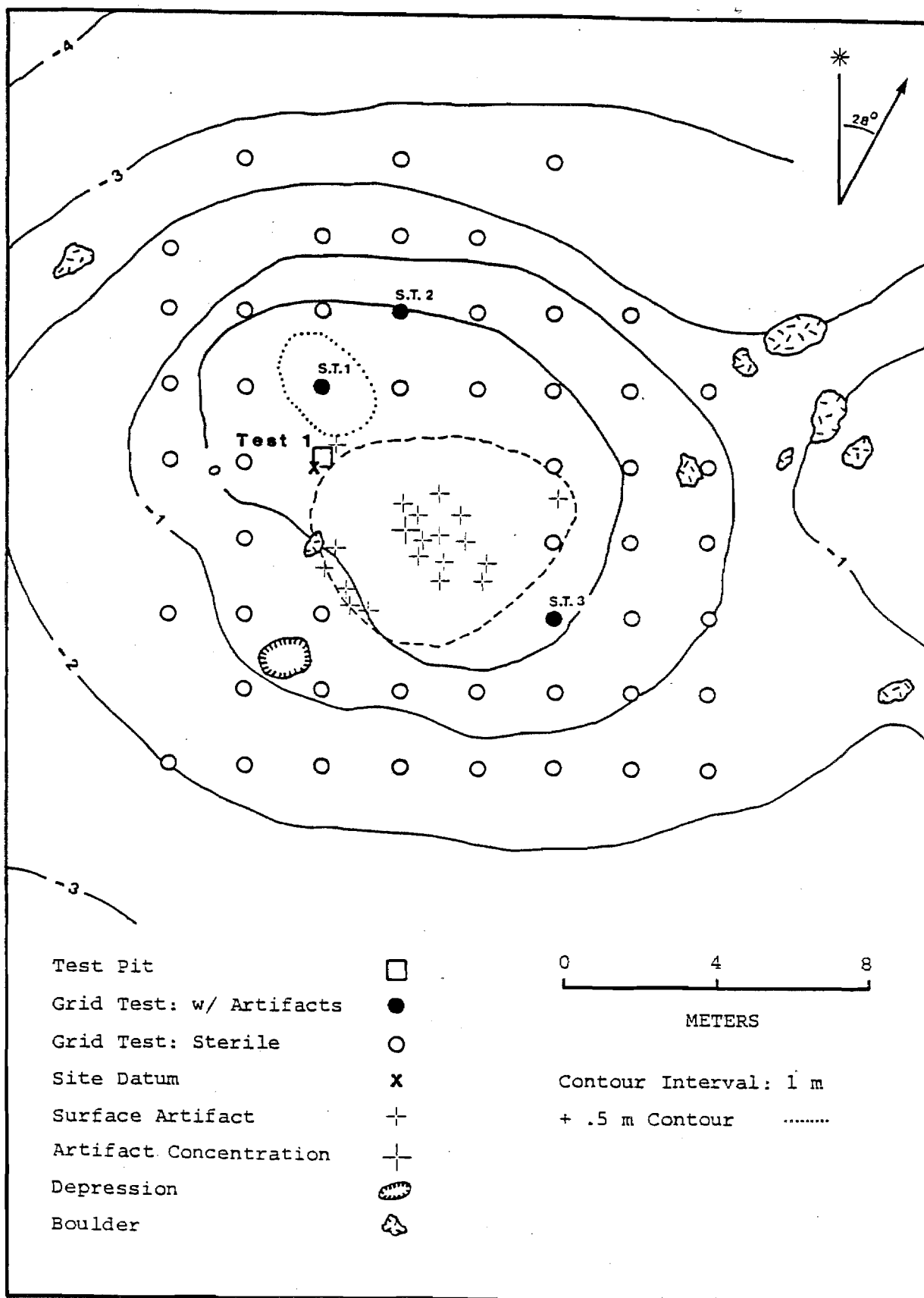


Figure D.144. Site Map, TLM 110

AHRS Number TLM 111

Area: Northwest of Tsusena Creek Mouth, Northwest Shore
of a Lake
Site Map: Figure D.145
Site Location Map: Figure E.62
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F
Setting:

The site is located at the northwestern end of a lake, locally known as Swimming Bear Lake. At 1019 m asl (altimeter: 3343 feet), the site is about 5 m above the lake on a 20 m wide point protruding into the lake. The site occupies the top of the southwest slope of the point about 30 m from the end. From the site the slope descends steeply to the muskeg margin of the lake. The site constitutes the highest point of relief within 100 m. The area in view is above timberline; therefore, extensive visibility, particularly across the lake and to the west, is afforded. Vegetation at the site consists of moss, grasses, lowbush cranberry, blueberry, crowberry, bearberry, and Labrador tea. The ground surface is fairly smooth, interrupted by many small tussocks and ground squirrel holes.

Testing:

The site consists of a roughly rectangular depression 1.3 x 1.5 m and 45 cm in depth as measured from the highest (northeast) wall. The depression is moss covered. The walls slope inward, most steeply from the northwest, northeast, and southeast. The southwest wall appears to be slightly eroding downslope. No berm circumscribing the depression is visible. A test pit (test pit 1) was dug about 1 m from the northeast wall, which yielded no cultural material. Eleven survey shovel tests were excavated; six shovel tests were dug within ca. 1 m of the depression, and one shovel test was dug in the floor of the depression. All shovel tests, as well as the test pit, showed a shallow sand, silt, and gravel deposition over drift. One of the shovel tests, on the

southern edge of the feature, revealed a gravel unit overlying the depositional and drift units, indicating the addition of fill from the excavated depression to the surrounding sediments. Four additional shovel tests were dug at approximately 10 m intervals along the top of the point. All were sterile. A grid shovel testing program was undertaken to locate subsurface artifacts and to provide an estimate of site size. Fourteen shovel tests were excavated and none produced cultural material.

The absence of artifacts at the site and the presence of bear excavations in the surrounding area make it difficult to determine whether the depression is cultural in origin. It is possible that this site does not represent a human occupation but represents an old bear excavation which has subsequently overgrown with upland tundra vegetation. Observed site size based on the size of the depression is 4 square meters (Table D.2).

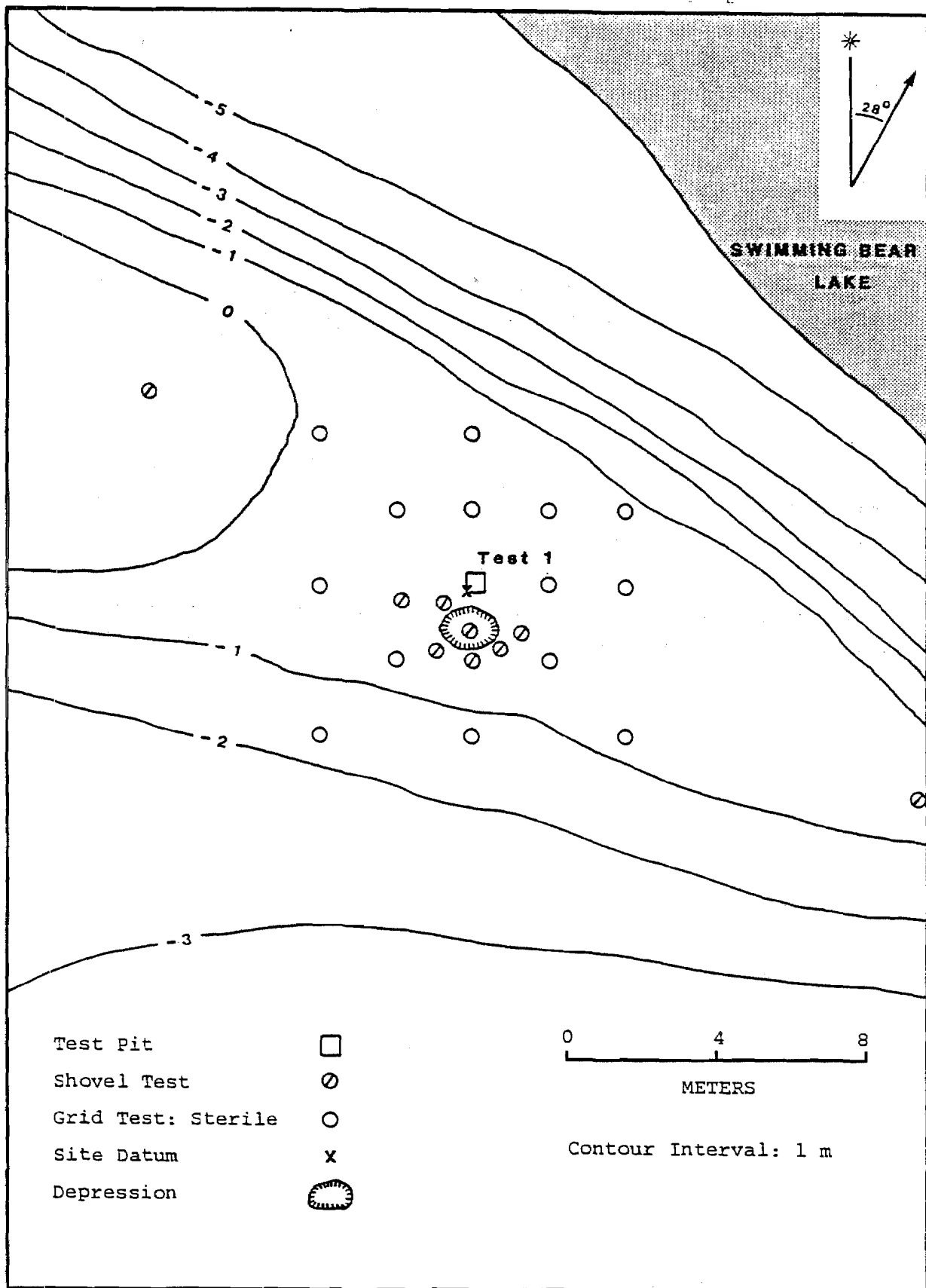


Figure D.145. Site Map, TLM 111

AHRS Number TLM 112

Area: Northwest of Tsusena Creek Mouth
Site Map: Figure D.146
Site Location Map: Figure E.62
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

This site is an irregular circular ring of stones located on a ridge overlooking Devil Creek and a major unnamed creek, northeast of the confluence of Devil Creek and the Susitna River, and north of a lake, locally known as Swimming Bear Lake. This ridge is oriented east-west at an elevation of ca. 1006 m asl (3300 feet). The site is within a low saddle on the ridge, about 200 m long, at the northwestern extent of a series of ridges and knolls north and east of Swimming Bear Lake, and commands views to the north of glacial valleys occupied by the unnamed creek and Devil Creek. The confluence of these southwesterly draining creeks is visible northwest of the site. A small marshy pond borders the site on the southwest side of the saddle. The slope descends gradually to the north and toward the unnamed creek to the east and west, making access to this creek and its confluence with Devil Creek, 600 m below the site, relatively easy. Views to the south and southeast are limited to about 400 m by higher ridges and uplands. Vegetation at the site is sparse, consisting of a thin moss and lichen mat, with scattered low brush and grasses in slightly less well drained areas. Large sections of the ridge at the site are deflated. Surrounding vegetation is much the same, with low brush occurring along drainage margins and in low-lying areas.

Testing:

An irregular circular ring of stones was the only cultural feature observed at the site. A total of 30 stones forming the "ring" were mapped. The stones range in size from small cobbles to small boulders.

These stones were only partially embedded in the surrounding soil, as opposed to other stones of this size that were deeply embedded or buried in the surrounding soil. No surface artifacts were observed, nor was any cultural material found in a 40 x 40 cm test (test pit 1) excavated 1.5 m west of the stone feature (Figure D.146). Estimated site size based on the distribution of artifacts is 15 square meters (Table D.2).

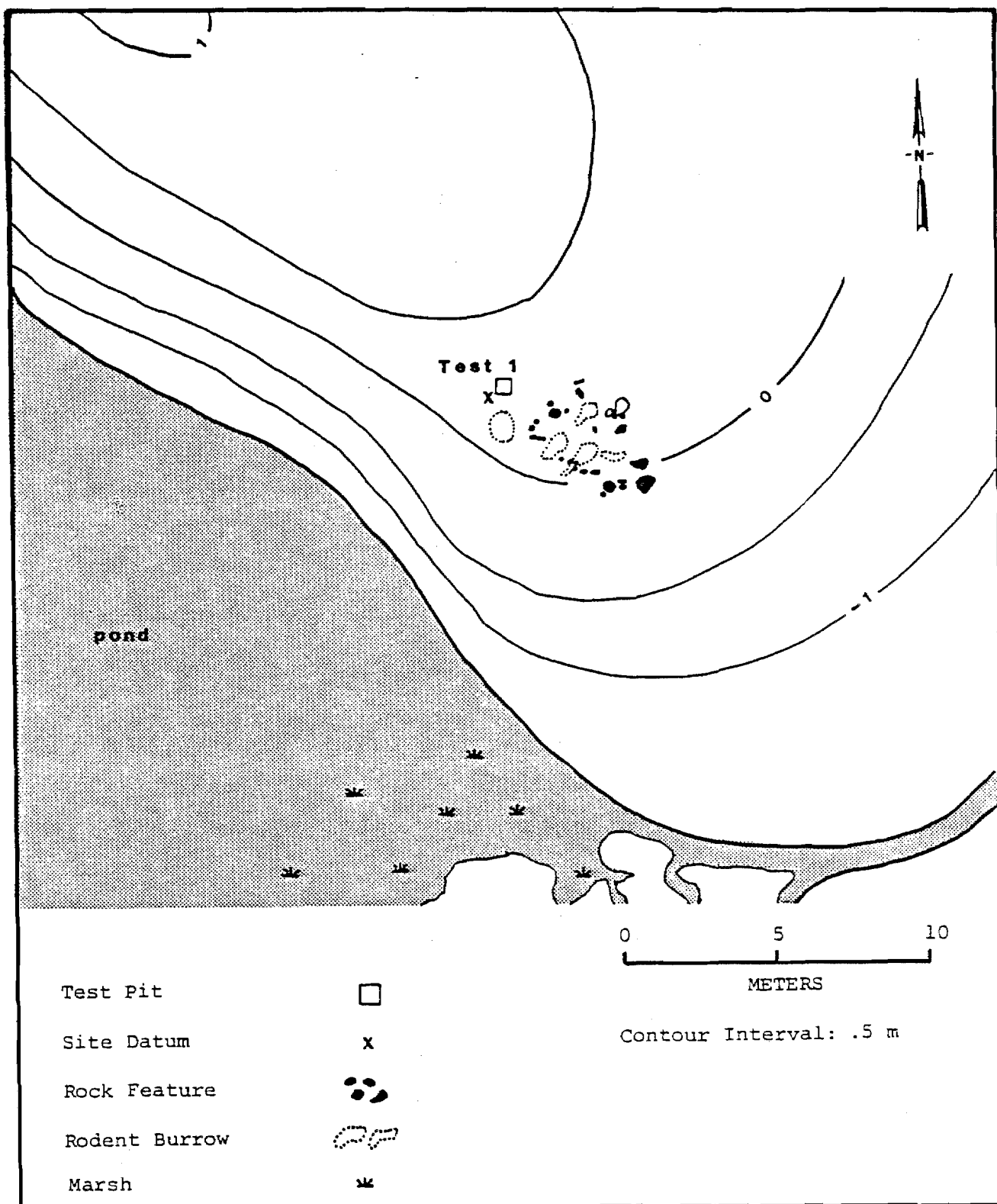


Figure D.146. Site Map, TLM 112

AHRS Number TLM 113; Accession Number UA81-272

Area: North of Devil Creek Mouth
Site Map: Figure D.147
Site Location Map: Figure E.60
USGS Map: Talkeetna Mts. D-5, Figure E.1
Site Location: Appendix F

Setting:

TLM 113 is located along a southeast-facing bluff at 754 m asl (altimeter: 2475 feet), northwest of Devil Creek. The bluff is the edge of a level terrace about 250 m wide, and about 30 m higher than Devil Creek. It is oriented with the creek in a northeast-southwest direction, and is dissected into shallow lobes. The bluff edge, on which the site is found, is a narrow natural gravel exposure 10 (east-west) x 200 m (northeast-southwest). Adjacent to this exposure is the well-vegetated, level terrace. To the north, the nearest higher ground is a low, irregular kame 5-10 m higher than the site. From the site, a panoramic view of the Devil Creek drainage and associated lower terraces to the east, southeast, and south, and the uplands gently rising behind is possible. Beyond the terrace to the west and north similar gently rolling uplands can be seen. The site is near the tree line for spruce, which allows for considerable visibility. Occasional spruce occur in the area, and the vegetation is predominantly a low shrub tundra with dwarf birch, blueberry, mosses, lichens, and willow. Vegetation is generally continuous except for deflated areas.

Testing:

The site consists of four chipped stone artifacts found within the gravel exposure along its 180 m length (Figure D.147). At the southwestern end of the exposure, a white argillite stemmed point (UA81-272-1; Figure D.380g) and a gray rhyolite biface (UA81-272-2; Figure D.380h) were found. Northeast of datum a white argillite flake and a black basalt modified flake (backed flake with retouch)

(UA81-272-4) were found and collected. Only the gray rhyolite biface (UA81-272-2) is depicted on the site map. No other surface artifacts were noted (Table D.194). Test pit 1, located at datum in soil adjacent to the gravel exposure, revealed a well-developed sequence of tephra and soils to a depth of 30 cm, but no cultural materials were recovered.

A grid shovel testing program was undertaken to locate subsurface artifacts and to provide a measure of site size and the distribution of cultural materials. Sixteen grid shovel tests were excavated during this program, none of which contained cultural remains. Eleven additional shovel tests were spaced along the bluff edge, within 10 m of the gravel exposure, also with negative results. Observed site size based on the distribution of artifacts is 5 square meters (Table D.2).

Table D.194.

Artifact Summary, TLM 113

Provenience

Description

Lithic Material

Surface:

- 1 Argillite flake
- 1 Basalt modified flake (UA81-272-4)
- 1 Rhyolite biface (UA81-272-2)
- 1 Argillite stemmed point (UA81-272-1)

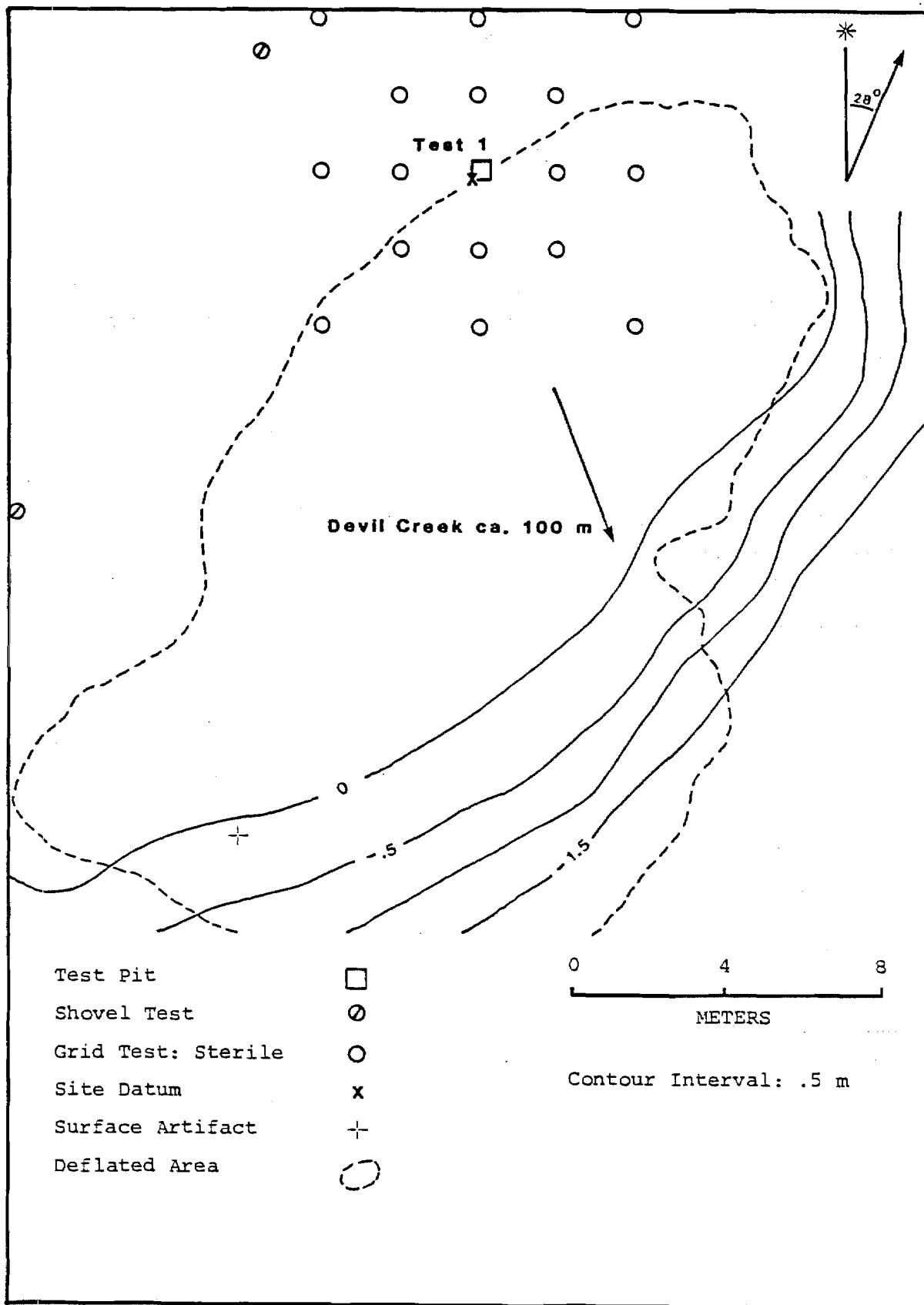


Figure D.147. Site Map, TLM 113

AHRS Number TLM 114; Accession Numbers UA81-273, UA84-111

Area: North of Devil Creek Mouth
Site Map: Figure D.148
Site Location Map: Figure E.60
USGS Map: Talkeetna Mts. D-5, Figure E.1
Site Location: Appendix F

Setting:

This site is located on the northeastern end of a north-south oriented terrace overlooking Devil Creek, due north of the confluence of Devil Creek with the Susitna River. Elevation at the site is 768 m asl (altimeter: 2520 feet) and is approximately 80 m above Devil Creek, which is the major drainage visible from the site. Devil Creek becomes constricted by downcutting into the valley floor just west and south of the site. Access to the creek is relatively easy by way of a minor drainage feeding into the creek east of the site. This drainage also defines the eastern and southern boundaries of the terrace. The site commands a view of Devil Creek and its valley to the east, north, and northwest. Visibility is limited to the west and south by the terrace the site is on. Vegetation at the site consists of scattered dwarf birch, low bush berries, Labrador tea, scattered grasses, and a fairly well developed moss and lichen mat. The area surrounding the site is at the upper limits of tree line in this region and spruce occurs sporadically at this elevation. Mosses dominate less well drained areas, which occupy much of the surrounding terrain.

Testing:

The site consists of a surface lithic scatter found in one of three deflation exposures located within a 20 meter area, and one isolated surface flake (Figure D.148). Each exposure is no greater than 2 m in diameter. A series of transects were surveyed at 2 m intervals across these deflated areas. Cultural remains recovered from these exposures included 13 white quartzite flakes, collected just north of the datum;

and one white quartzite flake, collected approximately 20 m northwest of the datum (Table D.195).

A 40 x 40 cm test (test pit 1) was excavated 1 m south of the lithic scatter, but no subsurface cultural material was found. A grid shovel testing program was implemented to locate subsurface material and to assist in determining the areal extent of TLM 114. Thirty-three grid shovel tests were excavated during this program. All were sterile. Three additional shovel tests placed within a 15 m radius of the scatter were also sterile. Observed site size based on the distribution of artifacts is 17 square meters (Table D.2).

Table D.195.

Artifact Summary, TLM 114

Provenience

Description

Lithic Material

Surface:

14 Quartzite flakes

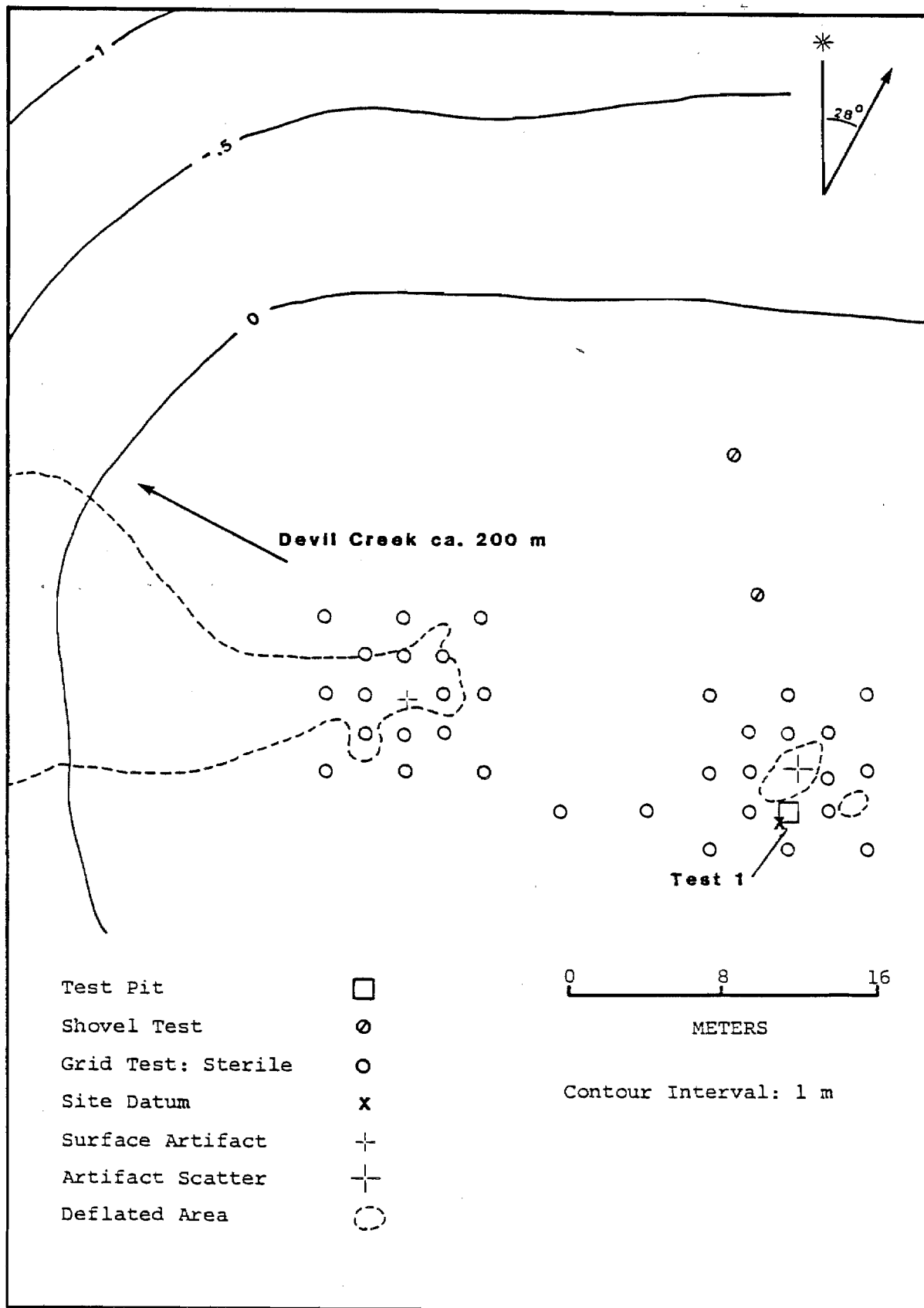


Figure D.148. Site Map, TLM 114

AHRS Number TLM 115; Accession Number UA82-95

Area: Northwest of Kosina Creek Mouth
Site Map: Figure D.149
Survey Locale 121: Figure E.192
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located at an elevation of 600 m asl (altimeter: 1968 feet) on the northern slope of the Susitna River canyon northwest of the mouth of Kosina Creek. It is situated upon a relatively flat bench on a north-south trending, narrow ridge sloping down the canyon wall and perpendicular to the Susitna River. The eastern edge of the ridge is steep (ca. 20 degrees) and formed by a small tributary drainage. The ridge slopes more gradually to the west, and forms the eastern edge of a relatively gentle notch in the canyon wall. The site is located on the edge of the southernmost flat bench of the ridge, before it drops sharply toward the Susitna River and measures approximately 20 (east-west) x 10 m (north-south). Apart from the moderately dense spruce, birch, and cottonwood forest which surrounds the site and neighboring terrain, the bench provides a point of high relief affording a good view of surrounding countryside. The Susitna River is visible to the south and east, and is accessible from the site. To the southeast, Kosina Creek and the sand bar in front of it can be seen. Thick vegetation obstructs the view to the north, east, and west.

Testing:

TLM 115 was located during survey testing when a basalt lanceolate point (UA82-95-1; Figure D.380i) was found in a shovel test, located toward the southern bench margin. Five subsequent shovel tests excavated at that time contained no artifactual material. The initial shovel test was expanded into a 40 x 40 cm test pit (test pit 1), but contained no additional artifactual material. The point was recorded as being

stratigraphically positioned within the Oshetna tephra toward the contact with an underlying reddish brown silty sandy matrix with pebbles.

Additional testing at the site included grid shovel testing and systematic testing. This testing program was implemented in order to assess site size as well as the content and stratigraphic position of the cultural component(s). Grid shovel testing included the excavation of 24 shovel tests. All of the shovel tests were negative. A single 1 x 1 m test square (N93/E100) was placed east of, and adjacent to, test pit 1 on the southern edge of the bench, before it drops sharply toward the Susitna River. Placement of the square adjacent to the test pit was thought to hold the best potential for locating additional artifactual material.

Discussion:

With the exception of the basalt lanceolate point, no artifactual material was recovered from the site. A discussion of the stratigraphic sequence which follows may be useful for making evaluations regarding the vertical position of the projectile point (Table D.197 and D.198).

Stratigraphy at TLM 115 included a series of depositional events similar to other sites in the project area. See Figure D.150 for an illustration of a generalized profile of the test square and Table D.196 for a detailed description of the soil/sediment units. The depositional events at the site include a basal level of glacial material consisting of coarse sand with pebbles and cobbles (unit 6). This unit is overlain by a fine silty sandy matrix with some pebbles (unit 5). Unit 5 may also be glacial in origin. The next three units in the sequence represent at least three episodes of volcanic tephra deposition. The tephra have the designations of Oshetna (unit 4), Watana (unit 3), and Devil (unit 2). The surface of the square was covered with a very thin organic layer (unit 1). Distinctions between the various units were based on the variables of color, texture and stratigraphic position.

Distinct color horizonation in the profile may also be related to soil-forming processes.

While the test square was excavated to a depth of 30-35 cm below surface, only the upper 6-14 cm represented the tephra sequence and organic layer. The boundaries between tephras varied from abrupt to diffuse, and both the Devil and Oshetna tephras formed discontinuous units. In places where the Oshetna tephra was absent, the boundary between the Watana tephra and the underlying silty matrix (unit 3/5) could only be defined on the basis of texture with the latter containing some sand and pebbles. While a few small flecks of charcoal were observed within the Oshetna tephra there was no evidence for the formation of a paleosol on the Oshetna surface as is common at other sites.

Evaluation:

The lanceolate point recovered during survey testing remains the only artifact found at the site. The point was recorded as lying within the Oshetna tephra. The Oshetna tephra unit in the portion of the test square directly adjacent to the test pit was not clearly defined indicating that the Oshetna tephra may have diffuse boundaries. Systematic testing was therefore unable to verify the stratigraphic context of the point or recover additional artifactual material bearing upon the cultural horizon with which the point is associated. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

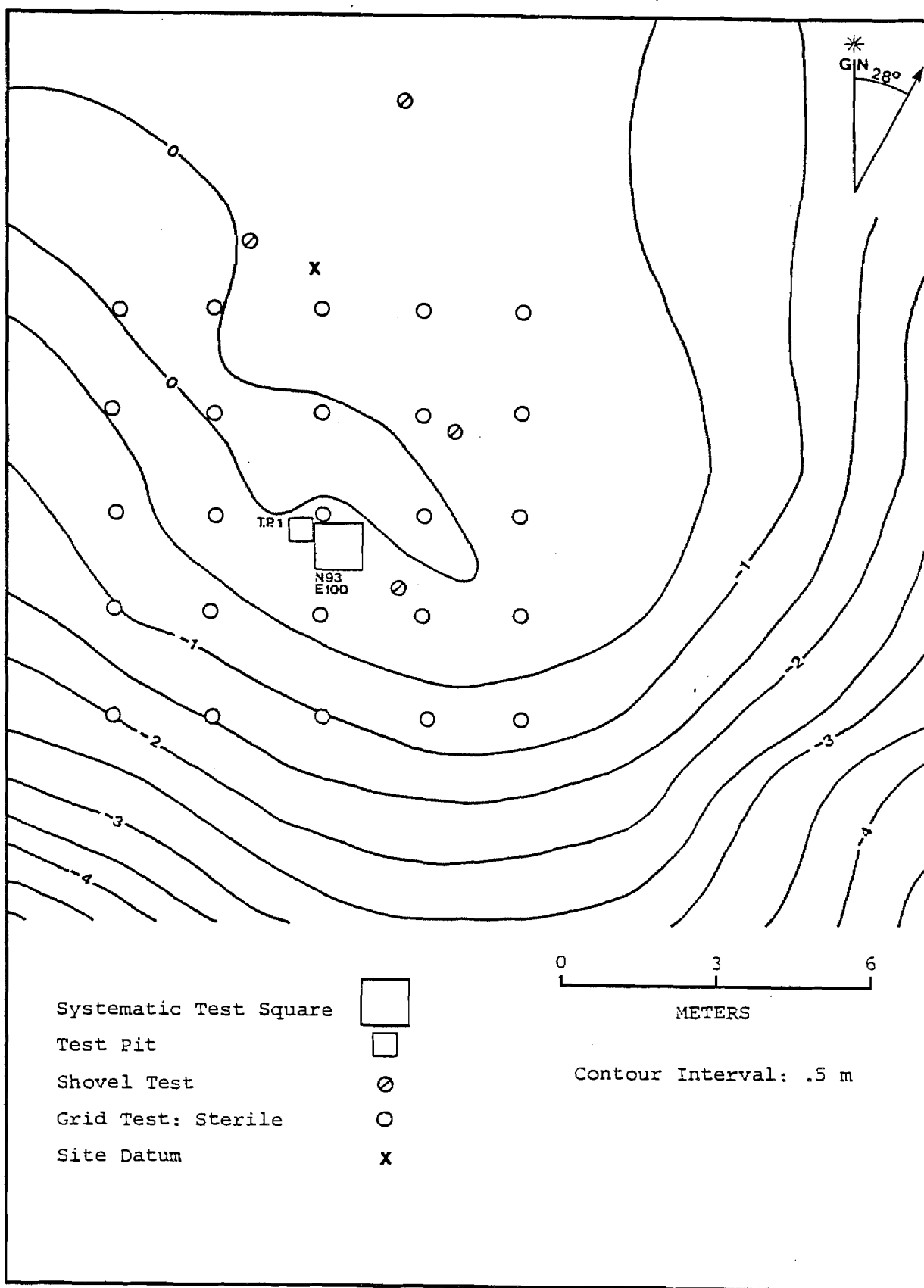


Figure D.149. Site Map, TLM 115

DEPTH (cm)

0

5

10

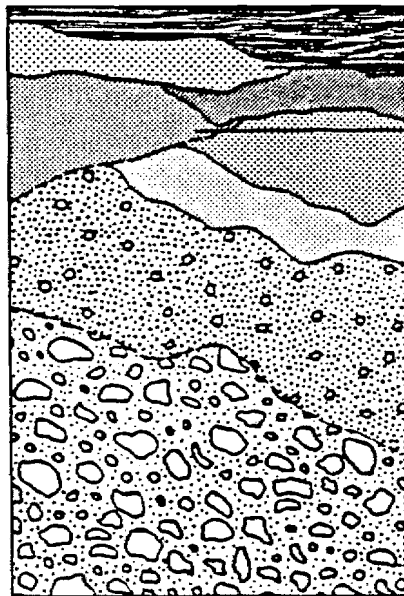
15

20

25

30

PROFILE



UNIT

1

2

3a

3c

3b

4 - CULTURAL

5

6

Figure D.150. Composite Profile, TLM 115

Table D.196.

Soil/Sediment Description for Composite Profile, TLM 115

Unit	Description
1	Surface organic layer consisting of plant material and roots mixed with fine silt and partially decomposed plant material; black (5YR 2.5/1). Thickness varies from 1-5 cm although usually 2 cm. Lower contact with unit 2 generally distinct. Unit had some disturbance due to earlier testing.
2	Very fine silt-sized particles with some roots; gray (5YR 5/1). Thickness varies from 1-4 cm. Lower contact varies from sharp to clear and wavy. Tephra (Devil); eluvial A horizon. Discontinuous, frequently appearing as pockets on profile. Dries to a fine powder. Small charcoal flecks at upper extent.
3a	Very fine silt-sized particles with some granular structure; strong brown (7.5YR 4/6). Thickness varies from 1-4 cm. Upper contact of unit sharp; lower contact irregular and diffuse. Discontinuous appearing at times in patches in test square profiles. Tephra (Watana); zone of iron accumulation. Where present underlain by unit 3b.

Table D.196. (Continued)

Unit	Description
3b	Very fine silt-sized particles; light yellowish brown (10YR 6/4). Thickness varies from 1-6 cm. Contact sharp when lower boundary occurs with unit 4. Contact with unit 5 clear and based on variation in texture as opposed to color. Tephra (Watana); B horizon. In areas this unit is mixed with units 4 and 5.
3c	Very fine silt-sized particles; red (2.5YR 4/8). Varies in thickness from 1-5 cm. Both upper and lower contacts clear. Upper extent of the Watana tephra; oxidized B horizon. Identified in the west wall profile and in small pockets in the south wall. Unit lies at the same stratigraphic position as unit 3a although it varies significantly in color.
4	Very fine silt-sized particles; gray (5YR 5/1). Thickness varies from 1-3 cm. Contacts with the upper and lower units vary from clear to gradual. Tephra (Oshetna). Discontinuous and mixed in areas with unit 3b and unit 5. Best defined in the NE position of the test square. Rare charcoal flecks observed.

Table D.196. (Continued)

Unit	Description
5	Fine silty sand with some gravels; dark yellowish brown (10YR 4/6). Thickness varies from 5-10 cm. Upper contact clear and lower contact gradual. Continuous unit.
6	Coarse sand with pebbles and cobbles; olive gray (5YR 4/2). Glacial material. Subangular to rounded cobbles usually 4-8 cm but ranging up to 24 cm in diameter. Some frost-fracturing present. Excavation into this unit determined limit of excavation.

Table D.197.

Artifact Summary, TLM 115

Tool

1	Lanceolate point 1 Basalt (UA82-95-1)
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Table D.198.

Artifact Summary by Stratigraphic Unit, TLM 115

Unit

Description

4	1 Basalt lanceolate point (UA82-95-1)
Oshetna tephra (shovel test)	

AHRS Number TLM 116

Area: Southeast of Tsusena Lake
Site Map: Figure D.151
Site Location Map: Figure E.63
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site, a rock cairn, is situated in the highest aspect of a hill at an elevation of ca. 840 m asl (2800 feet). The hill is a feature of locally high relief southeast of the eastern portion of a lake. The upper portion of this northwest-southeast oriented hill is 75 x 35 m. The surface of the hill is composed of exposed granite bedrock and boulders. The 1.3 m high cairn rests on an area of exposed bedrock. A panoramic view is available from the site with the greatest depth of view to the south and west. The glacial terrain bordering the Susitna River is visible to the south all the way to the Talkeetna Mountains. Tsusena Butte and the lake are visible to the northwest. Higher terrain to the east obstructs a view up the drainage of Deadman Creek. A stream draining a small pond south of the site flows west of the site.

The cairn is composed of approximately 40 angular and flat pieces of local granite. The base of the cairn is approximately square, being ca. 1 m long on each side oriented parallel to cardinal directions. The rocks have been stacked into a pyramid arrangement with an open framework. The rocks used in construction are generally 50 cm long and there is no evidence of small stones being employed for chinking or leveling. The open framework construction allows all of the rock surfaces to be viewed. A 15 cm long piece of broken bone was the only object found in the cairn. Given the well-preserved nature of the bone in contrast to the lichen-covered surfaces of adjacent stones, the bone is likely to have been introduced into the cairn by falling down from the top before becoming lodged 75 cm above the base. The differential

lichen growth between the exterior and interior surfaces of the stones suggests that the structure has been standing for a period of time. Two similar cairns are known from the vicinity. One occurs on the summit of Tsusena Butte to the west-northwest but is not discernable from the site. The other cairn occurs on a ridge southeast of Deadman Lake.

Testing:

No additional cultural material was found in the vicinity of the cairn and no subsurface testing was attempted due to the rocky nature of the surface. The cairn was photographed, but the rocks of the cairn were not disturbed. The piece of mammal bone was withdrawn to be photographed and then returned to its original location. No collections were warranted. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

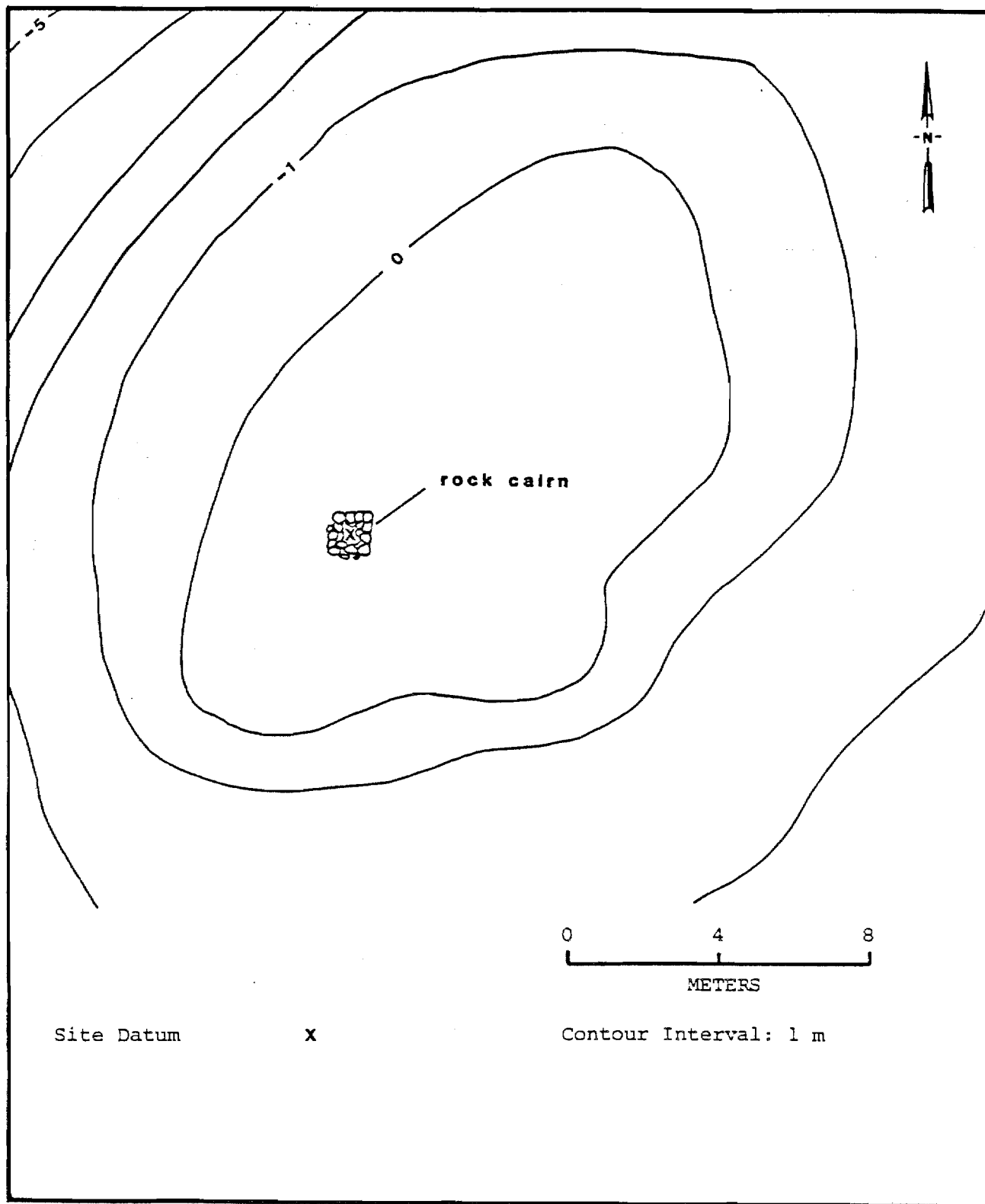


Figure D.151. Site Map, TLM 116

AHRS Number TLM 117; Accession Number UA81-275

Area: Southwest of Deadman Lake Outlet
Site Map: Figure D.152
Site Location Map: Figure E.58
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on a north-south oriented ridge which overlooks the confluence of Deadman Creek, flowing west-southwest, and one of its northern tributaries to the southeast. Situated on the northern quarter of the 100 m long ridge at an elevation of ca. 945 m asl (3100 feet), the site is west of the tributary which flows southward 25 m below the ridge. The ridge is one of several rolling, low ridges which border the north side of Deadman Creek and have been truncated by it. A panoramic view is possible from the ridge. To the south are the brush covered low-lying regions adjacent to the confluence and the gentle north-facing slopes beyond. The view westward is onto the east slopes of the ca. 1524 m asl (5000 feet) high mountains and the intervening hillocks which have been dissected by numerous drainage channels. North of the site is the tributary valley bordered by soliflucted slopes. Northeast, across the tributary, is the most prominent hill in the vicinity at an elevation of ca. 975 m asl (3200 feet) with HEA 180 located on the summit. Eastward there is a continuation of the rolling hills with TLM 098 (directly east of the tributary), TLM 099 (out of view, further east), and Deadman Mountain's southern ridge. Vegetation at the site consists of shrub birch, cranberry, and bearberry. The surrounding terrain is similarly vegetated with higher brush growing adjacent to the confluence.

Testing:

A surface lithic scatter, 25 (north-south) x 8 m (east-west), was found on the northern half of the ridge, 1 m below the centrally located high

point of the ridge (Figure D.152). Only four flakes were located during survey testing, being equally divided between black basalt and gray chert (Table D.199). Test pit 1, located 2 m southwest of the northern flakes, failed to reveal any cultural material below the surface. No tephras were present in the test. Estimated site size based on the distribution of artifacts is 200 square meters (Table D.2).

Table D.199.

Artifact Summary, TLM 117

Provenience	Description
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Lithic Material

Surface:	1	Basalt flake
	1	Chert flake
	1	Basalt flake (uncollected)
	1	Chert flake (uncollected)

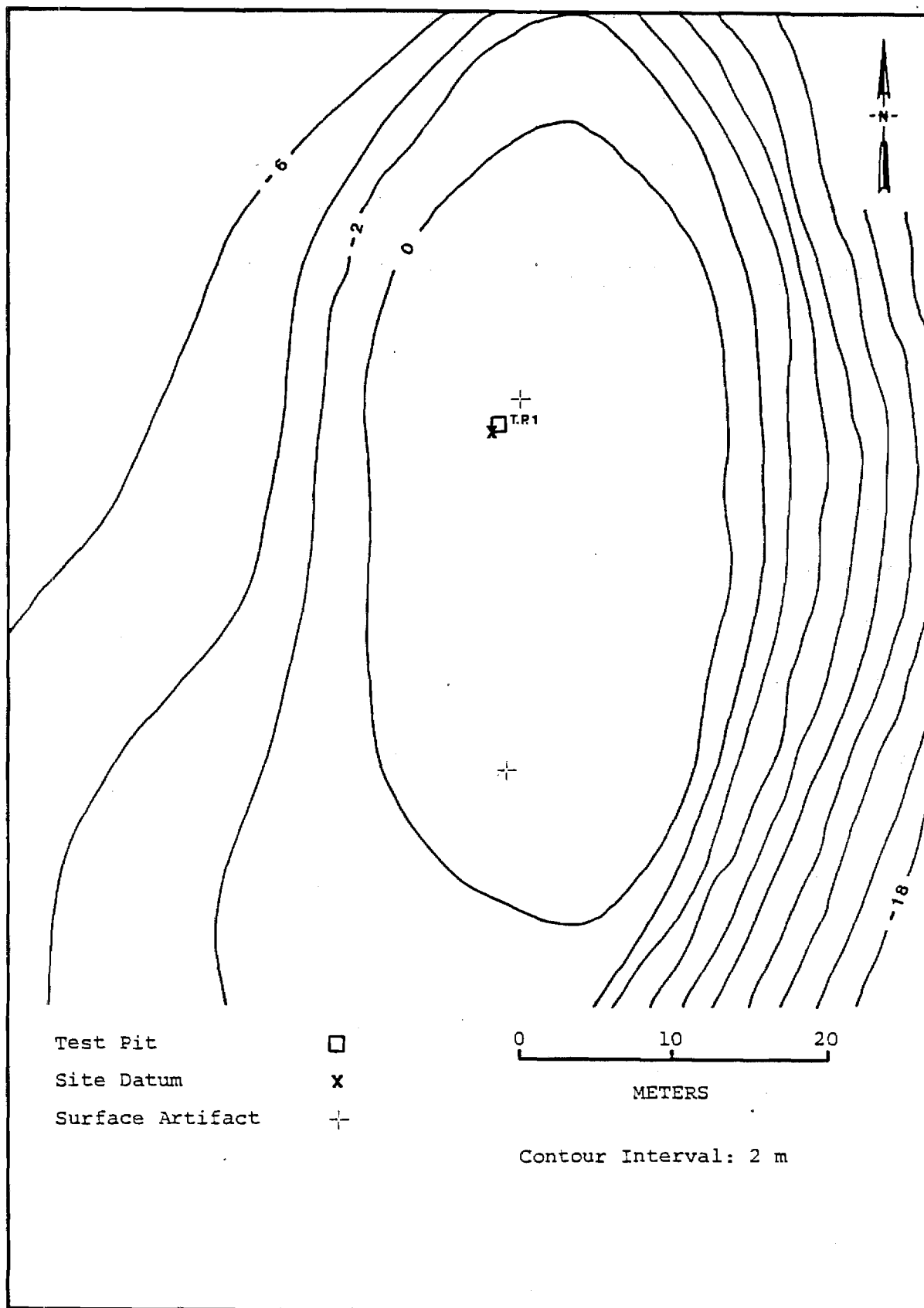


Figure D.152. Site Map, TLM 117

AHRS Number TLM 118; Accession Number UA82-58

Area: Unnamed Lake West of Devil Creek
Site Map: Figure D.153
Survey Locale 111: Figure E.181
USGS Map: Talkeetna Mts. D-5, Figure E.1
Site Location: Appendix F

Setting:

The site is located on top of an elongate, north-south oriented knoll (ca. 60 x 30 m), ca. 18 m above the southeast end of an unnamed 1 ha lake which is at an elevation of ca. 488 m asl (1600 feet). The site is southeast of the confluence of High Lake's outlet stream with Devil Creek. Devil Creek enters into the Susitna River to the south and is ca. 152 m lower in elevation than the site knoll. Two other knolls, ca. 6-12 m lower in elevation, are to the southwest. The view from the site is panoramic to the north, northeast, and northwest, encompassing the entire lake and the terrain ca. 1-3 km distant up to an elevation of ca. 701 m asl (2300 feet). To the east, west, and south the presence of trees obscures the view of a poorly drained ravine which is at lake elevation and lower. To the south-southwest the Susitna River valley is partially visible.

Vegetation in the low areas surrounding the site knoll consists of grasses, black spruce and paper birch forest with dwarf birch thickets. The surrounding uplands are closed black spruce forest. The knoll vegetation consists of a continuous moss and heath ground cover with large boulders and exposed bedrock apparent. Scattered birch and black spruce along with lowbush cranberry and dwarf birch are also present.

Testing:

No cultural material was found on the surface of this site; however, 5 small gray chert flakes, 3 thermally altered rocks, and charcoal were found in a shovel test which was placed on the upper central portion of

the knoll. A 40 x 40 cm test pit (test pit 1) was placed adjacent to the shovel test. Test pit 1 revealed 25 small gray-banded chert flakes, 1 rhyolite flake, 1 argillite bifacial tool fragment (UA82-58-27; Figure D.380j), and 4 thermally altered rocks (Table D.200). This material was located 6-10 cmbs within a thin lens of very fine dark brown matrix containing carbon extending to the contact with underlying tephra. Nine additional shovel tests placed on the knoll failed to reveal any other cultural material. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.200.

Artifact Summary, TLM 118

Provenience

Description

Lithic Material

Subsurface:

Shovel Test

- 5 Chert flakes
- 3 Thermally altered rocks

Test Pit 1

- 25 Chert flakes
- 1 Rhyolite flake
- 1 Argillite biface fragment (UA82-58-27)
- 4 Thermally altered rocks

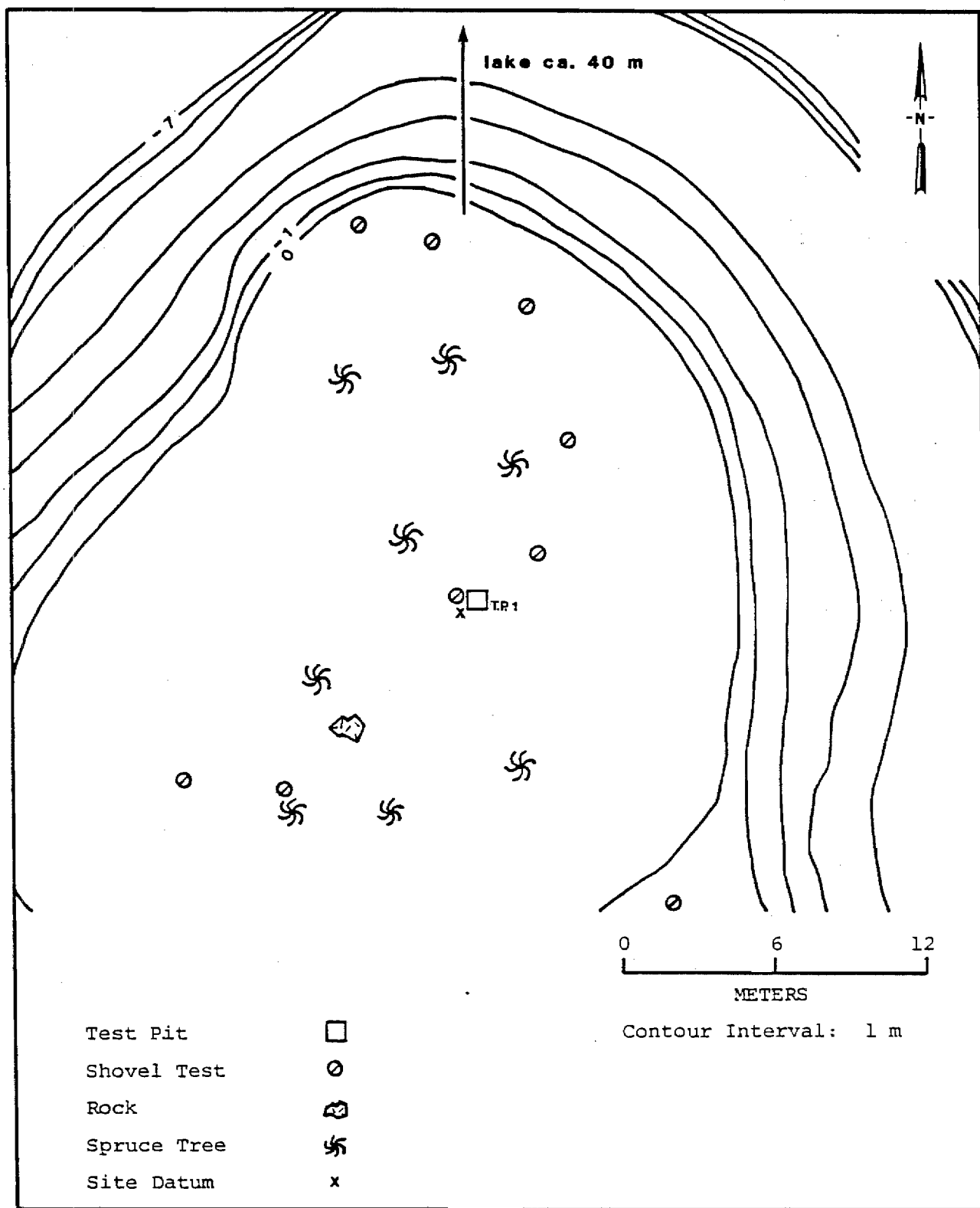


Figure D.153. Site Map, TLM 118

AHRS Number TLM 119; Accession Numbers UA82-59, UA84-240

Area: East of Watana Creek Mouth
Site Map: Figure D.154
Survey Locale 118: Figure E.189
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 119 is located on the central portion of a continuous ridge on the north side of the Susitna River canyon. The ridge, approximately 400 x 30-40 m, is oriented in a northwest-southeast direction roughly perpendicular to the river. It slopes gradually down from the upland plains bordering the Susitna River, steepening towards the river, and forms the steep (15 degree) western edge of a small stream canyon tributary to the Susitna River. The site, at 662 m asl (altimeter: 2172 feet), occupies a small level area near the center of the ridge where it begins to drop off sharply towards the river. The site is traversed by a well-worn game trail running along the crest of the ridge, and a large gravel exposure (ca. 20 x 12 m) lies on the eastern flank adjacent to the trail. Vegetation on the site includes scattered spruce, lowbush cranberry, dwarf birch, Labrador tea, sphagnum moss, and lichens. Vegetation cover is dense in areas other than the game trail or gravel exposure. Stands of birch with intermittent spruce occur on the eastern ridge slope, with dense spruce forest to the north, south, and west. Because of the dense surrounding woodlands, visibility from the site is limited to the east, where a commanding view of the creek drainage, surrounding uplands, and the Susitna River is available.

Testing:

Initial field survey located seven flakes on the surface of the site, five on the northwest edge of the gravel exposure and two on the game trail north of the exposure. A single flake was encountered west of the gravel exposure in a shovel test which was expanded into a 40 x 40 cm test pit (test pit 1). Another test pit (test pit 2) was placed approximately 16 m north of test pit 1, 2 m west of the location of the flakes found on the game trail but no artifactual material was recovered.

Grid shovel testing of TLM 119 involved placement of 58 grid shovel tests (four of which contained cultural material) to assist in determining site size, placement of test square N92/E100 to determine the stratigraphic position(s) of cultural materials, and recovery of additional artifacts from the gravel exposure. Figure D.154 shows the location of subsurface tests placed during field survey and systematic testing.

Discussion:

Twenty-four lithic artifacts were recovered from survey and systematic testing at TLM 119. Of these, 11 are from subsurface contexts, including the test square N92/E100, four grid shovel tests, and test pit 1. Table D.202 summarizes all materials located during testing, and Table D.203 gives the stratigraphic position of these artifacts.

Based on the subsurface testing from test square N92/E100, nine soil/sediment units were distinguished. These are depicted in Figure D.155 and described in Table D.201. Beneath the surface vegetation mat (unit 1) lies a layer of brown, somewhat peaty silt (unit 2). A relatively continuous Devil tephra (unit 3) underlies this silt. Artifacts are located in units 2 and 3 and at the contact between these units. A mottled layer of extremely fine, well-sorted Watana tephra (units 4a and 4b) lie below the Devil tephra, and is in turn underlain by a well-developed paleosol (unit 5) and Oshetna tephra layer (unit 6).

A reddish brown weathered sandy silt (unit 7a) underlies the Oshetna tephra, beneath which is unweathered, poorly-sorted, silty sand with cobbles (unit 7b). The sediments do not appear to have undergone severe cryoturbation at the site, but mixing and/or truncation of units has occurred along the game trail as a result of animal traffic.

All artifacts located in N92/E100 occur in units 2 and 3 and comprise a single occupational component most likely deposited after the Devil tephra. Artifacts located in shovel tests adjacent to the gravel exposure also occur in this stratigraphic position and are of the same raw material types. The 11 artifacts located on the gravel exposure cannot be assigned to this position with certainty, but since they are of the same raw material types represented in the subsurface component, they most likely eroded out of the same sedimentary unit. Five basalt flakes, located approximately 8 m north of the test square along the game trail and in shovel tests, are spatially separated from the assemblage adjacent to the gravel exposure, but occur in the same stratigraphic context and may be considered part of the same occupational component.

Four lithic raw material types consisting of basalt, chert, chalcedony, and argillite (in decreasing order of abundance) are represented in this component. Argillite, chert, and chalcedony are restricted to the southern portion of the site, near the test square and gravel exposure, and basalt occurs in the northern section as well as the southern part. Three artifacts show evidence of secondary modification: including one argillite biface fragment (UA84-240-13; Figure D.380k) and two modified flakes, one basalt (UA84-240-7) and one chalcedony (UA84-240-6). The remaining flakes are unmodified debitage from secondary and retouch stages of lithic reduction.

Evaluation:

TLM 119 is a discrete, single component site located in surface and subsurface contexts on the rim of a prominent ridge in the Susitna River canyon. While systematic testing at the site was limited, preliminary

results suggest the component may contain two spatially separate lithic scatters. The definable component is situated stratigraphically on the Devil tephra surface (unit 2/3 contact). The small size and relatively low diversity of artifacts at the site suggest that occupation was brief and probably limited to lithic tool manufacturing activities. Observed site size based on the distribution of artifacts is 44 square meters. (Table D.2).

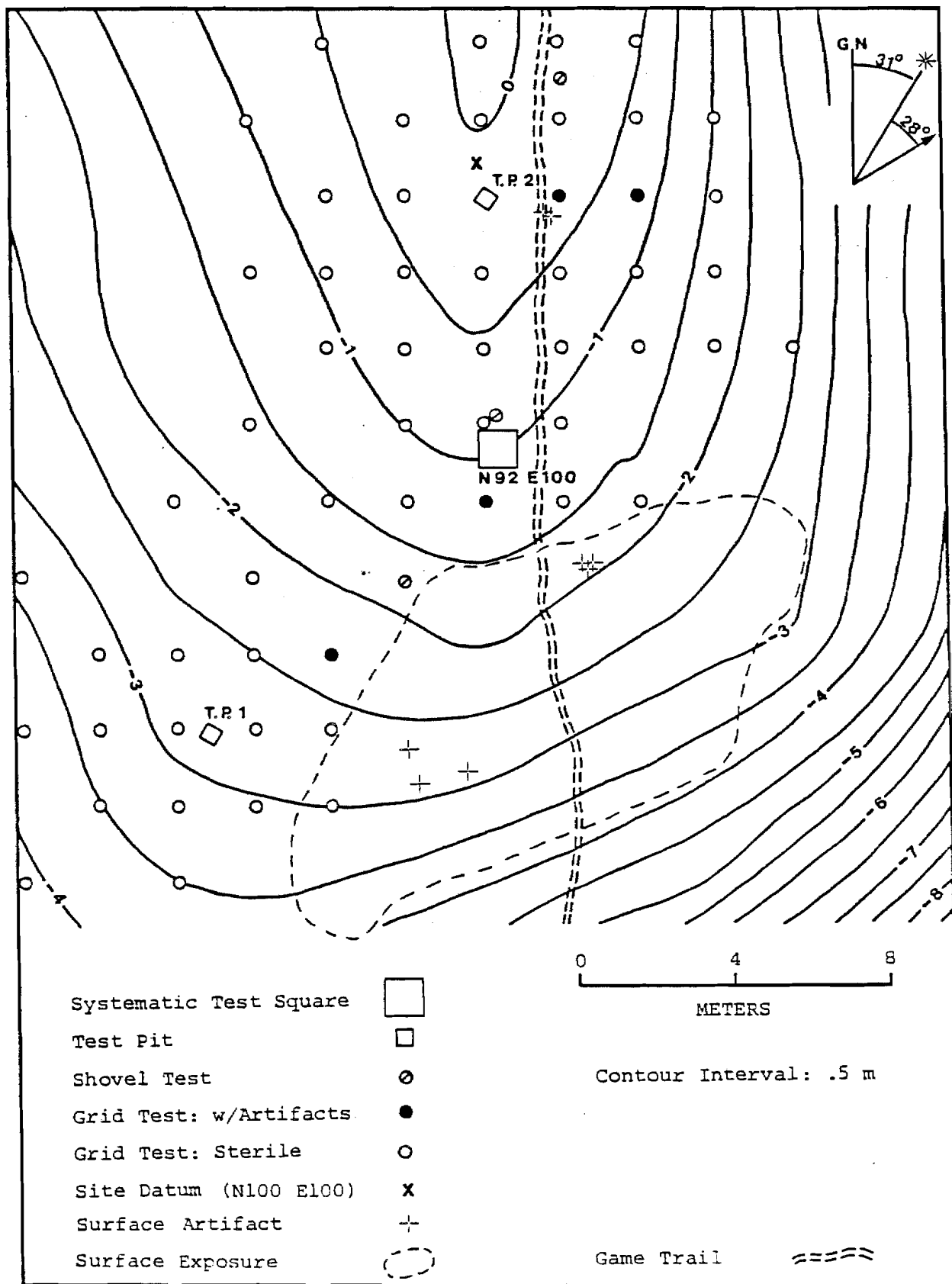


Figure D.154. Site Map, TLM 119

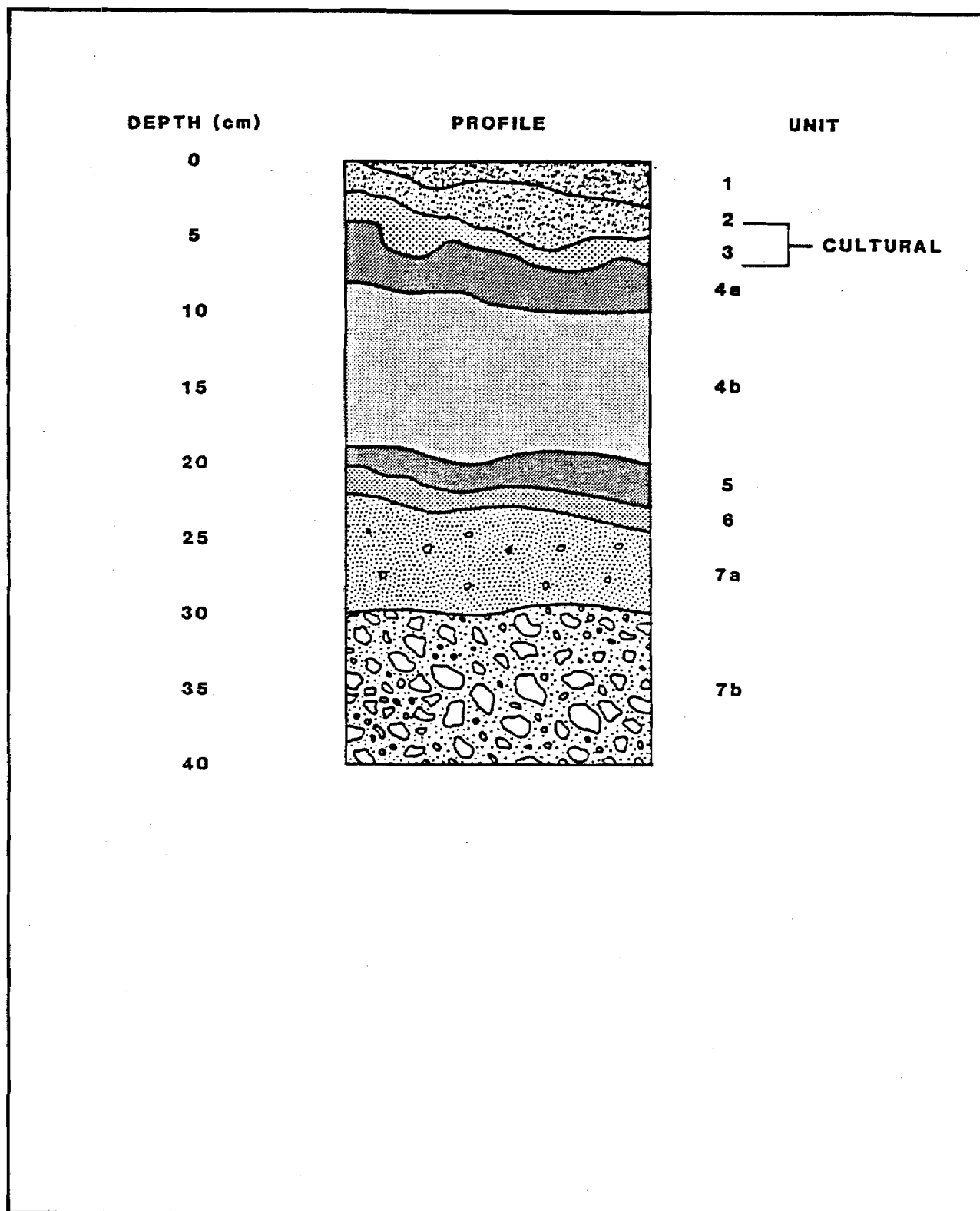


Figure D.155. Composite Profile, TLM 119

Table D.201.

Soil/Sediment Description for Composite Profile, TLM 119

Unit	Description
1	<p>Surface organic: roots, rootlets, organic debris, and small amount of silt; dark reddish brown (5YR 2.5/2). The finely divided humic layer is poorly developed. Thin and discontinuous, disappearing completely at game trail which runs through SE corner of test square. Thickness varies between 0 and 3 cm. Contact with underlying silt diffuse.</p>
2	<p>Slightly sandy silt somewhat peaty in texture; dark yellowish brown (10YR 4/4). Some organics present, as well as a few scattered pebbles. Thickness varies from 0.5 cm at the game trail to 6 cm, generally 2-5 cm. Generally continuous with abrupt, clear wavy lower contact. In vicinity of game trail, mixed with unit 4b. Artifacts are present at the contact between unit 2 and unit 3.</p>
3	<p>Very fine well-sorted silt; gray to gray brown (5YR 4/1). Varies in thickness from 0-7 cm, generally 1-4 cm. Devil tephra. In eastern part of square under game trail, may be mixed with units above and below or truncated, where present, contact with unit 4 below abrupt and wavy. Artifacts are present in this unit.</p>

Table D.201. (Continued)

Unit	Description
4a	Extremely fine, well-sorted silt; yellowish red (5YR 5/8). Discontinuous, occurring as patches in western portion of the square. Watana tephra. Upper contact abrupt and wavy; lower contact gradual but clear.
4b	Extremely fine, well-sorted silt; varies from light yellowish brown (2.5Y 6/4) to strong brown (7.5YR 5/8). Watana tephra. Continuous except in eastern end of square where it is truncated at the game trail, sometimes mixed with Devil tephra or silt and upwells in places. Thickness varies from 0-12 cm thick. Lower contact abrupt and wavy.
5	Sandy silt with coarse sand in places; medium brown (10YR 5/3) to slightly greenish brown. Paleosol. Surface oxidized or weathered, but not carbonized. Continuous; varying in thickness between less than one and 3 cm with a mode of 1 cm. Lower contact diffuse to mixed.
6	Silt with a few small scattered drift pebbles; grayish brown (10YR 5/2). Oshetna tephra. Often mixed and indistinguishable from unit 5. Discontinuous; varying in thickness from 0-2 cm. Lower contact abrupt and wavy.

Table D.201. (Continued)

Unit	Description
7a	Weathered sandy silt containing a few angular to subangular pebbles; dark yellowish brown (10YR 4/6). Weathered glacial drift. Relatively well sorted and continuous across squares. Thickness varies from 5-10 cm. Contact with unweathered drift below gradational.
7b	Unweathered, poorly sorted silty sand with abundant subangular to rounded cobbles up to 15 cm in diameter; olive brown (2.5Y 4/4). Glacial drift. Unit marks bottom of excavation.

Table D.202.

Artifact Summary, TLM 119

Tools

2	Modified flakes
	1 Basalt (UA84-240-7)
	1 Chalcedony (UA84-240-6)
1	Biface fragment
	1 Argillite (UA84-240-13)

3

Lithic Material

10	Basalt flakes
3	Chalcedony flakes
7	Chert flakes
1	Flake less than 1/8" (Basalt)

21

Table D.203.

Artifact Summary by Stratigraphic Unit, TLM 119

Unit	Description
Surface	6 Basalt flakes 1 Chalcedony flake 6 Chert flakes
2 Silt	4 Basalt flakes 1 Flake less than 1/8" (Basalt)
2/3 Contact between the silt and the Devil tephra	1 Chert flake 1 Basalt modified flake (UA84-240-7) 1 Argillite biface fragment (UA84-240-13)
3 Devil tephra	2 Chalcedony flakes 1 Chalcedony modified flake (UA84-240-6)

AHRS Number TLM 120; Accession Number UA82-61

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.156
Survey Locale 116: Figure D.186
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 120 is one of several sites on a system of knolls and low ridges which are oriented in a generally north-south direction and slope gradually northward toward the Susitna River. This ridge and knoll system is dissected by a series of unnamed creeks and drainages which flow north into the Susitna River and drain upland areas. The site is situated on a low-lying ovate knoll located between two unnamed creeks, one to the east and the other to the west. It is at an elevation of ca. 686 m asl (2250 feet), south of the Susitna River, and ca. 198 m higher than the river. The knoll is approximately 25 m in diameter at its level upper extent and is defined mainly by its northern exposure which slopes gradually over a distance of 30 m. The slope to the east, west, and south is more gradual.

The predominant view is to the north overlooking the Susitna River valley and the topography on the northern side of the river. The river itself is not visible. A north-south trending ridge ca. 400 m west of the site, on which TLM 121 and TLM 125 are located, is also visible from the site. Vegetation in the site vicinity is open black spruce forest and includes hummocky, poorly drained areas with mosses, willows, lowbush cranberry, blueberry, and grasses. Vegetation at the site consists of scattered spruce trees, low shrub, mosses, and lichens. Approximately 20% of the ground surface is exposed in the site area.

Testing:

The site is characterized by a surface scatter of basalt flakes 3 x 1.5 m in spatial extent (Table D.204). Ten of the 16 surface flakes were clustered within a 50 x 50 cm area in the central portion of the scatter. A 40 x 40 cm test pit (test pit 1) was excavated along the northeast edge of the scatter and subsurface basalt flakes were recovered 1-2 cmbs. The absence of the Devil tephra in the upper extent of test pit 1 makes the interpretation of the stratigraphic position of artifactual material problematic. Six additional shovel tests placed on the knoll and the knoll perimeter failed to reveal any additional subsurface material. Estimated site size based on the distribution of artifacts is 9 square meters (Table D.2).

Table D.204.

Artifact Summary, TLM 120

Provenience	Description
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Lithic Material

Surface:	16 Basalt flakes
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Subsurface:

Test pit 1	7 Basalt flakes
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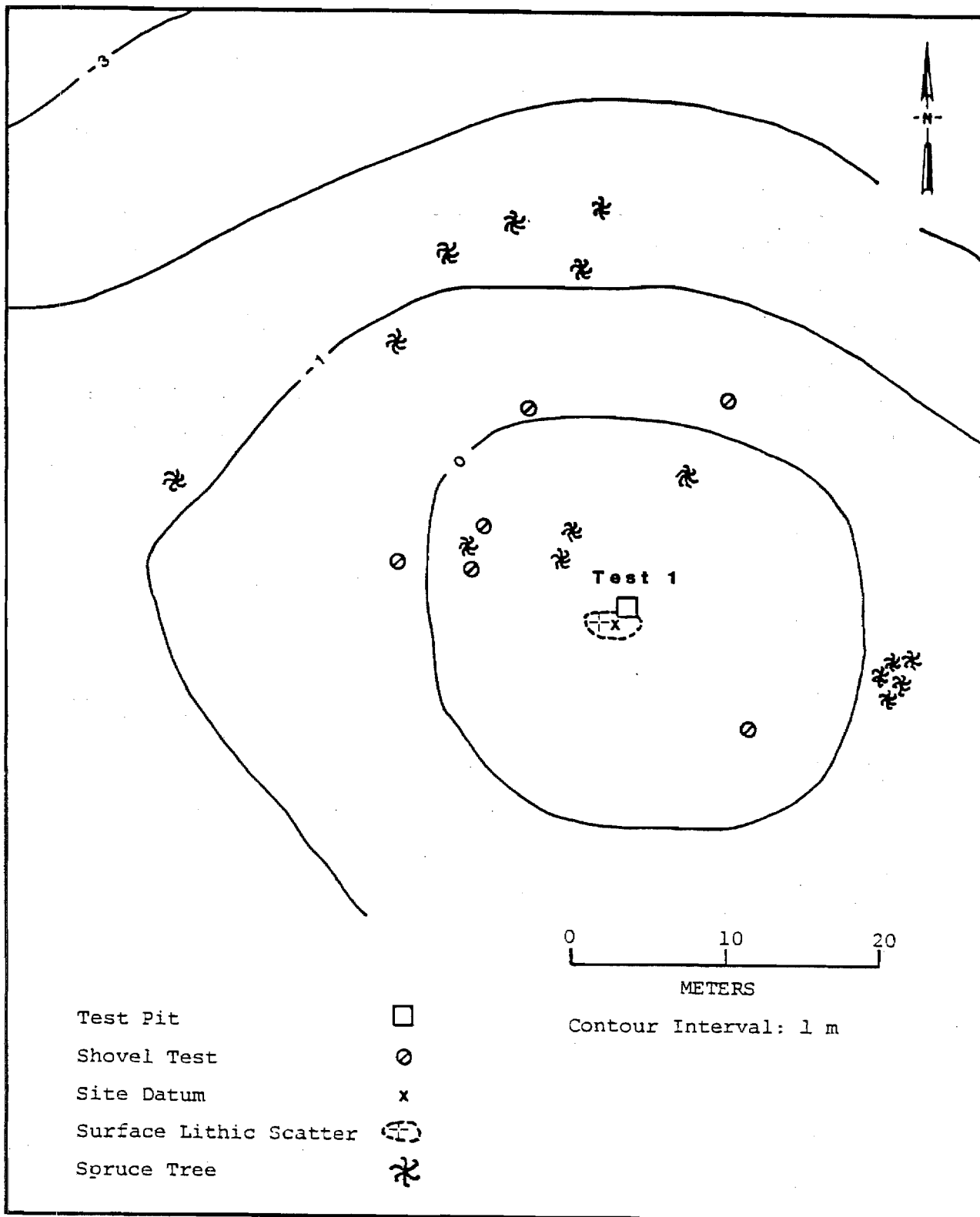


Figure D.156. Site Map, TLM 120

AHRS Number TLM 121; Accession Number UA82-60

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.157
Survey Locale 116: Figure E.186
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on a north-south oriented ridge south of the Susitna River and southeast of the mouth of Watana Creek. The site is situated at an elevation of ca. 686 m asl (2250 feet), on a flat bench, ca. 145 x 150 m, near the north edge of the ca. 400 m ridge. Drainages flow north to the Susitna River along both sides of the ridge. The site is situated 2 m east of the western edge of the bench, 50 m south of the northern edge, and ca. 175 m south of the ridge's northern terminus. The drainage immediately west of the site is small and the drainage on the east side of the ridge is a very shallow boggy area ca. 150 m distant. The view from the site overlooks the western drainage forested with black spruce. Two knolls are visible to the west. The knoll furthest west is ca. 30 m higher than the site. To the east the surface of the bench is highly visible for ca. 150 m because it is not forested. Northeast, beyond the northern edge of the bench, the northern bank of the Susitna River is visible, along with rising topography on the north side of the Susitna River. To the south, the bench ends abruptly 100 m from the site, where it meets a 5-degree slope. This slope rises 30 m to the rim of another bench that lies along the ridge. Another site (TLM 125) is situated 70 m south along this higher bench; however, only the edge of the bench is visible from the site. Site vegetation consists of a patch of white lichens 5 x 6 m in diameter. The site bench is covered with herbaceous and woody plants including lowbush cranberry, bearberry, Labrador tea, and dwarf birch. Along the perimeter of the bench are black spruce, which become crowded in the nearby drainages.

Testing:

The site contains subsurface cultural material from the one excavated test pit (test pit 1) including 22 calcined long bone and unidentifiable bone fragments, 1 lightly burned long bone fragment, 8 pieces of thermally altered rock, and charcoal pieces (Table D.205). No features were noted during excavation of the test pit. Cultural material was recovered from a stratigraphic unit directly above the Devil tephra. On-ground survey of soil exposures around exposed bedrock and two shovel tests nearby were negative. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.205.

Artifact Summary, TLM 121

Provenience	Description
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Lithic Material

Subsurface:

Test pit 1	8	Thermally altered rock fragments
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Faunal Material

Subsurface:

Test pit 1	1	Long bone fragment, burned, large mammal
	22	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

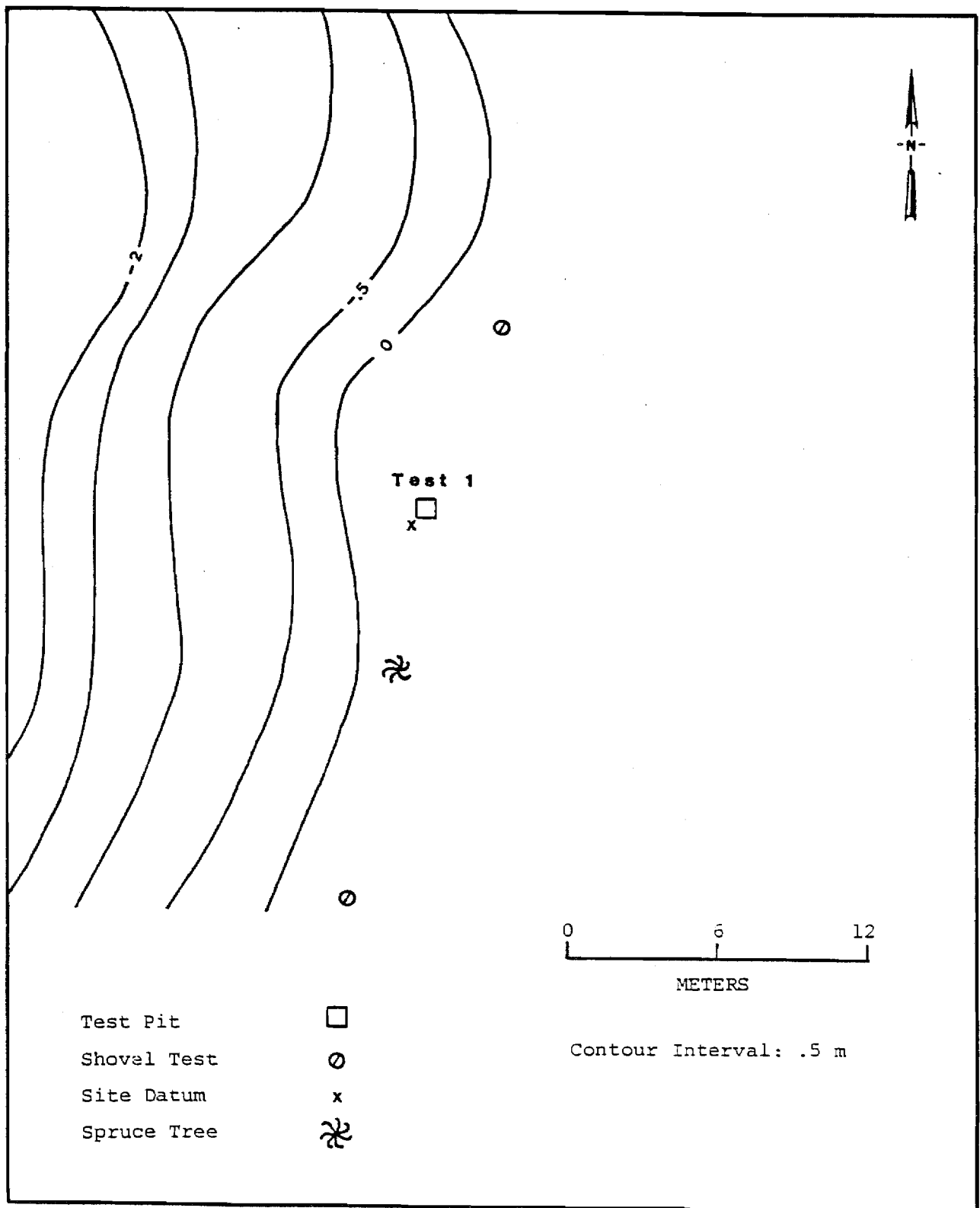


Figure D.157. Site Map, TLM 121

AHRS Number TLM 122; Accession Number UA82-62

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.158
Survey Locale 125: Figure E.197
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located southeast of the confluence of Watana Creek with the Susitna River, at ca. 686 m asl (2250 feet). It lies on a low ridge in the center of a relatively flat, gently northward-sloping, lacustrine plain bordering the Susitna River. The plain, which is about 500 m wide from the edge of the river canyon to the north to the steep uplands in the south, is about 190 m higher than the Susitna River at its nearest point. The plain is generally boggy, containing a number of small drainages and ponds; a small lake (less than 1 ha) is located west of the site. A series of low, rounded ridges and knolls composed of glacial drift stand 3-10 m above this plain along its length. The site occupies the southeastern end of one of these ridges, about 3 m above the surrounding plain and 0.5 m below the top of the ridge. The ridge is low and broad, oriented in a linear fashion along a northwest-southeast axis. It is approximately 100 x 35 m at the southeast end, where the site is located. The view from the site is panoramic in all directions, affording a good vantage point overlooking the black spruce forest and bogs of the surrounding plain, the steep uplands to the south, and the extensive plain north of the Susitna River. The Susitna River and canyon are not visible from the site. Vegetation on the ridge consists of lichen, low heath, dwarf birch, and scattered spruce. Small deflated areas and frost boils are common.

Testing:

The site consists of a single basalt flake found on the surface in a deflated area (1.2 x 2.5 m area) on the northeast face of the ridge

(Table D.206). A 40 x 40 cm test pit (test pit 1) was dug in soil adjacent to this gravelly deflated area, with negative results. The flake was 22 cm northwest (300 degrees) of the southwest corner of test pit 1 (site datum). Seven additional shovel tests were placed at the end of the ridge, and other deflated areas were examined carefully. No additional artifacts were found. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.206.

Artifact Summary, TLM 122

Provenience	Description
<hr/>	
<u>Lithic Material</u>	
Surface:	1 Basalt flake

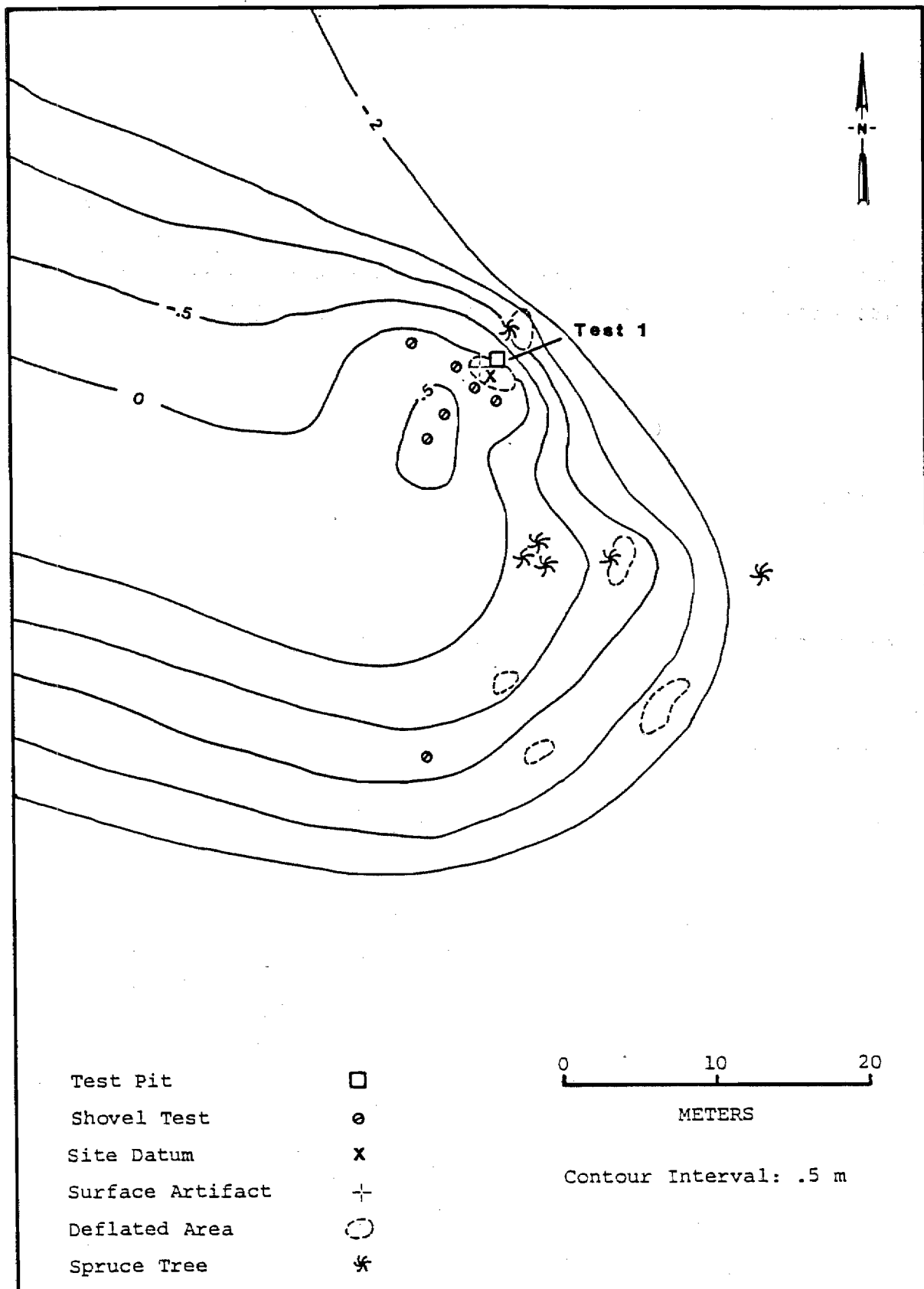


Figure D.158. Site Map, TLM 122

AHRS Number TLM 123; Accession Number UA82-63

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.159
Survey Locale 125: Figure E.198
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on the crest of a low ridge at approximately 686 m asl (2250 feet), near the center of a lacustrine plain lying south of the Susitna River and southeast of the mouth of Watana Creek. The ridge is arcuate, running roughly north-south with a narrow southern end and a lobate northern end. The ridge, approximately 100 (north-south) x 40 m, is 2 m higher in elevation than the surrounding plain at the narrow southern end and about 10 m higher at its northern extremity. The plain in this area measures approximately 500 m (north-south), sloping gradually from steep southern uplands to the rim of the Susitna River canyon, which lies about 200 m below the plain. While the plain is generally flat and boggy, numerous well-drained ridges and knolls, similar to that on which the site is located, rise from 3-10 m above the surface along its entire length. The site is situated on the crest of the ridge near the center. A large gravel exposure on the eastern face of the ridge also contains artifactual material, probably eroding from above. From the site a good view of the surrounding plain and southern uplands is available. The Susitna River and canyon to the north cannot be seen. A small creek running 500 m east of the site (the nearest available water, except for bogs) is masked from view by rather dense black spruce woodlands. Vegetation on the site includes lichen mat, low heath, dwarf birch, and scattered spruce, although exposed glacial drift and frost boils occur over much of the site surface.

Testing:

The site contains two small possible cache pits and a surface scatter of weathered bone and charcoal. Feature 1, southwest of site datum, is a roughly circular depression with a diameter of 1.5 m and a depth of 35 cm. Feature 2, ca. 15 m to the northeast, is an elliptical depression, measuring 2.0 (north-south) x 1.5 m (east-west), and is 50 cm deep. Between the two depressions on the crest of the ridge, and extending down the eastern slope for about 3-5 m, are scattered fragments of weathered, but unburned, bone (Table D.207). Two bone fragments were collected, one an unburned rib fragment tentatively identified as caribou (Rangifer tarandus), and the other an unidentifiable fragment. A small concentration of charcoal lies 60 cm southwest of site datum. A 40 x 40 cm test pit (test pit 1) was dug in the vegetation mat near this surface scatter. A small piece of charcoal was found in the west sidewall, located below the Devil tephra. No other artifactual materials were found. Seven shovel tests scattered along the ridge produced negative results. The backfill of the shovel test in feature 2 contained possible birch bark. Estimated site size based on the distribution of artifacts is 75 square meters (Table D.2).

Table D.207.

Artifact Summary, TLM 123

Provenience

Description

Faunal Material

Surface:

- 1 Rib fragment, unburned, possibly caribou
(Rangifer tarandus)
- 1 Unidentifiable fragment, unburned,
medium-large mammal

Other

Subsurface:

Shovel test 1

- 2 Possible birch bark fragments

AHRS Number TLM 124; Accession Number UA82-64

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.160
Survey Locale 125: Figure E.198
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located southeast of the confluence of Watana Creek with the Susitna River, at ca. 686 m asl (2250 feet). It lies on a low ridge in a relatively flat, gently northward-sloping lacustrine plain bordering the Susitna River. The plain, which is about 500 m wide from the edge of the river canyon to the north to the steep uplands toward the south, is about 190 m higher than the Susitna River at its nearest point. The plain is generally boggy, containing a number of small drainages and ponds. A small lake (less than 1 ha) is located west of the site. A series of low, rounded ridges and knolls composed of glacial drift stand 3-10 m above the plain along its length. The site occupies one of these ridges. The ridge is low and broad, oriented in a linear fashion along a north-south axis. It is approximately 200 m long, from its northern terminus to where it merges with the steeply rising southern uplands of the valley wall, and approximately 45 m wide. A small creek runs northward ca. 200 m east of the site. The view from the ridge crest is panoramic, affording a good vantage point overlooking the black spruce forest and bogs of the surrounding plain, the steep uplands to the south, and the extensive plain north of the Susitna River. The Susitna River and its canyon are not visible from the site. Vegetation on the ridge consists of lichen, low heath, dwarf birch, and scattered spruce. Small frost boils are common.

Testing:

The site consists of one basalt leaf-shaped point (UA82-64-1; Figure D.3801) found on the surface in a deflated area (3 x 5 m) on the crest

of the ridge, and one brown chert modified flake (UA82-64-2) found on the surface of a frost boil (1 x 2 m) on the east face of the ridge near its base and approximately 90 m north-northeast of the basalt point (Table D.208). A 40 x 40 cm test pit (test pit 1) was dug in soil adjacent to the point, with negative results. The point was situated 2 m south (180 degrees) of the southwest corner of test pit 1 (site datum). Sixteen shovel tests were placed on the ridge between and in the immediate vicinity of the surface artifacts. Other deflated areas were examined carefully without additional artifacts being found. Estimated site size based on the distribution of artifacts is 2,250 square meters (Table D.2).

Table D.208.

Artifact Summary, TLM 124

Provenience

Description

Lithic Material

Surface:

- 1 Chert modified flake (UA82-64-2)
- 1 Basalt leaf-shaped point (UA82-64-1)

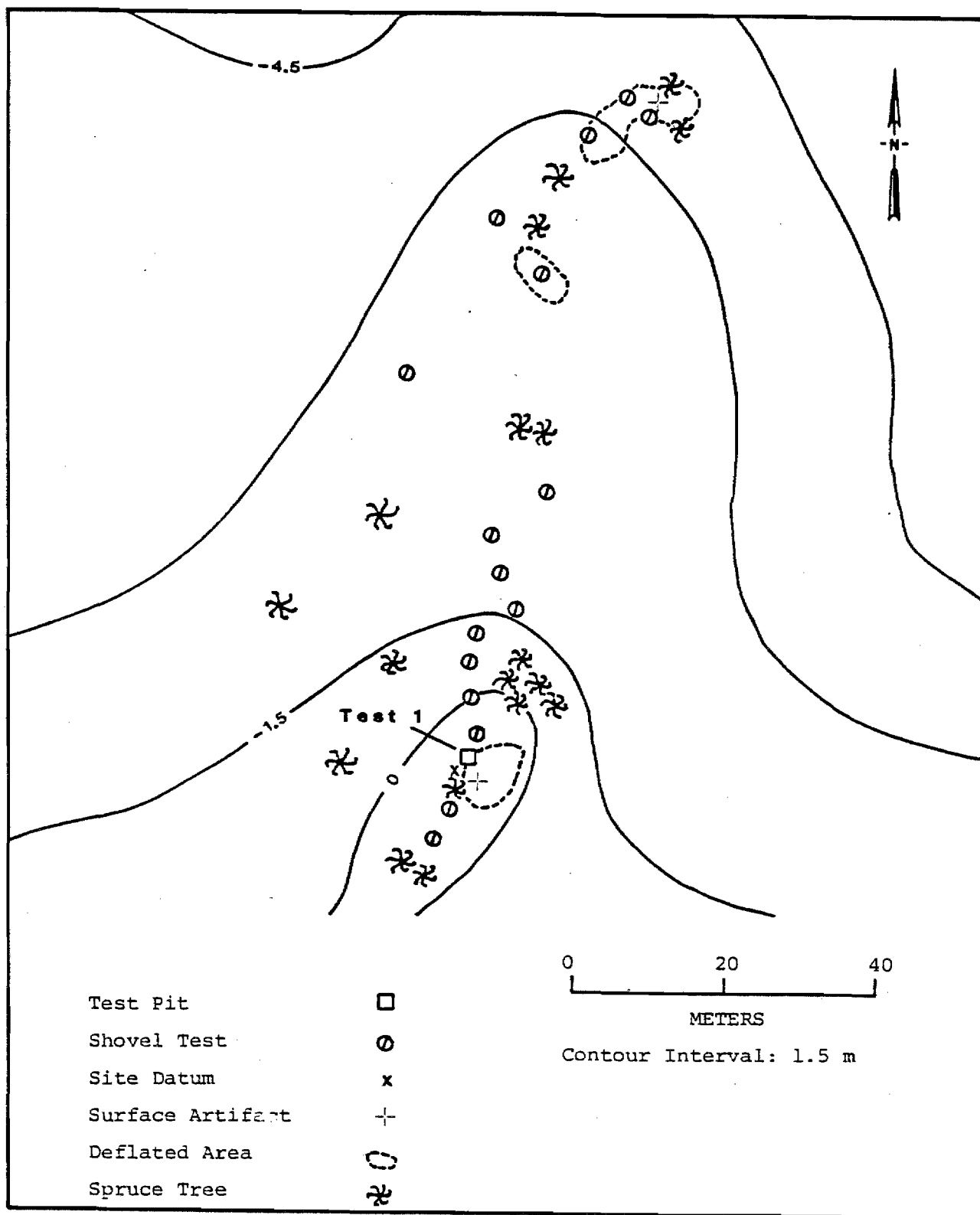


Figure D.160. Site Map, TLM 124

AHRS Number TLM 125; Accession Number UA82-65

Area: South of the Susitna River
Site Map: Figure D.161
Survey Locale 116: Figure E.186
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 125 is located at ca. 686 m asl (2250 feet) on a low knoll south of the Susitna River. The knoll is part of a ridge system which extends in a north-south direction from near the bank of the Susitna River upslope toward the uplands and mountains to the south. A number of such knolls, of varying height above the surrounding terrain, are located in the vicinity. Between the knolls and ridges, numerous small drainages flow into the Susitna River. The knoll on which the site is located is approximately 5 m above the surrounding terrain, which consists of low bogs and dense stands of black spruce. The top of the knoll is relatively flat and the site itself is located on the southeast portion of the knoll. The slope of the ridge system to the north is gentle for at least a kilometer until it begins to drop off to the river. The slopes of the knoll on the east, west, and north, although greater than 15 degrees, do not pose an access problem due to the short distance to the surrounding lowlands. The closest lake (2 ha) to the site is located 5 km to the northwest next to the Susitna River. This knoll, as well as other knolls in the area, provide dry "islands" in the relatively wet terrain which comprise most of the region. The view from the site is panoramic although the knoll itself is only a few meters above the surrounding terrain. The view would be increased considerably if the trees below the site were not present. Vegetation on the site consists of small, isolated black spruce stands with scattered birch. Low brush, lichens, and moss cover most of the site where trees are not present. A few very small deflated areas are located on the knoll.

Testing:

No surface indications of a site exist on the knoll. A total of seven shovel tests were excavated, one of which produced cultural material. Shovel test 1, on the extreme southeast portion of the knoll, produced one basalt flake at 8 cmbs (Table D.209). Test pit 1, excavated directly east of the shovel test, produced two additional basalt flakes from just below the organic horizon in a stratigraphic unit consisting of sandy silt with some pebbles 4-8 cmbs. Charcoal lenses and isolated charcoal lumps were also present in this same stratigraphic unit. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.209.

Artifact Summary, TLM 125

Provenience	Description
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Lithic Material

Subsurface:

Shovel test 1: 1 Basalt flake

Test pit 1: 2 Basalt flakes

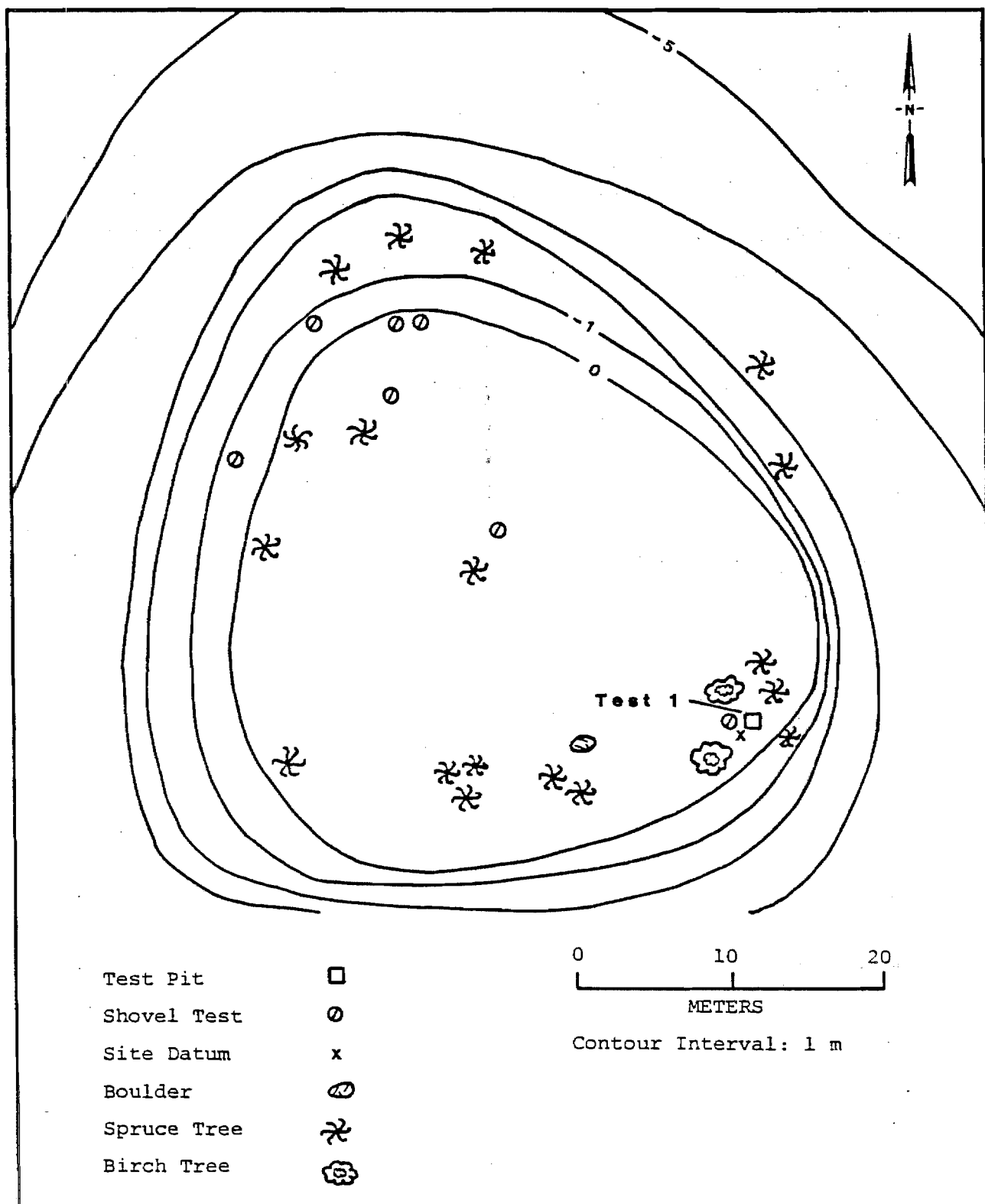


Figure D.161. Site Map, TLM 125

AHRS Number TLM 126; Accession Numbers UA82-66, UA84-125

Area: Northeast of Watana Creek
Site Map: Figure D.162
Survey Locale 130: Figure E.207
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on the crest of a kame forming a ridge north of the Susitna River, and northeast of the mouth of Watana Creek, at 633 m asl (altimeter: 2078 feet). The ridge is composed of glacial drift, oriented in a northwest-southeast direction. It is approximately 80 x 10 m along the relatively flat crest and slopes moderately steeply to the south, west, and east, toward lower terrain characterized by broad marshy areas and irregular kames and terraces. The ridge rises about 10 m above the western marshes and from 4-10 m above the southern and eastern kame topography. The site lies to the north about 2 m above a broad, flat plateau connecting the site ridge with other ridges of similar height to the north. The view from the site is panoramic, but occasionally obstructed by moderately dense white spruce and birch forest. To the west the Watana Creek canyon and intervening marshland is visible, while to the south and east the kame topography north of the Susitna River canyon is visible for ca. 500 m. The ridges and plateau north of the site are visible for a distance of about 800 m. Site TLM 174, located on a similar kame ca. 650 m away, is visible to the northeast. The surface of the site is covered with lichen, low heath, and dwarf birch vegetation, along with white spruce and paper birch. Fallen spruce trees and occasional frost boils expose underlying gravels in a few places.

Testing:

Two flakes were recovered from subsurface contexts during initial field survey at TLM 126, one in a shovel test and one in test pit 1,

superimposed upon this shovel test. The flakes were believed to occur in the Oshetna tephra, but their precise stratigraphic position was not clear.

To determine the stratigraphic position and areal extent of cultural material at the site, grid shovel testing and systematic testing program were implemented. Systematic testing consisted of the excavation of a 1 x 1 m test square, N99/E98. Thirty-one grid shovel tests were placed around test pit 1, with two containing flakes. The test square was set in between the two positive tests and test pit 1. Figure D.162 shows the location of shovel tests, test pits, and test square N99/E98 from reconnaissance and systematic testing.

Discussion:

A total of 164 flakes were recovered during survey and systematic testing of TLM 126. Of these, 12 flakes were found during grid shovel testing and 150 flakes were recovered from test square N99/E98. Eight flakes from N99/E98 were edge-modified. Table D.211 lists the artifacts recovered from TLM 126, and Table D.212 lists these by stratigraphic unit.

Nine soil/sediment units are present at this site, based on observations of subsurface exposures. A thin surface vegetation mat (unit 1a) grades into a dark, O2 horizon (unit 1b). Beneath these organic units is a relatively thick continuous layer of Devil tephra (unit 2). The underlying Watana tephra unit (unit 3) is a mottled and well-sorted fine silt, with a discontinuous, charcoal-rich stratum interbedded within it (unit 7). Unit 7, found only in test square N99/E98, contains much more charcoal than either the organic layer (1a-1b) or the Oshetna paleosol (unit 4) lying beneath Watana tephra (unit 3), and appears largely unattached stratigraphically from either of these two units. These sediments show evidence of cryoturbation and root disturbance, however, and unit 7 may have intruded into Watana tephra (unit 3) from one of these sources. Below the thin, charcoal-stained Oshetna paleosol is a gray sandy Oshetna tephra unit (unit 5), which is relatively thick and

undisturbed over much of the site, but which may be mixed with the paleosol (unit 4) or underlying drift (unit 6) locally. This underlying drift, a pebbly sand, is divided into weathered (unit 6a) and unweathered (unit 6b) units, the latter marking the limit of excavation. These soil/sediment units and their stratigraphic positions are described in Table D.210 and shown in Figure D.163. Artifacts were encountered at the contact between the Devil and Watana tephras (unit 2/3 contact) and in units 3, 4, 5, and 6a and the contacts between them. Similarity of lithic material types among units suggests a single component is distinguishable at the site.

The stratigraphic center of artifact abundance appears to be the Oshetna paleosol (unit 4), and it is likely that the assemblage at this site was deposited on this paleosol. Subsequent root disturbance and cryoturbation, evident from the vertical position of some artifacts and the mixture of strata, probably caused vertical displacement of artifacts into upper and lower units. While other occupations may have occurred at this site, vertical mixture of artifacts among units makes separation of the assemblage into more than one component impossible, and the similarity of lithic materials among units suggests that a multicomponent site is unlikely.

Lithic material types found in this component include argillite, quartzite, basalt, rhyolite, and chert (in descending order of abundance). The eight modified flakes (UA84-125-11, 12, 21, 30, 40, 43, 44, 45) are evenly divided between argillite and quartzite. Most of these show only slight modification of small areas along the margin of the flake, although one large quartzite flake (UA84-125-43) has continuous retouch along one irregular edge approximately 5 cm long.

The supposed stratigraphic position of the two flakes recovered during initial field survey, believed to come from the Oshetna paleosol or tephra (unit 4 or 5) but of uncertain provenience, is consistent with the majority of lithic material at the site.

Evaluation:

Testing at TLM 126 indicates the presence of a single, spatially limited component, most likely associated with a paleosol (unit 4) located between Watana tephra (unit 3) and Oshetna tephra (unit 5), but subsequently stratigraphically disturbed by cryoturbation. Artifacts from the site consist primarily of weathered argillite and quartzite flakes, with a few additional specimens of basalt, rhyolite, and chert. Several of these flakes show evidence of edge modification attributable to retouch and use wear. Limited testing precludes a detailed interpretation of the function of the site, but the small size of the site suggests a short-term occupation related to lithic reduction and limited use of flakes as tools. This site represents a limited occupation during the period between deposition of Watana and Oshetna tephras. Observed site size based on the distribution of artifacts is 17 square meters (Table D.2).

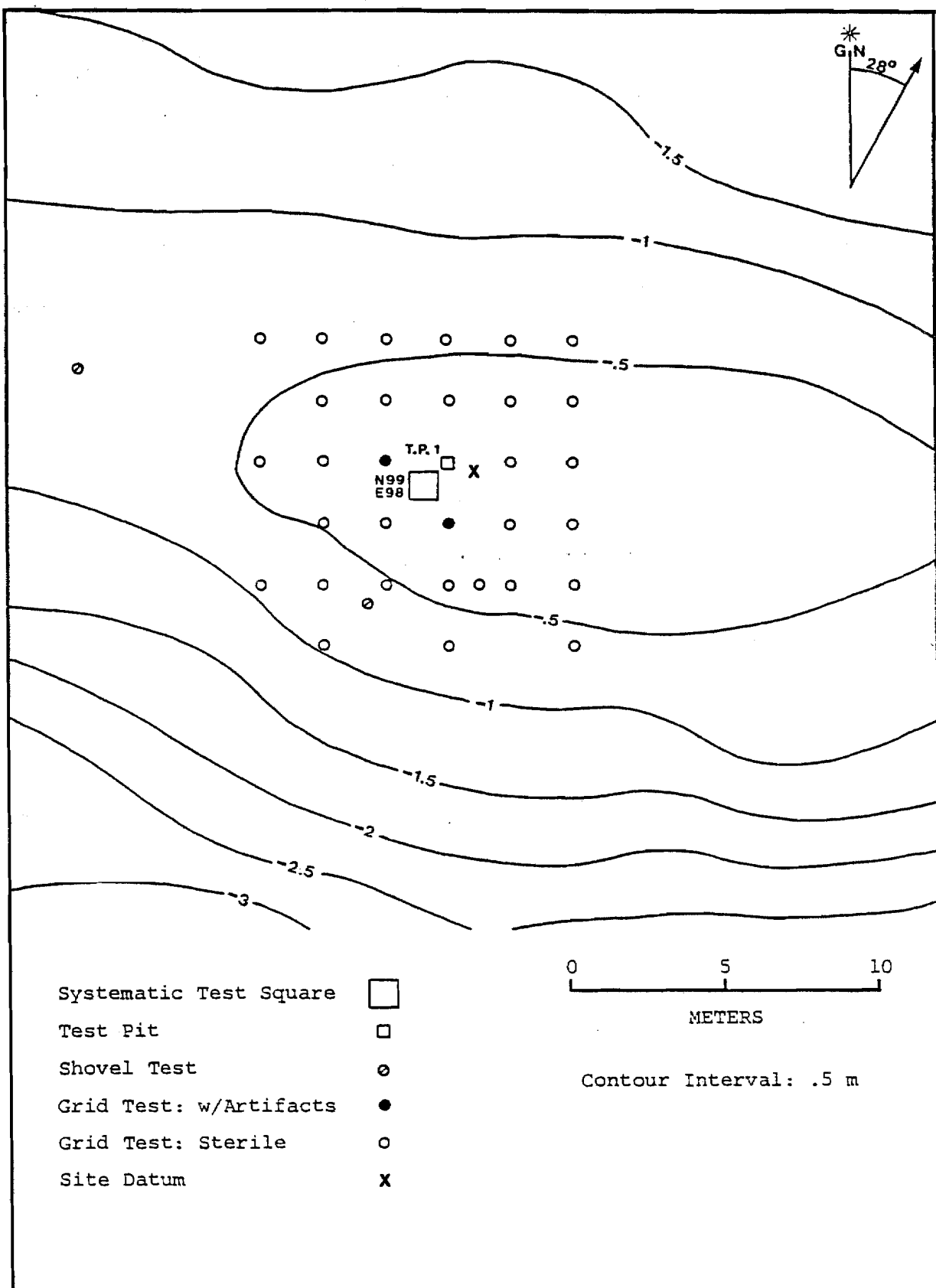


Figure D.162. Site Map, TLM 126

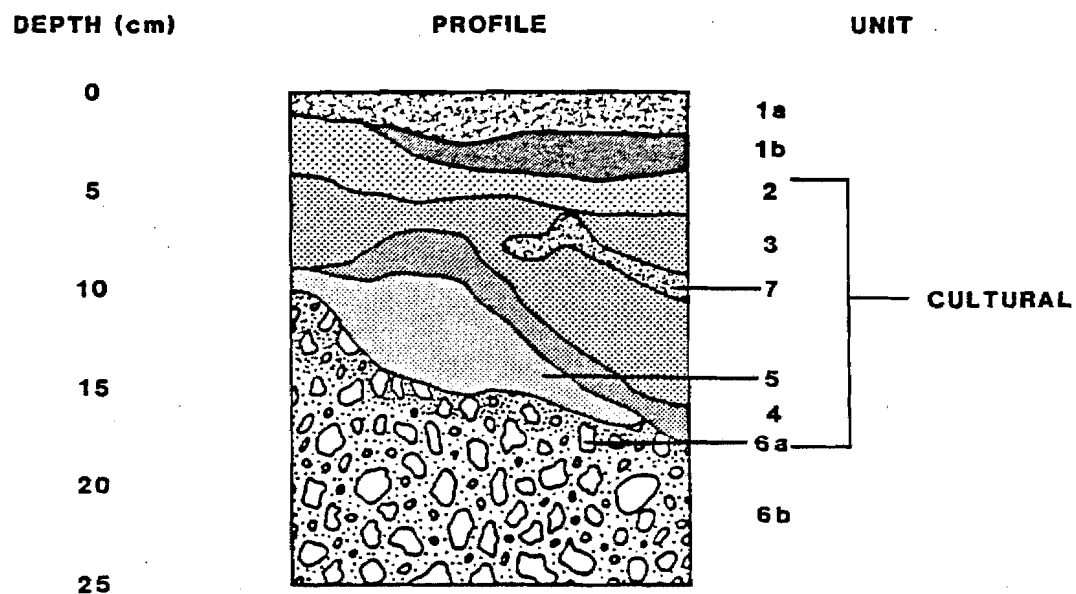


Figure D.163. Composite Profile, TLM 126

Table D.210.

Soil/Sediment Description for Composite Profile, TLM 126

Unit	Description
1a	Rootmat: contains roots from small vegetative matter such as moss, dwarf birch, and lowbush cranberry. Continuous. Ranges from less than 1-5 cm thick, but generally 2 cm thick. In NE quad, back dirt from test pit 1 overlies the surface from 0.5-1.5 cm thick.
1b	Fine silt with some charcoal as well as rootlets from the organic mat, very dark gray (10YR 3/1). Thickness ranges from 0-4 cm, but generally 2 cm. Upper contact abrupt. Contact with unit 2 generally abrupt and wavy with exception of the north wall profile where some of the contacts diffuse.
2	Well sorted silt; grayish brown (10YR 5/2). Thickness generally 2-3 cm with some isolated pockets of 4 cm. Devil tephra. Continuous. Upper contact abrupt and wavy. In north wall, some mottling with organics in which contacts are diffuse. Lower contact abrupt. Artifacts present at contact between unit 2 and unit 3.

Table D.210. (Continued)

Unit	Description
3	<p>Very fine, well-sorted silt. Varies from strong brown (10YR 4/6) in upper oxidized layer, grades into dark yellowish brown (10YR 5/6) in some areas, and yellowish brown (10YR 3/6) in other sections. Oxidized Watana which is discontinuous and varies in thickness from 0-2 cm, generally 1 cm. A layer of leached material, darker than the pure buff Watana is found directly under the oxidized Watana, and is discontinuous throughout the squares. Buff Watana (10YR 3/6) is continuous throughout. Thickness varies from 1-10 cm, generally 4-5 cm. Contacts are abrupt and wavy. Cultural.</p>
4	<p>Fine, well-sorted silt; olive brown (2.5Y 4/4). Paleosol. Well developed in NW quad, but discontinuous elsewhere. Thickness varies from 0-4 cm. Charcoal flecks are present in some sections. Upper contact abrupt and wavy; lower contact generally abrupt with exception of south and west profiles where mixed with unit 6. Artifacts are present in this unit.</p>
5	<p>Well-sorted fine sandy silt; dark grayish brown (2.5Y 4/2). Oshetna tephra. Well defined in NW quad, discontinuous in rest of square. Upper contact diffuse but generally clear. Thickness varies from 0-6 cm, generally 4 cm. Replaced by or mixed with drift in isolated areas of square. Lower contact diffuse but clear. Cultural.</p>

Table D.210. (Continued)

Unit	Description
6a	Weathered poorly sorted coarse sand and gravels; strong brown (7.5YR 4/6). Glacial drift. Continuous and varies in thickness from 3-10 cm. Some cobbles are present, two of which are greater than 15 cm. Cultural material is present in the upper 2 cm.
6b	Unweathered poorly sorted coarse sand and gravels; olive brown (2.5Y 4/4) to dark grayish brown (2.5Y 4/2). Glacial drift.
7	Well-sorted fine silt with abundant charcoal; dark yellowish brown (10YR 3/8). Varies in thickness between 0 and 3 cm thick. Contact with unit 3 generally diffuse and wavy; contacts with other units minimal. May be intrusive into Watana tephra, appears unconnected with Oshetna paleosol or fine organics.

Table D.211.

Artifact Summary, TLM 126

Tools

8	Modified flakes
	4 Argillite (UA84-125-21, 30, 40, 44)
	4 Quartzite (UA84-125-11, 12, 43, 45)

8

Lithic Material

98	Argillite flakes
8	Basalt flakes
1	Chert flake
31	Quartzite flakes
4	Rhyolite flakes
14	Flakes less than 1/8" (Argillite)

156

Table D.212.

Artifact Summary by Stratigraphic Unit, TLM 126

Unit		Description
2/3	3	Argillite flakes
Contact between	1	Basalt flake
Devil and Watana	1	Quartzite flake
tephras		
3	1	Argillite flake
Watana tephra	1	Rhyolite flake
3/4	6	Argillite flakes
Contact between	2	Basalt flakes
Watana tephra and	2	Quartzite flakes
Oshetna paleosol	1	Rhyolite flake
	6	Flakes less than 1/8" (Argillite)
	2	Quartzite modified flakes (UA84-125-11, 12)
4	34	Argillite flakes
Oshetna paleosol	3	Basalt flakes
	14	Quartzite flakes
	2	Rhyolite flakes
	4	Flakes less than 1/8" (Argillite)
	1	Argillite modified flake (UA84-125-21)
5	14	Argillite flakes
Oshetna tephra	7	Quartzite flakes
	4	Flakes less than 1/8" (Argillite)
	1	Argillite modified flake (UA84-125-30)

Table D.212. (Continued)

Unit		Description
4 and 6a	8	Argillite flakes
Mixed Oshetna paleosol and drift	2	Basalt flakes
5/6	21	Argillite flakes
Contact between	4	Quartzite flakes
Oshetna tephra	2	Argillite modified flakes (UA84-125-40, 44)
and drift	2	Quartzite modified flakes (UA84-125-43, 45)
6a	10	Argillite flakes
Weathered drift	3	Quartzite flakes
Subsurface unknown	1	Argillite flake
	1	Chert flake

AHRS Number TLM 127; Accession Number UA82-67

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.164
Survey Locale 116: Figure E.187
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on a kame which can be described as an east-west oriented elongated knoll at ca. 686 m asl (2250 feet), lying south of the Susitna River and southeast of the mouth of Watana Creek. The knoll itself is approximately 60 (east-west) x 10 m. The site is located on the eastern portion of the knoll with the site area a generally level 20 m in length. The knoll is situated between two unnamed creeks which flow northward to the Susitna River. These drainage systems border the eastern and western edges of the knoll. The knoll is distinguished primarily by its north face which descends 3 m over a distance of 20 m. The primary view from the site is to the north encompassing the terrain on the northern side of the Susitna River. Visibility to the east, west, and south of the site is limited by forest vegetation although lateral moraines and mountainous peaks can be seen south of the site, above the present vegetation. The creeks to the east and west are obscured by spruce forest. Surface vegetation at the site includes scattered black spruce with a ground cover of lowbush cranberry, Labrador tea, blueberry, heath, mosses, and lichens. The area surrounding the site is characterized by poorly drained black spruce forest.

Testing:

No artifactual material was found on the surface. Basalt flakes were located in two shovel tests which were within 1.6 m of each other. One of these shovel tests was expanded into a 40 x 40 cm test pit (test pit 1), and four additional flakes were recovered. Three of the flakes

found in situ from test pit 1 were located within a dark brownish matrix to the contact with the underlying Devil tephra, 2-4 cmbs. An additional flake was found within the Devil tephra (Table D.213). In addition to the artifactual material, two small circular depressions were observed on the site surface. These depressions are ca. 60 cm in diameter and 10 cm deep and are located within 1.5 m of each other. Test pit 1 is situated on the northeast edge of the northernmost depression, bisecting the feature edge. No truncation of the strata was observed, rather the soil units followed the contours of the depression. Nine additional shovel tests were placed in the site area with negative results. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.213.

Artifact Summary, TLM 127

Provenience	Description
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<u>Lithic Material</u>	
Subsurface:	
Test pit 1	7 Basalt flakes
	1 Chert flake

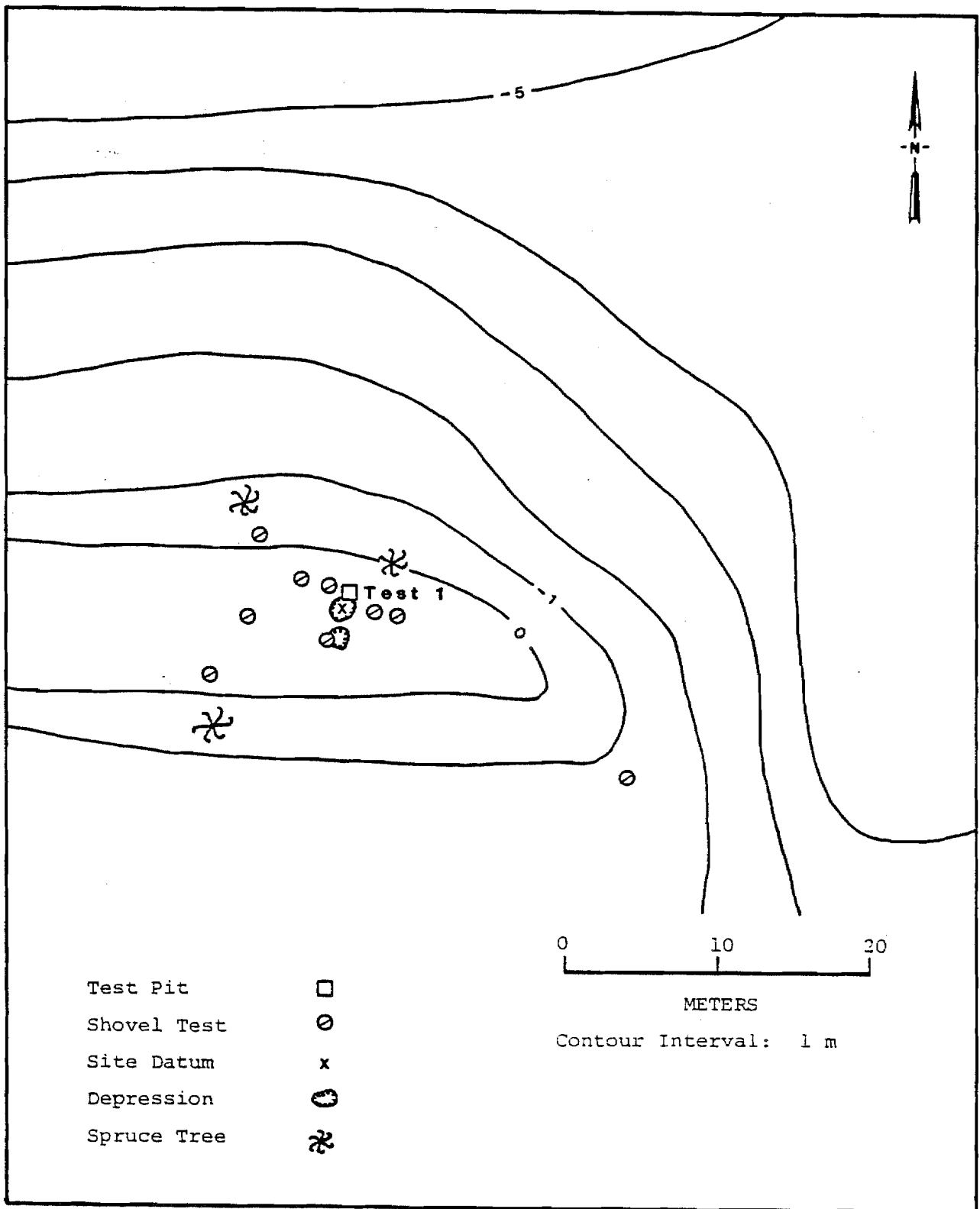


Figure D.164. Site Map, TLM 127

AHRS Number TLM 128; Accession Numbers UA82-68, UA83-230

Area: Northeast of Jay Creek Mouth
Site Map: Figure D.165
Survey Locale 127: Figure E.201
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

TLM 128 is located on a level area at the intersection of two different ridge systems on the west side of Jay Creek northeast of the confluence of Jay Creek with the Susitna River. The site, at an elevation of ca. 836 m asl (2750 feet), is a prominent topographic feature higher in relief than the surrounding terrain. The two ridges which intersect at the site location include a major ridge system orientated in a northeast to southwest direction, roughly parallel to Jay Creek, and a minor ridge orientated in a northwest to southeast direction extending down toward Jay Creek. The level area is ca. 35 x 30 m in dimension and is situated on the southern and western portions of the two ridges, respectively. The topographic setting of the site vicinity is characterized by a glaciolacustrine plain with an undulating surface composed of ridges and knolls to the south, and bordered by upland hills rising to elevations of 1113 m asl (3650 feet) to the north and west. To the northeast and east the topography is similar to that in the vicinity of the site and includes the major ridge system.

The view from the site is essentially panoramic, obstructed only by higher terrain 200-300 m north and west. Particularly noteworthy is the view in southern directions from the southern part of the site. This view encompasses the glaciolacustrine plain with various terrain features and the area extending from the uplands down to the rim of the Jay Creek valley, in the vicinity of a mineral lick, 1.2 km southwest and 61 m lower in elevation. Site vegetation includes low brush and scattered spruce. Lowbush blueberry, cranberry, bearberry, and

crowberry form the predominant site vegetation. Lichens, mosses, and grasses occur on the ground surface with soil exposed only in a few locations along game trails and in an 8 x 4.5 m exposure on the western edge of the site. Frost features were also observed particularly in the southwestern area where surface artifacts were located.

Testing:

TLM 128 was initially located when an argillite biface fragment (UA82-68-3) was recovered from the southwest area of the site in a cryoturbated surface exposure. During survey testing of the site, one 40 x 40 cm test pit (test pit 1) was placed adjacent to this frost feature, as illustrated in Figure D.165. Artifactual material was recovered from two stratigraphic levels within the test pit. In addition, a black chert modified flake (UA82-68-16) was collected from a soil exposure in the southeast portion of the site. Situated on the western slope of the site was a square depression which appeared to be the result of excavation into the slope. This 70 cm deep surface feature measured 1.7 square meters, and while slumpage had occurred, the depression had parallel and straight walls. The feature appeared to be recent in origin. Five shovel tests were placed on the level central area of the site, all with negative results.

Initial systematic testing at TLM 128 consisted of three 1 x 1 m test squares. These squares were placed in the vicinity of the surface erosional feature located on the southern portion of the ridge. The test squares were positioned in a checkerboard pattern with one of the squares superimposed over test pit 1. Placement of the three test squares was designed to provide a 3-meter continuous profile in an effort to define the content, extent, and stratigraphic position of artifactual material recovered from surface survey and in test pit 1.

Five additional test squares were excavated at the site. All test squares were excavated adjacent to one another to form a continuous 5-meter profile along the N89 grid line. This orientation was made to obtain information on the effects of slope erosion on stratigraphy. The

5-meter long excavation essentially truncates the ridge crest and reveals the sequence of sediment build up and subsequent deflation.

Discussion:

Survey testing and systematic testing resulted in a total artifact assemblage of 7,890 lithic specimens and 12 faunal remains. Forty two of the lithics were classified as tools or tool fragments. The initial excavation identified two prehistoric components. One of the two components represented an occupation below the Oshetna tephra, a rare situation for the Susitna River valley. Unfortunately, the initial excavation only obtained a very small amount of organic matter for radiocarbon dating for the pre-Oshetna tephra occupation. The resulting date, (4580 \pm 780 years: 2630 B.C.-Beta-5362) did not appear reliable given the stratigraphic context and the large error factor (780 radiocarbon years). One goal of the additional testing program was to obtain more organic material for radiocarbon dating.

All eight of the test squares produced artifactual material. The most productive squares were N90/E99 and the adjacent N89/E99. The complete artifact inventory from all phases of testing is listed in Table D.215. The distribution of materials by stratigraphic unit is presented in Table D.217.

A total of six classes of lithic raw materials were identified in the collected assemblage. The lithic material types include argillite, basalt, chalcedony, chert, obsidian, and quartzite. Argillite is the most abundant type represented by 6,959 flakes, 14 modified flakes, 7 bifaces and fragments, 3 preforms, 4 triangular points, and 2 cores. Basalt and chert are the second and third most abundant types, with 434 and 420 flakes, respectively. Basalt and chert tools were also represented in the assemblage. The other three types of lithic raw material together account for less than one percent of the lithics recovered.

Eleven soil/sediment units were finally identified at TLM 128, whereas only nine were recorded during the initial testing. Figure D.166 shows the vertical superposition of these units. Table D.214 describes the various unit characteristics. Only one of the five later test squares tested, N89/E99, contained all eleven of the soil/sediment units. The vertical placement of the soil/sediment units was fairly consistent throughout the site, but specific units were missing in some squares and in some squares erosion has caused mixing of units.

Three broad kinds of soil/sediment units were found at TLM 128. These include natural depositional units, the contacts between these units, and cultural units. A general stratigraphic section consists of glacial drift at the bottom of the sequence overlain by a sequence of eolian deposits. The lowest eolian deposit, a loess, contains the lower paleosol, capped by a sequence of three tephra. The oldest tephra is the Oshetna tephra, which is covered by the Watana tephra. Above the Watana tephra lies the Devil tephra. Between the Oshetna and Watana tephra is a thin discontinuous lens of charcoal and carbonized organics, identified as the paleosol above the Oshetna tephra. This paleosol is found elsewhere in the project area. Above the volcanic sediments is a lens of carbonaceous organics and charcoal. This lens is probably the O2 horizon of the contemporary root mat which caps the sequence. The root mat is sparse and contains plant debris and rootlets from Labrador tea, blueberry, and dwarf birch.

Ten of the eleven soil/sediment units have associated cultural material within or at their contacts, and two separate occupations have been identified. During initial testing, the upper occupation appeared to be correlated to the Devil tephra (unit 3), as lithics were recovered in association with this tephra in two of the test squares (N91/E100, N92/E99). It was also noted that disturbance of the upper stratigraphic units was too great to definitely assign the stratigraphic position of the occupation, but the paucity of material on the contact between the Devil and Watana units suggested a post-Devil tephra occupation. Renewed testing revealed that this upper occupation was indeed associated with the upper units (1 and 2), as unit 3 (Devil tephra), was

found to be sterile. Lithic specimens associated with the lower component were found primarily in the eolian deposits and the lower paleosol. Thirteen flakes were recovered from the drift.

Upper Component: Systematic testing showed the upper component to be concentrated in the decayed organic horizon (unit 2) and its contacts with adjacent units. In addition to argillite, basalt, and chert flakes, a basalt biface fragment (UA83-230-245; Figure D.281b) was recovered from this unit. Other tool fragments probably associated with the upper component were collected from the surface. They include an argillite biface fragment (UA82-68-3; Figure D.281r) collected during the initial survey, a red chert scraper fragment (UA83-230-18) found in a surface exposure northeast of the site, and a dark red chert scraper (UA83-230-72; Figure 281o) found north of the N100/E100 grid coordinate. An additional argillite bifacially worked tool fragment (UA82-68-321; Figure D.281r) was found at the site after systematic testing in 1982. Unfortunately this tool was located on the surface of one of the backfilled test squares and consequently lacks provenience. The tool fragment articulates with the surface collected biface fragment (UA82-68-2) to form a complete asymmetric biface which may have broken as a result of heat treatment (suggested by a glossy sheen and potlid fracture). Subsequent to breakage of the original biface the basal portion was modified with bifacial retouch at the corner formed by the medial break and the right edge of the original biface. Displacement of the tool was probably the result of excavation in the vicinity of the erosional feature where original surface artifacts were found.

Lower Component: The lower component is concentrated in the lower paleosol (unit 7) which is contained within the eolian deposit. Artifacts associated with this component are also found within the eolian sediments and in the contact zones associated with the lower paleosol. The soil/sediment units which contain artifacts and which are associated with this component include 6a, 6b, 6c, 7, and 8. Artifacts are also found in the contacts between the eolian sediments and the lower paleosol 6b/7, 7/6c, and the contacts between the lower paleosol and glacial drift, as well as eolian sediments 7/8, 6c/8, and 6c/7/8.

Two argillite and 11 chert flakes were also found within the glacial drift and are associated with the lower component. Test square N89/E98 produced 6 flakes and 1 chert modified flake (UA83-230-221) that were associated with unit 4 (Watana tephra). Units 5a and 5b are not present in this square. There is strong evidence, particularly with regard to stratigraphy, that suggests these seven flakes are more accurately attributed to the contact between the eolian silt and paleosol.

The lower component, including artifacts recovered from stratigraphic units 4-8, produced 99% of the lithic artifacts collected from the site. A total of 7,805 lithic artifacts were found in this occupation with the majority being recovered from test squares N89/E99 and N90/E99. Table D.217 provides an artifact summary by stratigraphic unit. Five of the six raw material types found at the site were represented in the lower component assemblage. The majority of artifacts from this assemblage were composed of argillite. Of the 7,805 artifacts associated with the lower component, 34 were classified as tools or tool fragments. These included 16 modified flakes, 1 scraper, 1 blade, 7 biface fragments, 3 preforms, 4 triangular point fragments, and 2 cores. The raw material types and catalogue numbers for each of these tools are listed in Tables D.215 and D.217.

Faunal material recovered from TLM 128 was associated with the lower component, and found in stratigraphic units 6c, 7, 8, and in the lower paleosol, unit 7. The material consisted of 12 calcined long bone fragments of small-large mammals (Figure Table D.216).

There appear to be two different kinds of manufacturing technologies employed in making the points. The first one is a more traditional technique to reduce bifaces down to point size and shape. It employs percussion flaking to remove large flakes which are carried across the entire face of the point. A basalt triangular point fragment (UA83-230-190; Figure D.281q) illustrates this type of flaking. The second technique used is more striking and may represent a technology of biface production not previously documented for Interior Alaska. This bifacial production method uses very thin original flakes as the

bifacial core. These flakes are then shaped by edge retouch along the margins of the original flake. This retouching is produced by hard hammer percussion, abrading, and probably some pressure flaking. The retouch flakes are characteristically small and tend to step fracture. They do not carry well and in no circumstances do they meet in the center of the biface, except possibly at the point tip, which is narrow. Examples of this technique are seen in the argillite triangular point fragments (UA83-230-24, 25 articulates with UA82-68-226; Figure D.281h,j), an argillite preform (UA83-230-104; Figure D.281k), and an argillite biface UA83-230-36; Figure D.281g). On these tools the original dorsal and ventral flake surfaces can still be identified. One of the points (UA83-230-24) is also characterized by a concave base with evidence of basal grinding. A basalt triangular point (UA83-230-97; Figure D.281i) exemplifies both bifacial production technologies, one for each face, which indicates that the two techniques may not be entirely different.

There are three biface tips found in the assemblage (UA83-230-42, 43, 128; Figure D.281c,f,d) which contain bifacial flaking that carries to the center of the tool, but it is not clear if these tips are associated with the first type of technology or the edge retouch technology. The edge retouching technique leaves much of the original flake surfaces intact on the finished tool because the flakes are only removed along the edges. Consequently the original dorsal and ventral surfaces are identifiable.

A chert scraper (UA83-230-41), 1 obsidian blade fragment (UA82-68-15), 1 basalt biface fragment (UA82-68-222; Figure D.281p), 1 chert biface fragment (point tip) (UA82-68-85; Figure D.281e), 2 argillite preforms (UA82-68-186; UA83-230-236; Figure D.281m,l), and 3 argillite flake cores (UA82-68-187, 189, 246; Figure D.281s,t,u) are also associated with the lower component. The brown chert scraper (UA83-230-41; Figure D.281n) was prepared from a thick bladelike flake, with the scraping edge manufactured on the distal end of the flake. The worked edge contains an acute angle which may suggest a function other than scraping. The proximal end of a blade (UA82-68-15; Figure D.281a)

represented the only lithic specimen at the site made from obsidian. It was recovered during the survey testing of TLM 128 in test pit 1.

An important discovery was the fitting of fragments recovered from the two different field seasons. An artifact identified as a modified flake (UA82-68-226) and found in an eolian deposit (6c) during the initial testing was fitted to a bifacial fragment (UA83-230-25) recovered from the lower paleosol (unit 7) in the later field season. These two artifacts, when combined, represent the remains of a triangular point described above. The fact that each tool fragment was recovered from a different soil/sediment unit confirms that stratigraphic displacement was occurring at the site.

Evaluation:

TLM 128, located on a prominent ridge on the west side of Jay Creek, provides a panoramic view in all directions which is only obstructed by higher terrain to the northwest about 250 m away. The view to the south affords observations down to the rim of the Jay Creek Valley in the vicinity of a mineral lick. The mineral lick lies approximately 1.2 km to the southwest and is frequented by Dall sheep and caribou.

Systematic testing at TLM 128 has defined two prehistoric components. The upper component occurs on the surface and into unit 2 (O2 horizon). No diagnostic artifacts were found which might suggest the type of activity which had taken place at the site during its first occupation. The lower component occurred before the deposition of the Oshetna tephra and is separated from the Oshetna tephra by approximately 40 cm of eolian sediments. The prehistoric living surface occurs as a paleosol composed of carbonized organics, charcoal, and artifacts. A radiocarbon sample taken during initial testing provided a date of 4580 ± 780 years: 2630 B.C. (Beta-5362). This date is questionable because of its stratigraphic position and the size of the sample taken. The Oshetna tephra overlies this paleosol by about 40 cm. The error factor of ± 780 years is large and is probably the result of a small or contaminated

sample. Additional radiocarbon samples were procured during renewed testing and produced dates which conform with the regional stratigraphic position of the paleosol. These samples yielded dates of 6970 ± 210 years: 5020 B.C. (Beta-7304) and 7240 ± 110 years: 5290 B.C. (Beta-7306). Two additional radiocarbon samples were submitted. These samples contained a high percentage of soil matrix and little clean charcoal. Because of the small amount of charcoal, both were analyzed as bulk samples and produced dates of 5780 ± 100 years: 3830 B.C. (Beta-7847) and 1260 ± 80 years: A.D. 690 (Beta-7848) which are not considered to represent the age of the paleosol.

In addition to the unique stratigraphic position of the lower component, the artifacts recovered from this component reveal a previously unreported and possibly diagnostic assemblage for this time period. The most distinctive characteristic of this assemblage is bifacial edge retouched concave-based points, exhibiting basal edge grinding, which have been manufactured on thin flakes. Additional artifacts associated with this assemblage include modified bifacial thinning flakes and a blade industry.

The site appears to have had an extensive early occupation during which primary tool manufacturing occurred. Large bifacial reduction flakes were either produced on the site or transported onto the site and then reduced to points. The later component contains evidence of a minor occupation, with no indication of the type of activity which may have taken place. This site is important because of its component below the Oshetna tephra, its potential for defining the early chronology in the Susitna River valley, and for definition of a new diagnostic artifact assemblage for Interior Alaska. Estimated site size based on the distribution of artifacts is 600 square meters (Table D.2).

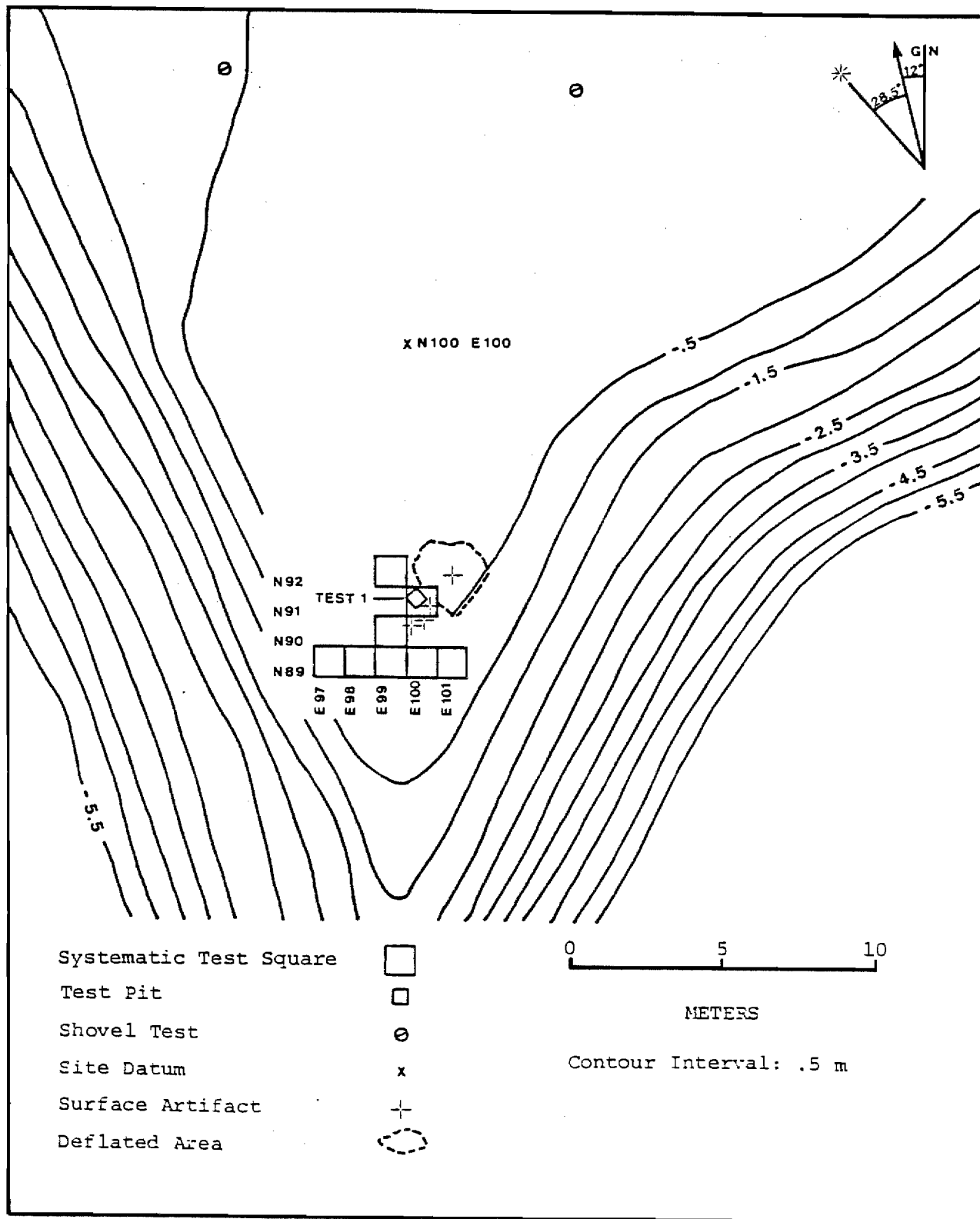


Figure D.165. Site Map, TLM 128

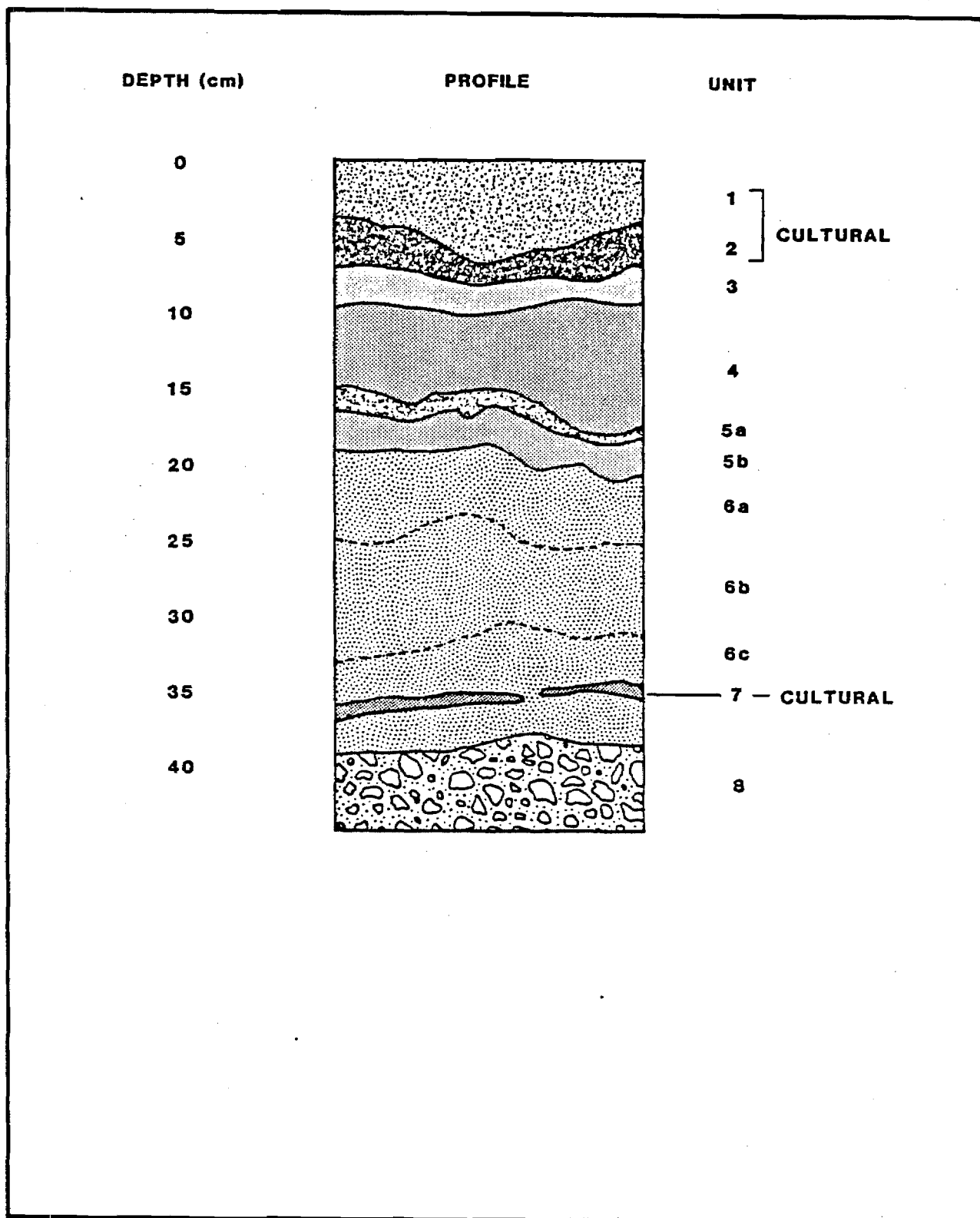


Figure D.166. Composite Profile, TLM 128

Table D.214.

Soil/Sediment Description for Composite Profile, TLM 128

Unit	Description
1	<p>Surface organic peat layer consisting of humus, roots, and plant debris mixed with fine silt and some eolian sandy silt; dark brown (10YR 3/3 moist; 10YR 4/3 dry). Thickness varies from 0-12 cm with a modal value of 4 cm. Lower contact generally distinct and regular to wavy. Discontinuous as a result of two game trails and other surface disturbances. Often mixed with unit 2 and in one case with both units 2 and 3. These mixed units are discontinuous and appear as pockets.</p>
2	<p>Fine silt with finely divided organics, fine charcoal pieces, carbon-staining, and some root debris; very dark gray to dark grayish brown (10YR 3/1 moist; 10YR 4/2 dry). Thickness is 0-6 cm with an average of 3 cm. Contacts are distinct to diffuse. 02 horizon. Unit is discontinuous and appears most often as a mixed unit with units 1, 3, or both 3 and 4. Disturbance present, due to the game trails, root invasion, and surface erosion, especially past the break in slope. Cultural.</p>

Table D.214. (Continued)

Unit	Description
3	<p>Very fine silt with small charcoal flecks and some roots; light pinkish gray to gray (5YR 7/2 moist; 10YR 4/2 dry). Thickness varies from 0-5 cm with a modal value of 3 cm. Contacts are distinct to diffuse. Devil tephra. Intermittent, found mostly in pockets or as a mixed unit with units 1 and 2, unit 2, or with 2 and 4. Powders readily. Disturbance present due to game trails, root invasion, and surface erosion, especially past the breaks in slope. Flakes were found only in N92/E99.</p>
4	<p>Very fine grain silt with light oxidation and even coloration; strong brown to yellowish brown (7.5YR 4/6 moist; 10YR 5/8 dry). Thickness varies from 0-12 cm with a modal value of 4 cm. Contacts gradual. Watana tephra. Discontinuous and typically occurs as pockets. May be mixed with units 2 or 3. Some roots are present in this unit. Disturbances present due to root invasion and surface erosion, especially over the breaks in slope. Cultural remains encountered in square N89/E98 are likely derived from other strata.</p>
5a	<p>Very fine silt with carbon-staining and decomposing organics; dark grayish brown to pale brown (10YR 5/2 to 10YR 4/2 moist; 10YR 6/3 dry). Very thin, ranging from 1-2 cm. Lower contact vague. Paleosol. Found in the west wall of N89/E99 as well as the north wall of N90/E99.</p>

Table D.214. (Continued)

Unit	Description
5b	Fine to medium silt, powdery with no carbon; light brownish gray to pinkish gray (2.5YR 6/2 moist; 7.5YR 7/2 dry). Thickness varies from 1-3 cm. Contacts are generally distinct. Oshetna tephra. Discontinuous, typically occurs as stringers or small, isolated pockets; Also occurs as a mixed unit, with unit 4. Unit appears in all but N89/E100. One argillite flake was recovered from N90/E99.
6a	Fine sandy silt matrix, oxidized in upper portions; dark yellowish brown to brownish yellow (10YR 4/4 moist; 10YR 6/6 dry). Thickness varies from 2-15 cm with a modal value of 4-6 cm. Lower contacts gradual to indistinct. Oxidized eolian deposit. Fairly continuous throughout the site. Contains pockets of unit 5a in N89/E99. Disturbed by a mixed unit (units 6c, 7 and 8) and roots, especially noticeable in the south wall of N89/E100. Cultural material rare, likely derived from other strata.
6b	Fine sandy silt matrix, eolian deposit; olive brown to very pale brown (2.5YR 4/4 moist; 10YR 7/4 dry). Thickness varies from 0-18 cm with a modal value of 6-10 cm. Lower contacts gradual. Discontinuous and does not occur in the steepest portions of the slopes in N89/E97 and N89/E101. More consistent in color than units 6a or 6c. Mottled brown in some areas, which may indicate decomposed organics. Cultural material rare, likely derived from other strata.

Table D.214. (Continued)

Unit	Description
6c	<p>Very fine sandy silt matrix with prominent reddish yellow (orange) oxidized mottling throughout; dark brown to light yellowish brown (10YR 3/3 moist; 10YR 6/4 dry). Thickness varies from 0-14 cm with a modal value of 6 cm. Contacts generally distinct. Fairly continuous across site even over the breaks in slope. Unit 6c contains the major occupation unit of the site, unit 7. All squares except N92/E99 yielded cultural material.</p>
7	<p>Very fine silt, mottled in color which occurs within unit 6c; mottled dark to light brown (10YR 3/4 to 3/6 moist; 10YR 6/4 dry). Thickness is between 1-2 cm. Contacts generally distinct. Paleosol. Appears as discontinuous units of decomposed organics and fine charcoal pieces (unit 7a) and as oxidized lenses (unit 7b) which are red to strong brown (2.5YR 5/8 moist; 7.5YR 5/8 dry). Major cultural unit of the site.</p>
8	<p>Fine to coarse subangular gravels, poorly sorted pebbles and rocks; olive brown to light yellowish brown (2.5YR 4/4 moist; 2.5YR 6/4 dry). Typically 10 cm into this unit is the limits of the excavation. Glacial drift. Cultural remains only in N90/E99.</p>

Table D.215.

Artifact Summary, TLM 128

Tools

18	Modified flakes
	14 Argillite (UA82-68-79, 80, 81, 188, 216, 218, 225, 227 UA83-230-23, 54, 55; 91, 158, 229)
	4 Chert (UA82-68-16, 86, 141; UA83-230-221)
3	Scrapers
	3 Chert (UA83-230-18, 41, 72)
1	Blade
	1 Obsidian (UA82-68-15)
10	Bifaces and fragments
	7 Argillite (UA82-68-3 articulates with 321, 187; UA83-230-36, 42, 43, 128)
	2 Basalt (UA82-68-222; UA83-230-245)
	1 Chert (UA82-68-85)
3	Preforms and fragments
	3 Argillite (UA82-68-186; UA83-230-104, 236)
5	Triangular points and fragments
	4 Argillite (UA82-68-226 articulates with UA83-230-25; UA83-230-24, 97)
	1 Basalt (UA83-230-190)
2	Flake cores
	2 Argillite (UA82-68-189, 246)

Table D.215. (Continued)

Lithic Material

6,959	Argillite flakes
435	Basalt flakes
30	Chalcedony flakes
420	Chert flakes
<u>5</u>	Quartzite flakes
7,849	

Faunal Material

12	Calcined bone fragments
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Table D.216.

Faunal Material, TLM 128

Unit	Description
6c, 7, 8 Contact between eolian deposit, lower paleosol, and glacial drift	8 Long bone fragments, calcined, mammal 1 Long bone fragment, calcined, large mammal
7 Lower paleosol	3 Long bone fragments, calcined, mammal

Table D.217.

Artifact Summary by Stratigraphic Unit, TLM 128

Unit	Description
Surface	5 Argillite flakes 2 Chert flakes 1 Chert modified flake (UA82-68-16) 2 Chert scrapers (UA83-230-18, 72) 2 Argillite biface fragments (UA82-68-3 articualtes with 321)
Unit 1 organic mat	2 Argillite flakes 1 Basalt flake 1 Chert flake
Unit 1/2, 2 Contact between organic mat and decayed organic horizon, decayed organic horizon	10 Argillite flakes 3 Basalt flakes 1 Chalcedony flake 2 Chert flakes 1 Argillite modified flake (UA83-230-229) 1 Basalt biface fragment (UA83-230-245)
Unit 1/3 Contact between organic mat and Devil tephra	18 Argillite flakes 5 Basalt flakes 1 Chert flake

Table D.217. (Continued)

Unit		Description
Unit 1/4	3	Argillite flakes
Contact between	2	Basalt flakes
organic mat	2	Quartzite flakes
and Watana tephra		
Units 1/6	1	Argillite flake
Contact between		
organic mat and		
eolian deposit		
Unit 3	16	Argillite flakes
Devil tephra	3	Quartzite flakes
Unit 3/4	1	Argillite flake
Contact between		
Devil and Watana		
tephras		
Unit 4	3	Argillite flakes
Watana tephra	3	Chert flakes
	1	Chert modified flake (UA83-230-221)
Unit 4/5	1	Argillite flake
Contact between	2	Basalt flakes
Watana and		
Oshetna tephras		
Unit 5	1	Argillite flake
Oshetna tephra		

Table D.217. (Continued)

Unit		Description
Unit 6	1	Obsidian blade fragment (UA82-68-15)
Eolian deposit		
Units 6a & 6b	3	Argillite flakes
Eolian deposit	1	Basalt flake
	1	Chert flake
Unit 6c	298	Argillite flakes
Eolian deposit	22	Basalt flakes
	26	Chert flakes
	1	Argillite modified flake (UA82-68-227)
	1	Chert modified flake (UA82-68-86)
	1	Chert biface tip (UA82-68-85)
	1	Argillite triangular point fragment (UA82-68-226, articulates with UA83-230-25 from unit 7)
Unit 6b/7	159	Argillite flakes
Contact between eolian deposit and lower paleosol	23	Chert flakes
Unit 6c/7	381	Argillite flakes
Contact between eolian deposit and lower paleosol	5	Basalt flakes
	9	Chert flakes
	1	Argillite modified flake (UA83-230-91)
	1	Argillite triangular point (UA83-230-97)

Table D.217. (Continued)

Unit	Description
Unit 7	3,451 Argillite flakes
Lower paleosol	268 Basalt flakes
	28 Chalcedony flakes
	19 Chert flakes
	7 Argillite modified flakes (UA82-68-188, 216, 218; UA83-230-23, 54, 55, 158)
	1 Chert modified flake (UA82-68-141)
	1 Chert scraper (UA83-230-41)
	4 Argillite biface fragments (UA82-68-187; UA83-230-36, 42, 43)
	1 Basalt biface fragment (UA82-68-222)
	3 Argillite preforms (UA82-68-186; UA83-230-104, 236)
	2 Argillite triangular points (UA83-230-24, 25) (UA83-230-25 articulates with UA82-68-226 from unit 6c)
	2 Argillite flake cores (UA82-68-189, 246)
Unit 7/6c	27 Argillite flakes
Contact between	3 Basalt flakes
lower paleosol	1 Chert flake
and eolian	1 Basalt triangular point fragment (UA83-230-190)
deposit	

Table D.217. (Continued)

Unit		Description
Unit 6c/7/8	2,546	Argillite flakes
Contact between	119	Basalt flakes
eolian deposit,	1	Chalcedony flake
lower paleosol,	314	Chert flakes
and glacial	3	Argillite modified flakes (UA82-68-79, 80,
drift		81)
Unit 7/6c/8	2	Argillite flakes
Contact between		
lower paleosol,		
eolian deposit,		
and glacial drift		
Unit 6c/8	1	Basalt flake
Contact between	1	Argillite biface tip (UA83-230-128)
eolian deposit and		
glacial drift		
Unit 7/8	11	Argillite flakes
Contact between	2	Basalt flakes
lower paleosol and		
glacial drift		
Unit 8	2	Argillite flakes
Glacial drift	11	Chert flakes
Rodent burrow	18	Argillite flakes
	1	Basalt flake
	7	Chert flakes
	1	Argillite modified flake (UA82-68-225)

AHRS Number TLM 129; Accession Number UA82-69

Area: Southeast of Watana Creek Mouth
Site Map: Locus A, Figure D.167
Locus B, Figure D.168
Survey Locale 125: Figure E.198
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 southeast of the confluence of Watana Creek with the Susitna River, at ca. 700 m asl (2300 feet). It lies on a low ridge in the center of a relatively flat, gently northward-sloping lacustrine plain bordering the Susitna River. The plain, which is about 500 m wide from the edge of the river canyon to the north to the steep uplands in the south, is about 190 m higher than the Susitna River. The plain is generally boggy, containing a number of small drainages and ponds. A small lake (less than 1 ha) is located ca. 1.4 km west of the site. Two small creeks lie on each side of the ridge on which the site is located, to the east and west. A series of low, rounded ridges and knolls composed of glacial drift rise 3-10 m above the plain along its length. The site consists of two loci located on two separate but adjacent knolls on a single more or less continuous, sinuous, north-south trending ridge which is ca. 400 x 50-100 m at its base. Locus A is situated on top of a high, arcuate knoll about 100 m south of the northern end, with a related feature near the base of the ridge just east of the knoll. Locus B lies at the top of a flat, rounded knoll 200 m to the south of locus A. Visibility from the ridge is excellent, since it is one of the highest in the vicinity, and offers a panoramic view of small drainages on either side, as well as of the black spruce woodlands and bogs on the plain (north, east, and west) and of the southern uplands. Vegetation on the ridge consists of lichen, low heath, dwarf birch, and scattered spruce. Small deflated areas and frost boils are common.

Testing:

The site consists of two loci. Locus A contains a small surface and subsurface lithic scatter with a small possible cache pit (0.8 m in diameter and 15 cm deep) 26 m to the east (105 degrees) near the base of the slope. It was not tested. A 40 x 40 cm test pit excavated adjacent to the surface lithic scatter (test pit 1) revealed basalt flakes in situ in and above the Devil tephra (Table D.218). Locus B lies approximately 200 m south (200 degrees) of locus A, and consists of an isolated, possible cache pit 1.4 m in diameter and 30 cm deep. It was not tested. Twenty-seven shovel tests were placed between and in the vicinities of the loci, and deflated areas were examined carefully. No additional artifacts were found. Estimated size for locus A based on the distribution of artifacts is 150 square meters. Estimated size for locus B based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.218.

Artifact Summary, TLM 129

Provenience		Description
<u>Lithic Material</u>		
Surface:		
<u>Locus A</u>	7	Basalt flakes
Subsurface:		
<u>Locus A</u>		
Test pit 1	31	Basalt flakes

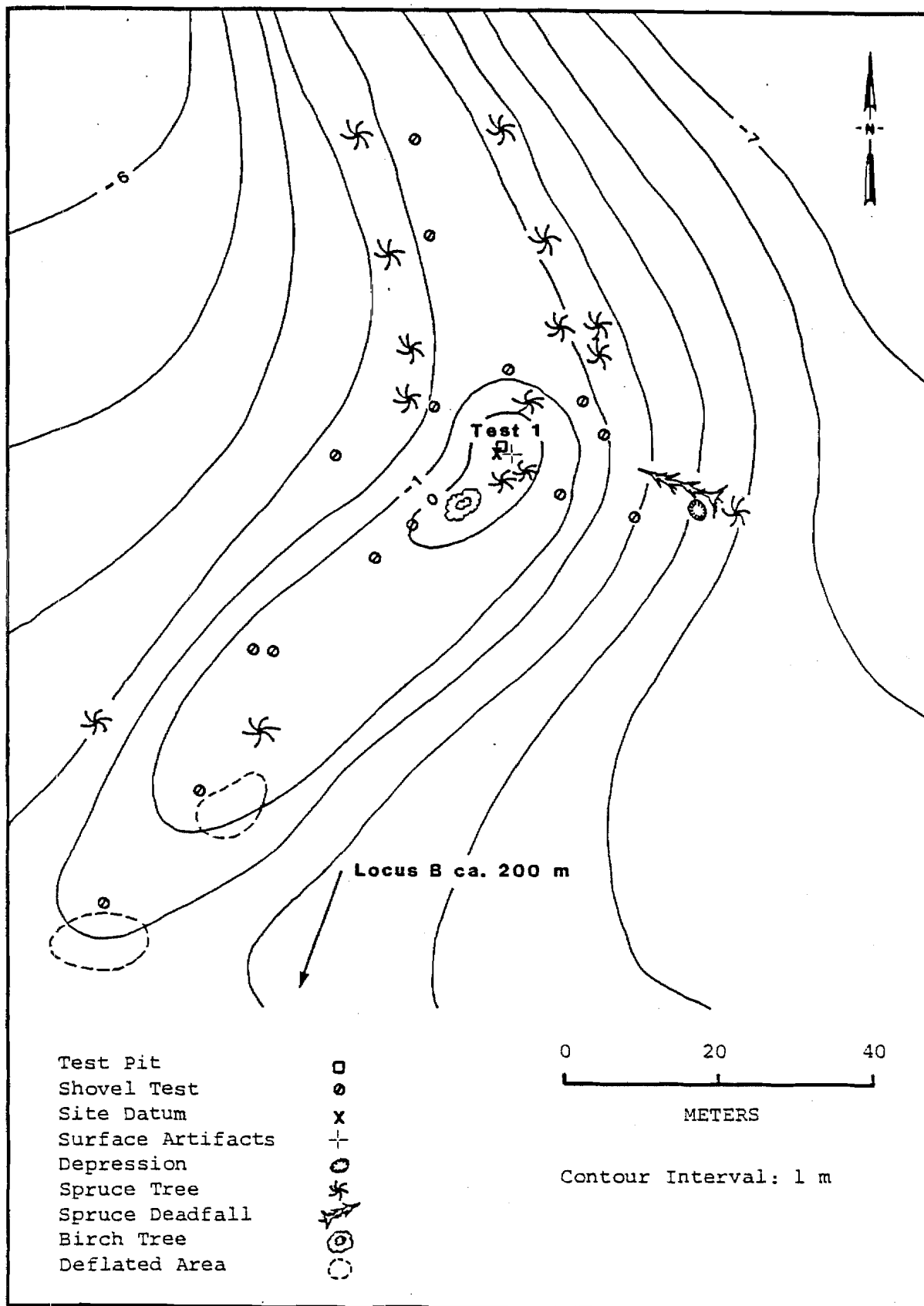


Figure D.167. Site Map, TLM 129 Locus A

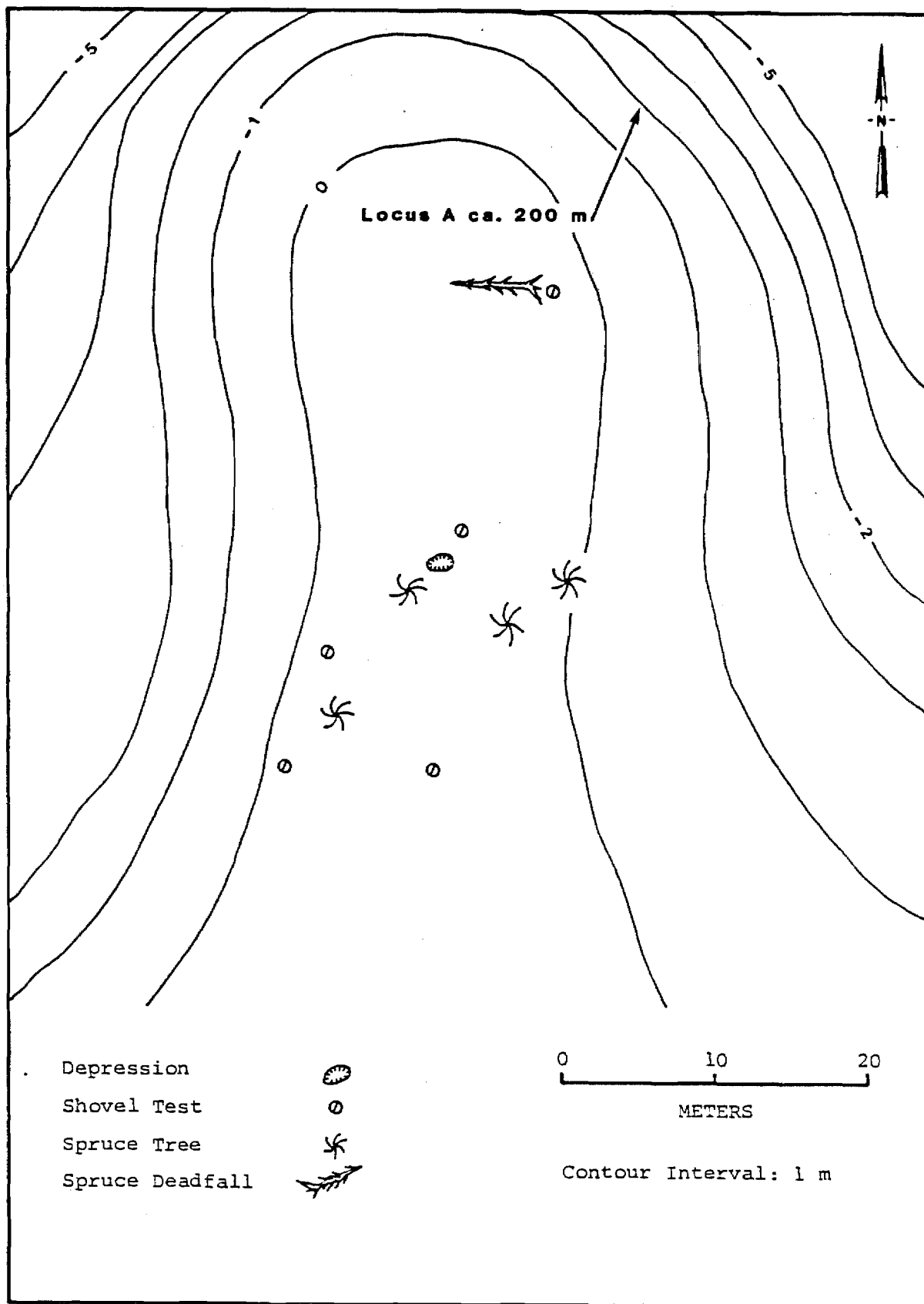


Figure D.168. Site Map, TLM 129 Locus B

AHRS Number TLM 130; Accession Number UA82-70

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.169
Survey Locale 125: Figure E.198
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on a small knoll at approximately 671 m asl (2200 feet) near the southern rim of the Susitna River canyon, southeast of the confluence of Watana Creek with the Susitna River. The knoll, a northeast-southwest trending glacial kame about 30 x 7 m, and ca. 1 m high, is situated on a glaciolacustrine plain which slopes gradually up from the rim of the Susitna River canyon (north of the site) for a distance of about 500 m to merge with steep-walled uplands in the south. The plain is generally flat and boggy, but numerous knolls and ridges are located on it. These knolls and ridges range from 25-300 m in length and from 1-10 m higher than the plain, and provide dry areas within this boggy plain. The knoll on which TLM 130 is located is one of the smallest knolls in the area. Small drainages traverse the plain in a north-south direction; one of these lies 100 m to the west of the site, forming a small canyon to the northwest. A larger creek lies 250 m to the east, beyond a series of higher ridges and knolls. The view to the east is obstructed by these ridges which are ca. 6 m high. To the south and west the view of the boggy plain is partially limited by open black spruce forest and low knolls. The uplands to the south are clearly visible, and the Susitna River canyon (but not the river) is visible to the north. Vegetation on the site consists of fairly continuous lichen mat and low heath, with dwarf birch growing on the sides. Spruce are scattered about the sides, and make up open woodlands and thickets in the bogs away from the site, 60 m to the south. Gravel exposures and frost boils are rare.

Testing:

During survey testing, an initial shovel test was excavated near the center of the knoll at TLM 130. This shovel test produced 15 pieces of burned bone and 6 flakes (of 3 different raw materials); it was later expanded to a 40 x 40 cm test pit (test pit 1), which yielded additional lithics and bone. A second shovel test was excavated at the north end of the knoll, but failed to produce cultural material. No surface artifacts were found.

Four 1 x 1 m test squares were excavated during systematic testing. The four test squares were located on the southern portion of the knoll. These tests were placed in a checkerboard pattern providing a 4 m continuous profile along the E100 grid line from N94 to N98. The placement of these squares was designed to define the cultural component(s) identified during survey testing and to obtain additional diagnostic artifacts.

Discussion:

Test pit 1 and all four of the test squares produced cultural material with three of the squares containing both lithic and faunal material and the fourth square containing lithic material only. An inventory of these artifacts, representing one or possibly two archeological components, is presented in Table D.220.

Five soil/sediment units were identified above the glacial drift (Figure D.170; Table D.219). Site stratigraphy at TLM 130 is composed of 15-20 cm of soil/sediments underlain by glacial deposits of sandy till with gravels, pebbles and cobbles. Three tephra units were identified and referred to as the Devil, Watana, and Oshetna, although the definition of the Watana tephra is in question at this site. A thin lens of grayish brown matrix was located within what may be the Watana tephra in between the upper oxidized and the lower yellowish brown zones. This lens lacked continuity and was often patchy in appearance. Mixed stratigraphy, the undulating appearance of the soil/sediment units, and

gravels located in all stratigraphic units indicate that cryoturbation has been prevalent on the kame. A thin layer of lichen and organic material at the upper extent may indicate that vegetation was not present to stabilize the surface. Surface frost features were evident along the kame edges with an erosional feature bordering the western portion of N97/E99.

Lithic material, which was collected during both survey and systematic testing, represents four different material types. During survey testing an endscraper (UA82-70-11; Figure D.382a) of yellowish brown chert was found in situ in test pit 1 in association with the Watana tephra. During systematic testing 26 flakes of the same material as the scraper were located. As with the other lithic material, these flakes came from a number of different stratigraphic levels. One of these flakes, located at the Devil tephra and Watana tephra contact, exhibited unifacial retouch and is classified as a modified flake (UA82-70-171). A burin spall fragment (UA82-70-210) of a gray chert was recovered from within unit 3; the possible Watana tephra. The remaining lithic material collected from both phases of testing include 141 flakes with no apparent retouch or modification. Material types and the number of flakes associated with each type are summarized on Table D.220.

Faunal material from the site consisted of 1348 bone fragments, the majority of which were calcined, and 10 tooth fragments. Most of the faunal material can be described as small unidentifiable fragments, but the tooth fragments and two calcined metapodial fragments were identified as caribou or possible caribou (Rangifer tarandus). The majority of the faunal material, including all identifiable specimens, is concentrated in unit 3 and the associated grayish brown matrix. Only 3 bone fragments were found in the Devil tephra, and only 127 were found at the lower Devil tephra contact (Table D.221).

As mentioned above, artifactual material, was recorded from several stratigraphic units of the four 1 x 1 test squares. These units include the surface organic layer, Devil tephra, possible Watana tephra, and a lens of matrix within this proposed tephra. Material found in

association with the Oshetna tephra appears to be displaced as the result of frost activity. Cryoturbation has probably mixed artifactual material through several stratigraphic levels, as was indicated by the apparent lack of concentration in the distribution of lithic artifacts and material types, flakes upended relative to stratigraphic contacts, and undulating stratigraphy. Although there is no clear separation, the vertical distribution of faunal material occurs lower than that of lithic material and may indicate that there are two components at the site.

The possible upper component at the site is associated with the upper stratigraphic levels including a surface organic unit (unit 1) and an underlying unit (Devil tephra, unit 2) to the contact with the oxidized zone (unit 3a). Of 144 lithics recovered from this site, 94 were in association with these stratigraphic units. The lithic material includes four different material types: argillite, basalt, chalcedony, and chert. The majority of the lithics are concentrated in two centrally positioned test squares, N95/E99 and N96/E100. In addition, 130 bone fragments were recovered from the same stratigraphic context. This quantity of bone is minimal when compared to the lower units, and its provenience may be the result of vertical displacement.

Artifactual material, including numerous calcined bone fragments and lithic debitage, was located throughout the middle tephra (oxidized zone) to the contact with the Oshetna tephra in three of the four test squares. Of the 1,358 bone and tooth fragments recovered from this site, 1228 were from this stratigraphic context. The spatial distribution of the faunal material indicates that this is a localized phenomenon. The majority of bone fragments were recovered from test square N95/E99, although fragments were also recovered from N96/E100 and N94/E100. The horizontal distribution of bone fragments in N96/E100 defines the northern border of this concentration of bone fragments, with almost all of the faunal material recovered from the southwest and southeast quadrants. In addition, bone from N94/E100 consisted of only 76 small fragments, with 72 of these fragments recovered from a small area in the northeast quadrant. This square then defines a southern

edge to the concentration, limiting the spatial extent of the bone concentration to an area of 2-3 m in diameter.

Of particular interest was a thin discontinuous lens, 1 cm or less in thickness, of grayish brown matrix (unit 4). This lens is stratigraphically positioned beneath the oxidized zone 1-3 cm below the Devil and possible Watana tephra contact. It was recognized in all four of the test squares, and was associated with faunal remains and lithics in three of the test squares. In test square N95/E99 a dark-stained organic matrix (unit 4a), associated with this lens, contained numerous bone fragments and charcoal. In both test squares N94/E100 and N96/E100, bone was found on the upper contact of this unit with larger (ca. 5-7 cm) bone fragments resting on the surface in test square N96/E100. While artifactual material was found both above and below this lens and horizontally beyond the extent of it, the lens appears to be part of an occupational surface. In portions of test squares N94/E100, N95/E99, and N96/E100, the Watana tephra was altered and contained charcoal flecks with an indistinct lens of grayish brown matrix, correlating stratigraphically with the grayish brown unit.

Review of the collection of artifacts recovered from this site (summarized in Table D.222) indicates that the stratigraphic position(s) of the cultural component(s) remains problematic. The lithic artifactual material occurs in highest frequency in upper stratigraphic units, but also occurs in lower stratigraphic units. There is no distinct division between lithic material types in the cultural strata, between the Devil tephra and Watana tephra. If an additional component is represented, the displacement of lithic material may be too great to define its original stratigraphic position or its correlation with the faunal material.

One radiocarbon determination on charcoal is available from the site. Sample UA82-70-158, collected from a dark organic matrix (unit 4a) associated with the grayish brown lens, produced a date of 1420 ± 70 years: A.D. 530 (Beta-5363). The stratigraphic position of the sample dates the cultural component associated with the faunal material. When

considering the amount of cryoturbation observed at the site, it is possible that the radiocarbon sample was contaminated; and therefore, does not provide a reliable date.

Evaluation:

The size of the kame upon which the site is situated and the spatial extent and nature of the artifact assemblage indicate that TLM 130 probably functioned as a temporary campsite where tool manufacturing occurred. While a multicomponent site may be represented, systematic testing was only able to accurately define one component. Failure to clearly document either the presence or absence of an additional component may be attributed to cryoturbation and the subsequent distribution of lithic material types, with specimens intruding into a number of different stratigraphic layers.

The component which was defined at TLM 130 is situated stratigraphically within what appears to be the Watana tephra. Numerous calcined bone fragments, flakes, a yellow brown chert endscraper, and a burin spall were located within this stratigraphic context. A radiocarbon determination of 1420 ± 70 years: A.D. 530 (Beta-5363) was obtained from a charcoal sample collected from the grayish brown lens in unit 4a. As the sample is in association with artifactual material, it should date the cultural component. The radiocarbon date is younger than the generally accepted date for the contact between the Devil and Watana tephras. It is probable that the radiocarbon sample was contaminated, and therefore does not provide a reliable date.

If an additional component is represented at this site, it would postdate the Watana tephra. This component would be distinguished primarily by the presence of lithic artifacts which were recovered throughout the stratigraphic levels above the contact of this tephra. Estimated site size based on the distribution of artifacts is 12 square meters (Table D.2).

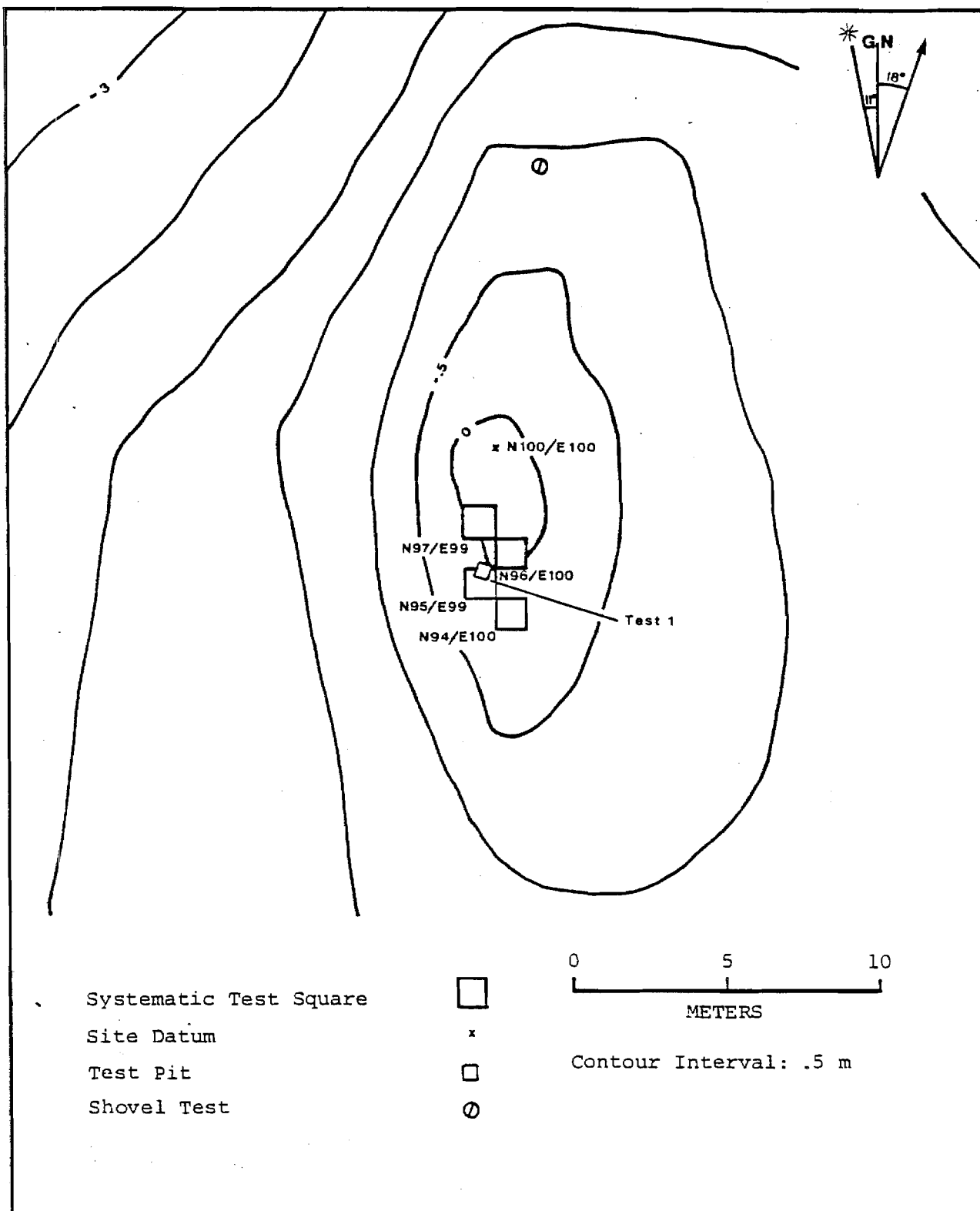


Figure D.169. Site Map, TLM 130

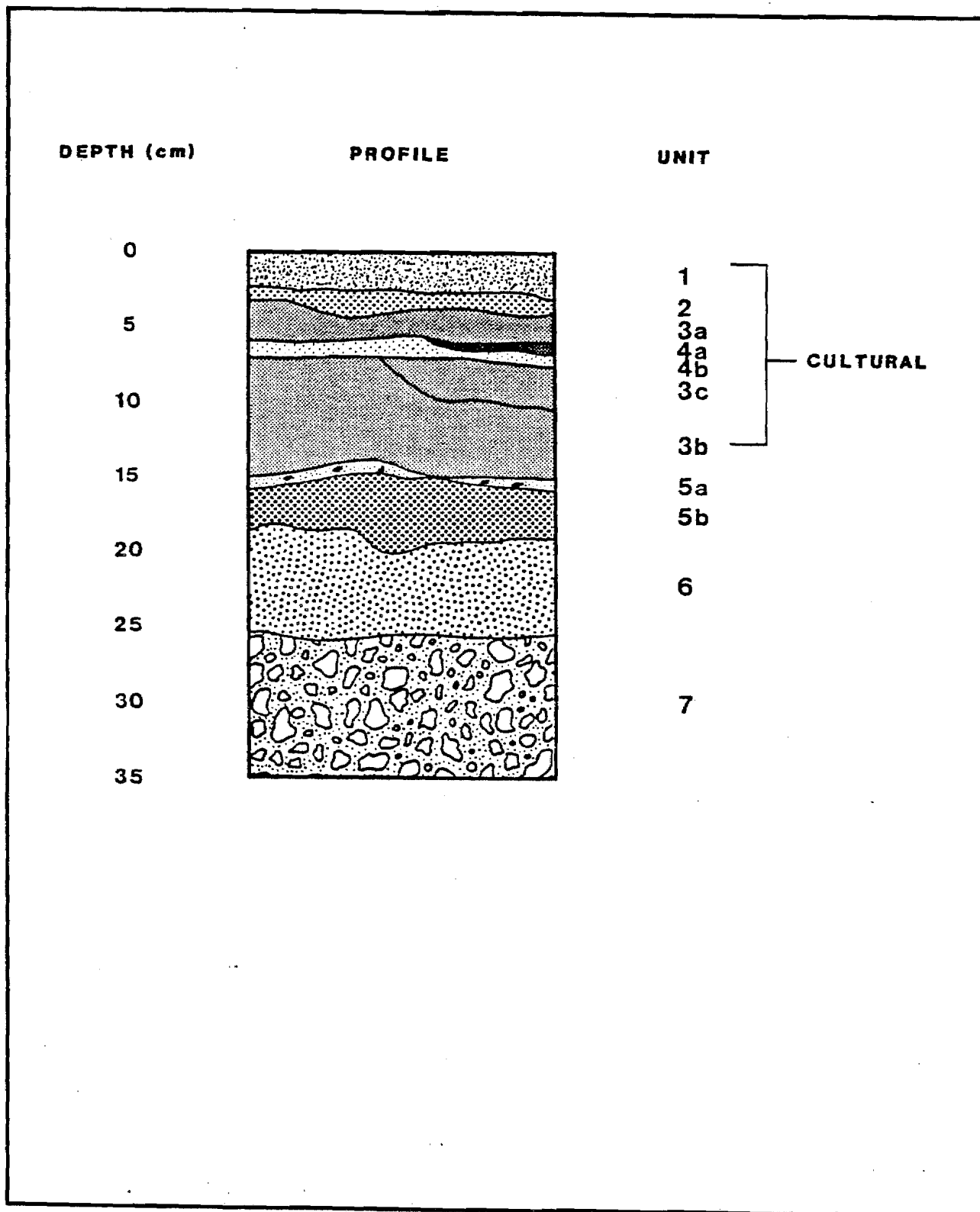


Figure D.170. Composite Profile, TLM 130

Table D.219.

Soil/Sediment Description for Composite Profile, TLM 130

Unit	Description
1	Organic layer: roots, crowberry, and lichen underlain by decomposed plant fragments and finely divided organic material. Dark brown (7.5YR 3/2). Continuous. Unit 1-4 cm in thickness. Contains charcoal. Clear to sharp contact.
2	Very fine silt size particles; light brownish gray (10YR 6/2). Contains small charcoal flecks and a small number of gravels. A horizon. Devil tephra. Variable in thickness and continuity. Clear to sharp contacts.
3a	Granular structure; strong brown (7.5YR 4/6). Watana tephra. Oxidized zone at upper extent, variable in color depending on degree of oxidization. Thickness varies from 1-3 cm. Sharp upper boundary.
3b	Very fine particles; light yellowish brown (10YR 6/4). Watana tephra. Unit 3a grades into unit 3b. Variable in depth but continuous throughout. Lower contact sharp.
3c	Very fine particles, cultural alteration with small amounts of charcoal and bone fragments. Variable in color from grayish brown (10YR 5/3) to yellowish brown (10YR 5/6). Watana tephra. Thickness from 7-9 cm. Discontinuous and does not extend into N97/E99. Similar in stratigraphic position to Unit 3a. Contacts clear to gradational.

Table D.219. (Continued)

Unit	Description
4	Very fine silt size particles; grayish brown (10YR 5/2) to light yellowish brown (10YR 6/4). Color variation may be due to cultural alterations. Varies from 0.5-1.5 cm. Discontinuous lens, present in all test squares, stratigraphically positioned between units 3a and 3b. Contacts clear. May represent a cultural surface.
4a	Fine-grained matrix; dark brown (10YR 3/3). At upper extent of unit 4 contained numerous bone fragments, in addition to charcoal, and possibly organic material. Located only in N95/E99.
5a	Matrix with charcoal; dark grayish brown (10YR 3/2). Thin lens (less than 1 cm). Upper contact sharp. Lacks continuity but present in all squares.
5b	Granular structure with a small number of gravels; gray (10YR 5/1). Oshetna tephra. Varies from 1.5-3 cm in thickness. Discontinuous with undulating appearance. Clear contacts.

Table D.219. (Continued)

Unit	Description
6	Sandy silty matrix with coarse sand particles and gravels; dark yellowish brown (10YR 4/6) to yellowish brown (10YR 5/8), depending on degree of oxidation. Oxidized glacial drift. Upper contact clear to sharp.
7	Medium to coarse sand with pebbles and cobbles; dark grayish brown (10YR 4/2). Unoxidized glacial drift; unconsolidated. Unit determined limit of excavation.

Table D.220.

Artifact Summary, TLM 130

Tools

1	Modified flake 1 Chert (UA82-70-171)
1	Scraper fragment 1 Chert (UA82-70-11)
1	1 Burin spall fragment 1 Chert (UA82-70-210)

3

Lithic Material

37	Argillite flakes
57	Basalt flakes
5	Chalcedony flakes
42	Chert flakes

141

Faunal Material

1,358	Bone and teeth fragments
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Table D.221.

Faunal Material by Stratigraphic Unit, TLM 130

Unit		Description
1/3	3	Long bone fragments, calcined, medium-large mammal
Contact between organic layer and Watana tephra		
2	3	Long bone fragments, calcined, medium-large mammal
Devil tephra		
2/3	90	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
Contact between Devil and Watana tephra	34	Long bone and unidentifiable bone fragments, calcined, mammal
3	1	Metapodial fragment, calcined, possible caribou (<u>Rangifer tarandus</u>)
Watana tephra	582	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
3a	1	Incisor fragment, calcined, possible caribou (<u>Rangifer tarandus</u>)
Oxidized Watana tephra	3	Molar fragments, calcined, possible caribou, (<u>Rangifer tarandus</u>)
	109	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
	3	Long bone fragments, calcined, mammal

Table D.221. (Continued)

Unit	Description
3b Unoxidized Watana tephra	12 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
3a/3c Contact between oxidized and culturally altered Watana	6 Molar fragments, calcined, caribou (<u>Rangifer tarandus</u>)
3c Culturally altered Watana	70 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
	72 Long bone and unidentifiable bone fragments, calcined, mammal
3a/4 Contact between oxidized Watana tephra and grayish brown matrix	1 Unidentifiable bone fragment, calcined, mammal
3c/4 Contact between culturally altered Watana tephra and grayish brown matrix	1 Long bone fragment, calcined, large mammal 27 Long bone and unidentifiable bone fragments, calcined, medium-large mammal

Table D.221. (Continued)

Unit	Description
3/4a Contact between Watana tephra and dark brown organic matrix	1 Distal metatarsal fragment, calcined, caribou (<u>Rangifer tarandus</u>)
4 Grayish brown matrix	4 Long bone fragments, calcined, medium-large mammal
4a Dark brown organic matrix	301 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
5 Oshetna tephra	33 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
3, 5, 6, 7 Mixed Watana, Oshetna, and oxidized and unoxidized drift	1 Long bone fragment, calcined, medium-large mammal

Table D.222.

Artifact Summary by Stratigraphic Unit, TLM 130

Unit	Description	
Surface	1	Basalt flake
1	2	Argillite flakes
Organic layer	7	Basalt flakes
	1	Chalcedony flake
	8	Chert flakes
1/2	3	Argillite flakes
Contact between	6	Basalt flakes
organic layer	2	Chalcedony flakes
and Devil tephra	3	Chert flakes
2	9	Argillite flakes
Devil tephra	10	Basalt flakes
	8	Chert flakes
2/3	19	Argillite flakes
Contact between	7	Basalt flakes
Devil and Watana	1	Chalcedony flake
tephras	5	Chert flakes
	1	Chert modified flake (UA82-70-171)
	1	Chert scraper fragment (UA82-70-11)

Table D.222. (Continued)

Unit	Description
3 Watana tephra	4 Argillite flakes 23 Basalt flakes 1 Chalcedony flake 15 Chert flakes 1 Chert burin spall fragment (UA82-70-210)
4 Grayish brown matrix	1 Chert flake
4a Dark brown organic matrix	3 Basalt flakes 2 Chert flakes

AHRS Number TLM 131; Accession Number UA82-71

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.171
Survey Locale 125: Figure D.198
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on a low knoll south of the Susitna River and southeast of the confluence of Watana Creek with the Susitna River. The knoll is located in an area characterized by low ridges and knolls on a relatively flat, gradually north-sloping lacustrine plain, at an elevation of ca. 677 m asl (2220 feet). The steep south wall of the Susitna River canyon lies within 600 m of the site to the northeast. A small clear water creek lies 60-80 m to the west of the site. The knoll is ca. 20-30 m at the base, with a north-south trending major axis, and rises to ca. 1.5 m above the adjacent, flat, ground surface. The view from the top of the knoll is obstructed by 2-5 m high discontinuous ridges and knolls within 100 m to the north and northeast, but is good to the east and west, encompassing hummocky, poorly drained areas and broad, low drainages in these directions, as well as the facing slopes of low ridges not more than 500 m distant. To the south, the gradually rising lacustrine plain is in view, as well as the steeply rising uplands which form the south wall of the Susitna River valley ca. 0.5-1 km distant. A reduction in the density of black spruce thickets and woodlands from ca. 30-150 m to the east, south, and west of the site would result in improved visibility. Vegetation on the knoll consists of lichens, grasses, forbs, low shrubs, and one small spruce tree. Small deflated areas and frost boils occur sporadically.

Testing:

The site contained one brown chert flake found on a deflated area near the top of the knoll (Table D.223). A single 40 x 40 cm test was dug immediately southwest and slightly upslope from the location of the flake, intersecting the margin of vegetative mat surrounding the deflated area and exposing stratified soils, with negative results. Exposures on and near the knoll were examined carefully, but no additional artifacts were found. No shovel tests were dug. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.223.

Artifact Summary, TLM 131

Provenience	Description
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Lithic Material

Surface:	1 Chert flake
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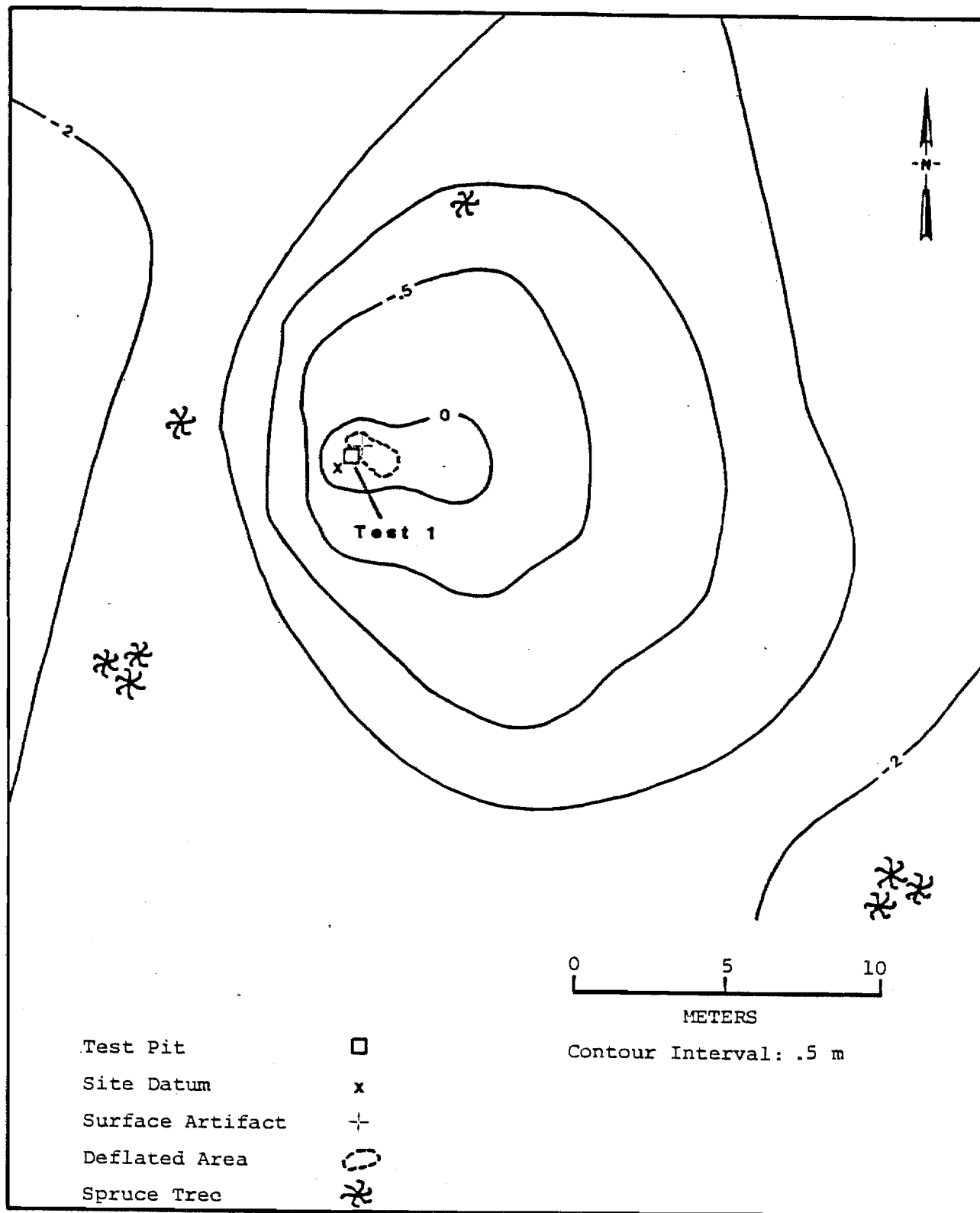


Figure D.171. Site Map, TLM 131

AHRS Number TLM 132; Accession Number UA82-72

Area: Southeast of Watana Creek
Site Map: Figure D.172
Survey Locale 116: Figure E.186
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on a northeast-southwest oriented knoll south of the Susitna River and southeast of the mouth of Watana Creek. The site is situated at an elevation of ca. 686 m asl (2250 feet) on top of the south end of the knoll. The knoll is flattened on top, measuring 45 x 25 m. Numerous large soil exposures give evidence of cryoturbation. The knoll is one of several east-west trending knolls that are separated by drainages or bogs. These knolls are kame deposits situated upon a 1 km wide gently sloping lacustrine terrace which is also oriented east-west. Shallow drainages flow north along the sides of the knoll. These drainages and the terrace area south of the site are obscured from view by dense stands of black spruce. Northern views from the site are also limited by spruce in the drainages and by its position on the knoll, although the view from the northern limit of the knoll is panoramic, encompassing the gentle slope descending to a flat plain bordering the Susitna River. The river is visible for several kilometers in all northerly directions, as is rising topography on its north side. Other knolls are visible to the west and northeast, ca. 200 m distant. Vegetation on the site knoll consists of large areas of lichens, crowberry, blueberry, Labrador tea, and dwarf birch. Vegetation surrounding the knoll in all directions except north is composed of stands of dense black spruce and thick sphagnum moss covering the ground. The flat plain bordering the Susitna River is heavily vegetated with black spruce and willow. Several sites have been located on nearby knolls to the east and west (TLM 120 through 125, TLM 127, TLM 129 through 133, and TLM 064).

Testing:

One single gray chert flake was found on the surface of an exposure (Table D.224). Thirteen shovel tests were placed on the knoll and numerous exposures were investigated, all with negative results. A test pit was not excavated at TLM 132. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.224.

Artifact Summary, TLM 132

Provenience	Description
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Lithic Material

Surface:	1 Chert flake
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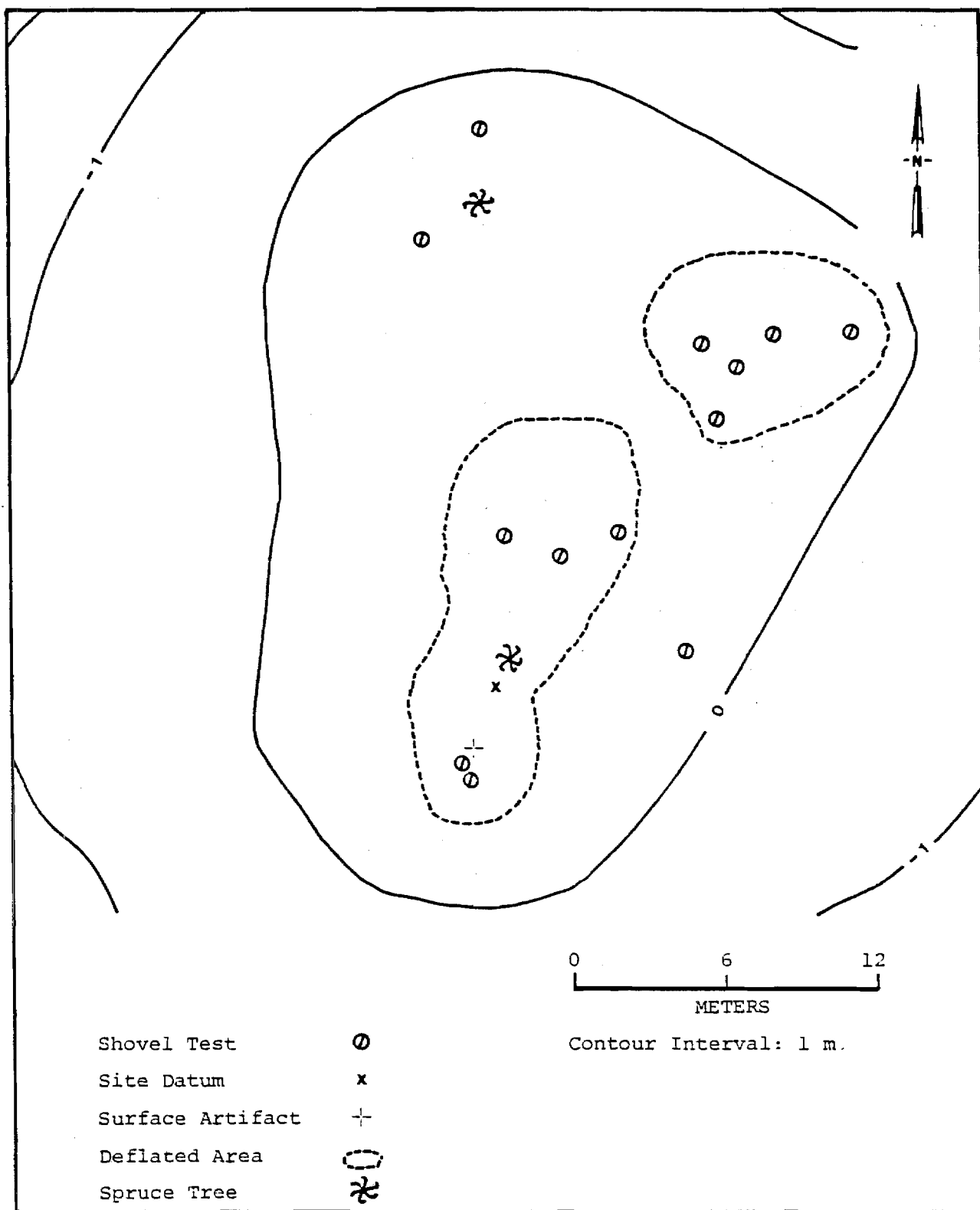


Figure D.172. Site Map, TLM 132

AHRS Number TLM 133; Accession Number UA82-73

Area: Southeast of Watana Creek Mouth
Site Map: Figure D.173
Survey Locale 125: Figure E.198
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 133 is situated at ca. 677 m asl (2220 feet) on the broad crest of a kame forming a ridge located south of the rim of the Susitna River canyon and southeast of the mouth of Watana Creek. The ridge is approximately 150 m long trending in a northeast-southwest direction, with a broad flat top about 35 m wide. It is arcuate in shape, with high points on the northeastern and southwestern ends and a saddle approximately 1 m lower in elevation between them. The site is located in this saddle, midway along the ridge top. The top of the ridge is from 3-5 m higher than the surrounding flat, boggy glaciolacustrine plain, which extends on all sides. To the north, the plain is only a small area about 25 m wide between the edge of the kame and the rim of the Susitna River canyon. To the south, the plain rises gradually towards steeper upland areas, about 500 m distant. Numerous other ridges and knolls are found on this plain along its ca. 10 km (east-west) length. Small to moderately large creeks crosscut the plain in some areas; one of these flows northward, 150 m east of the site. Elsewhere the plain is boggy, or low and intermittently wet. The Susitna River canyon, north of the site, drops steeply 200 m down to the Susitna River; access to the river is possible by more gradual ridges located to the northeast and northwest. From the ridge top, the Susitna River and its canyon can be seen, and a commanding view of the surrounding plain and southern uplands is available to the south, east, and west. Site vegetation consists of dwarf birch shrub, low heath, lichen mat, and scattered spruce and paper birch. Frost boils and gravel exposures are common, especially on the sloping sides of the kame. Game trails are common.

Testing:

A single brown chert biface fragment (UA82-73-1; Figure D.382b) was encountered on the surface of a lichen mat in a game trail (Table D.225). A 40 x 40 cm test pit (test pit 1) was placed adjacent to the location of the biface, but no additional cultural material was recovered. Twelve shovel tests were scattered around the ridge top and surrounding area, with negative results. Game trails, gravel exposures, and lichen mats were examined, but no additional surface artifacts were recovered. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.225.

Artifact Summary, TLM 133

Provenience	Description
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Lithic Material

Surface:	1 Chert biface fragment (UA82-73-1)
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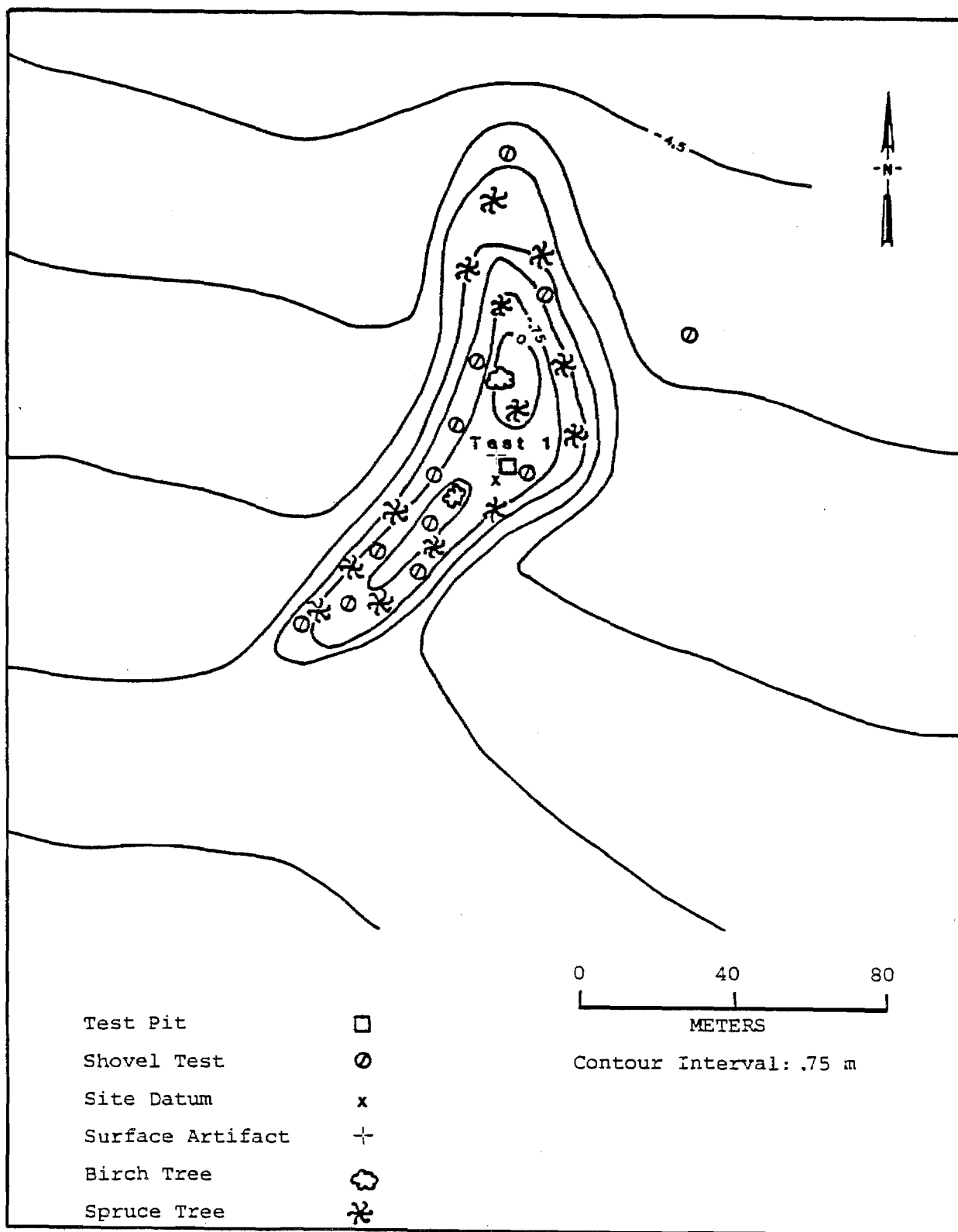


Figure D.173. Site Map, TLM 133

AHRS Number TLM 134; Accession Number UA82-74

Area: North-northeast of Jay Creek Mouth
Site Map: Figure D.174
Survey Locale 127: Figure E.201
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located north-northeast of the confluence of Jay Creek with the Susitna River. It is situated at an elevation of ca. 800 m asl (2625 feet) at the southeastern edge of a 300 m long ridge oriented northeast-southwest, which descends to the rim of the Jay Creek canyon. The southern end of this ridge branches, forming two separate sections (a western and an eastern) separated by a small drainage swale ca. 3 m lower in elevation and measuring ca. 75 x 40 m. The site is situated on the eastern section which measures approximately 100 x 200 m and TLM 135 is located on the western section. The site is in the middle of a gentle slope on a gravelly soil exposure measuring 1.5 x 1.5 m. Views from the site are obscured to the northwest and west by spruce and intervening topography. A gentle slope rises ca. 200 m to the north where TLM 128 is located. Mountainous foothills are visible to the north about 2 km distant. Views to the south and east include high topography on Jay Creek's east side and the Susitna River's south side. Site vegetation on the slope adjacent to the gravelly soil exposure includes cranberry, crowberry, blueberry, and extensive lichen mat. Flat areas between slopes have woody shrubs of dwarf birch and Labrador tea. A small black spruce stand west of the site separates the site and the drainage swale. Black spruce and aspen are on the south and east facing slopes descending to Jay Creek. The gently rising northern slope is covered by dwarf birch with isolated black spruce. Other sites are present nearby. Within 1 km of TLM 134 are TLM 128, TLM 135, TLM 136, TLM 144, and TLM 143.

Testing:

The site is a surface lithic scatter (Table D.226). No subsurface artifacts were observed at the site. Six shovel tests were placed in the site area. Three green retouched argillite flake fragments were located on a gravelly soil exposure on a gentle slope. The three flake fragments articulate forming an edge modified tool (UA82-74-1, 2, 3). Additional surface survey of soil exposures and lichen mat revealed one other surface artifact, a cobble (UA82-74-5), that may have a modified edge. It lies 10 m south of the site datum on a flat area below the site. A shovel test was placed adjacent to this find, but no artifacts were observed. One 40 x 40 cm test pit was excavated at the site, but no additional artifacts were recovered. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.226.

Artifact Summary, TLM 134

Provenience	Description
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Lithic Material

Surface:	3 Argillite modified fragments (UA82-74-1, 2, 3 all articulate)
	1 Cobble, possibly modified

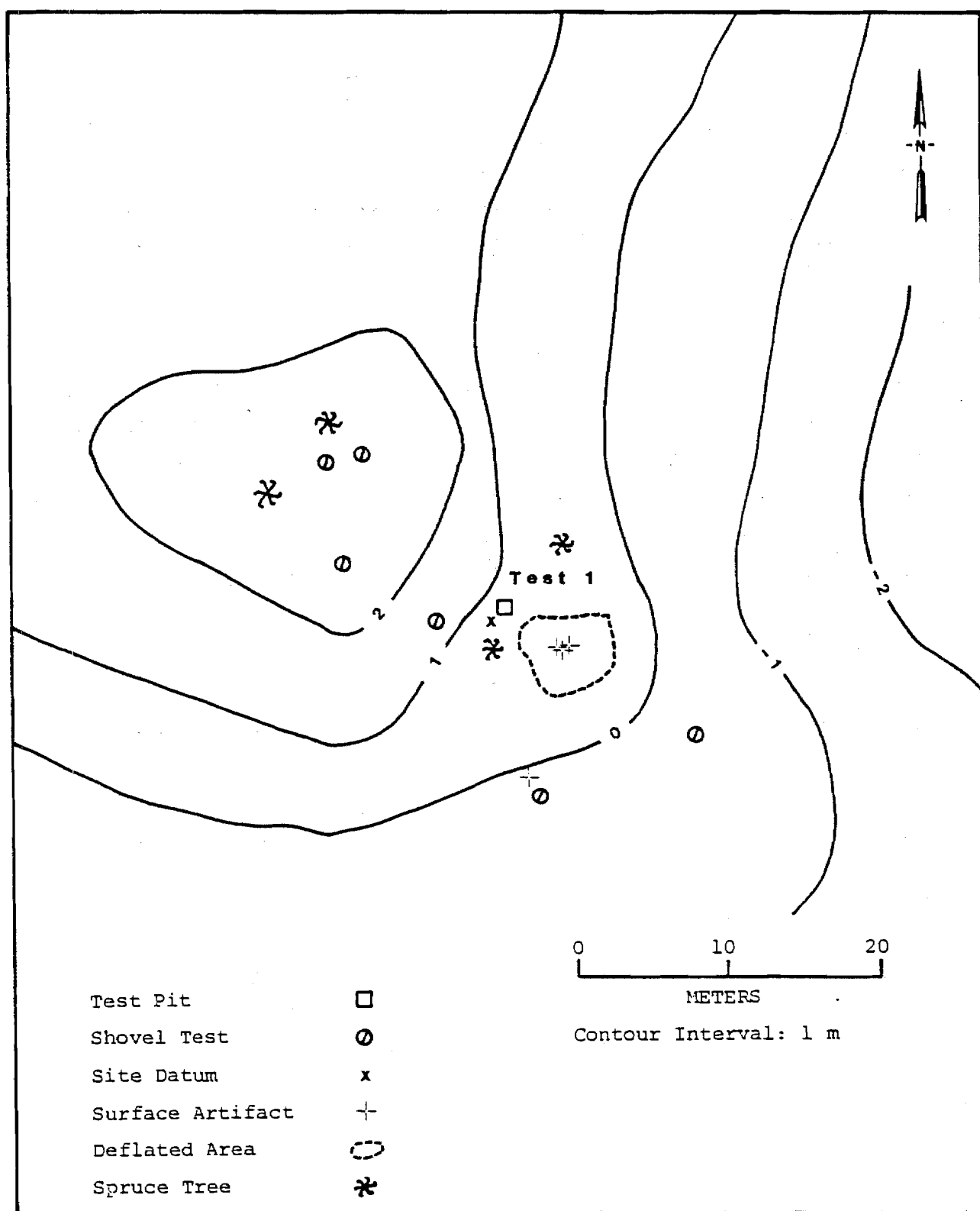


Figure D.174. Site Map, TLM 134

AHRS Number TLM 135; Accession Number UA82-75

Area: Northeast of Jay Creek Mouth
Site Map: Figure D.175
Survey Locale 127: Figure E.201
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is at an elevation of ca. 800 m asl (2625 feet) on a discrete linear rise situated on the southeastern extension of a broad sloping ridge. This ridge is oriented in a northeast-southwest direction and descends from an elevation of ca. 838 m asl (2750 feet) to the rim of the Jay Creek canyon. The linear rise extends from the ridge and has steep east, southeast and south slopes averaging 10-15 degrees. The east slope continues down to Jay Creek which is east and ca. 152 m lower in elevation. The southeast and south slopes descend into a drainage which flows into Jay Creek. The linear rise is separated from an additional rise, ca. 60 m northeast, by a broad swale. On this rise is the location of TLM 134, a surface lithic scatter. TLM 135, on the southeastern edge, occupies an eroded area on the central portion of the crest of the linear rise. The upper extent of this terrain feature has dimensions of ca. 100 x 15 m. The ridge system is bordered on the southeast and northeast sides by drainages which flow into Jay Creek, draining the upland area. Visibility of these drainages and Jay Creek is obscured by vegetation and by the lower slopes. Terrain northeast of the site is similar to the site area with ridge extensions perpendicular to Jay Creek. Southwest of the site the terrain broadens out to a glaciolacustrine plain with discrete topographic features. The predominant view from this site is to the south and southwest toward the vicinity of a mineral lick which appears to be the focal point for the location of sites in this area. The mineral lick is to the south where Jay Creek makes tight 90-degree turns. North of the site the upland topography is visible including the terrain features on which TLM 128 and TLM 144 are located. The view to the northeast is restricted by a

rise on the northeastern terminus of the ridge upon which TLM 134 is located. Vegetation on the site consists of scattered spruce with lowbush cranberry, blueberry, dwarf birch, lichens, crowberry, bearberry, and scattered grasses. An open mixed spruce-hardwood forest is characteristic of the vegetation on the slopes with high brush in open areas.

Testing:

The site is composed of surface lithic artifacts exposed in an eroded area on the crest of a discrete linear rise. Artifactual material comes from a 3 x 2 m area of this exposure and includes a basalt side-notched point (UA82-75-1; Figure D.382c), and eight basalt waste flakes (Table D.227). A 40 x 40 cm test (test pit 1) was placed on a vegetated area off the exposure with negative results. Five shovel tests were placed along the crest of the rise, but none of these contained artifactual material. Estimated site size based on distribution of artifacts is 32 square meters (Table D.2).

Table D.227.

Artifact Summary, TLM 135

Provenience	Description
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Lithic Material

Surface:	8	Basalt flakes
	1	Basalt notched point (UA82-75-1)

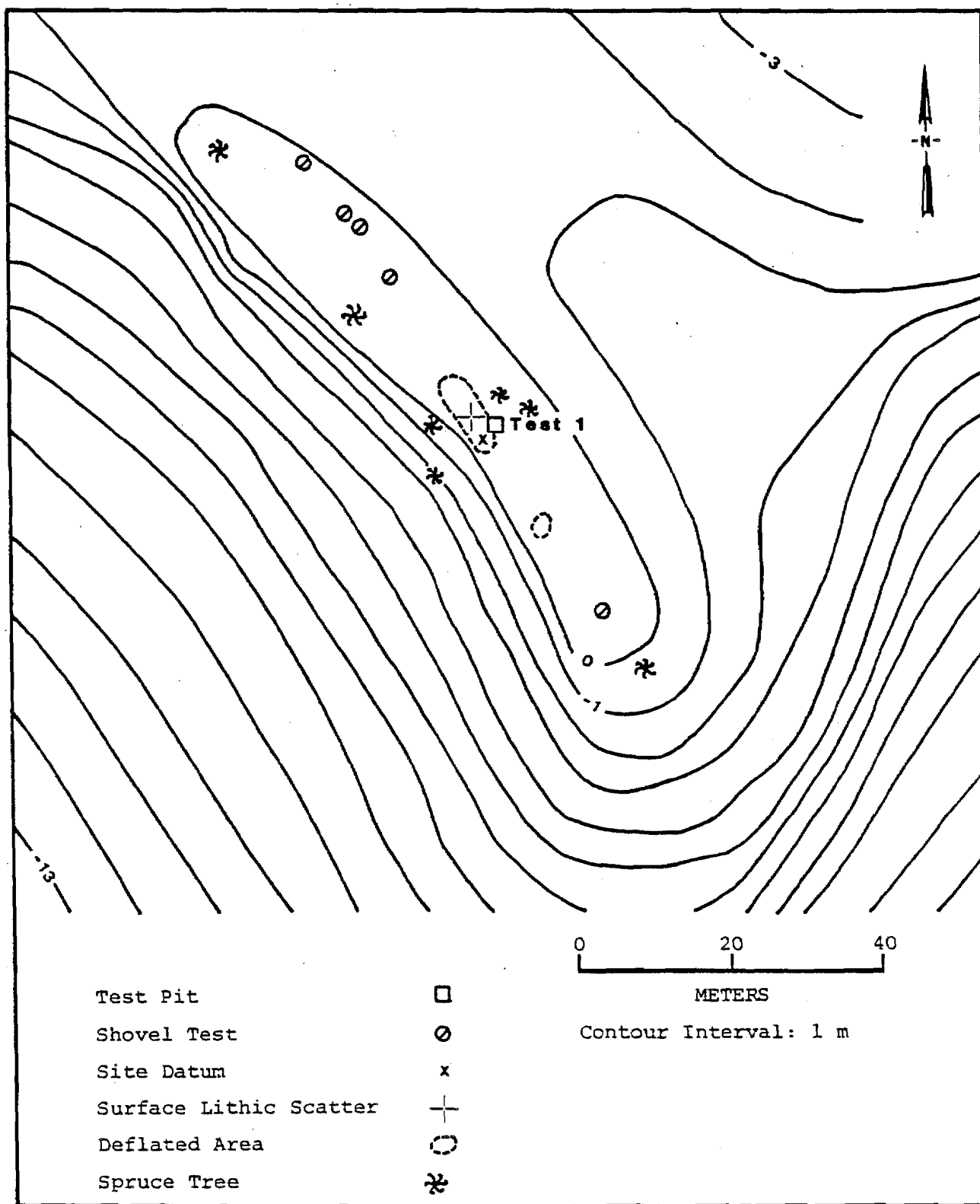


Figure D.175. Site Map, TLM 135

AHRS Number TLM 136; Accession Number UA82-76

Area: North-northeast of Jay Creek Mouth
Site Map: Figure D.176
Survey Locale 127: Figure E.200
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located on a small circular knoll west of Jay Creek, north-northeast from its mouth. Terrain southeast of this knoll slopes gradually for approximately 40 m to the western rim of the Jay Creek canyon. Situated at an elevation of ca. 787 m asl (2580 feet), and ca. 146 m above Jay Creek, the site is characterized by a 1.5 m rise above surrounding terrain. The level area at the upper extent of the knoll measures ca. 5 x 7 m with basal measurements of ca. 13 x 17 m marking the lower extent. Approximately 250 m to the northwest a continuous southeast-facing hill slopes from an elevation of ca. 823 m asl (2700 feet) down into a shallow basin with a west to east flowing creek situated ca. 150 m northeast of the knoll. Two narrow (ca. 50 cm) and shallow (ca. 30 cm) streams that merge and then diverge along a relatively straight path, ultimately flow into Jay Creek east of the site. Thick brush obscures the creek from view. Site vegetation includes blueberry, Labrador tea, fireweed, crowberry, moss, black spruce, lichen (white and yellow), dwarf birch, equisetum, willow, grasses, and occasional juniper. Cryoturbation is evident across the level knoll crest. The southeast facing hill described above determines the extent of visibility to the north, northwest, west, and southwest. Visibility to the south is limited to the gentle sloping terrain of the valley rim. Adjacent valley margins to the north and northeast are discernible through open forest up to 1 km. In the absence of a thick spruce stand, located ca. 40 m west, the view would increase in that direction. Several sites have been discovered within a 500 m radius of TLM 136, the closest being TLM 143 situated approximately 200 m southwest.

Testing:

Both surface and subsurface cultural material was recovered. The site was initially identified by a 2.5 x 2.5 m lithic scatter on the central portion of the level knoll crest which is oriented in a northeast-southwest direction (Table D.228). Four lithic artifacts, 1 rock fragment, and 3 bone fragments were collected from the cryoturbated surface, including a basalt scraper fragment (UA82-76-1; Figure D.382d). No subsurface shovel tests were excavated, however a single 40 x 40 cm test pit (test pit 1) was excavated northeast of the surface feature. Artifactual material was recovered from three different stratigraphic units. These include two flakes at 2 cmbs from the contact of a gray-white fine silt (Devil tephra) with a yellow-brown fine silt unit (Watana tephra). Nineteen flakes and 62 calcined bone fragments were located between 4 and 8 cmbs within the oxidized Watana. Twenty-two flakes and five bone fragments were located in a red-yellow fine sandy silt (Watana tephra) between 8 and 12 cmbs. Six flakes were recovered in a reddish brown sandy clayey silt, 12-20 cm below the surface, below a thin layer of gray silt (Oshetna tephra). Faunal material consisted of calcined medium-large mammal long bone and unidentifiable bone fragments, a possible rib fragment, and a possible tibia fragment of caribou (Ranigifer tarandus). The distribution of artifactual material in the test pit indicates that the site is multicomponent. Estimated site size based on the distribution of artifacts is 6 square meters (Table D.2).

Table D.228.

Artifact Summary, TLM 136

Provenience	Description
<u>Lithic Material</u>	
Surface:	2 Argillite flakes
	1 Basalt flake
	1 Basalt scraper (UA82-76-1)
	1 Rock fragment
Subsurface:	
Test Pit 1	18 Argillite flakes
	19 Basalt flakes
	12 Chert flakes
<u>Faunal Material</u>	
Surface:	1 Possible proximal tibia fragment, calcined, possible caribou (<u>Rangifer tarandus</u>)
	2 Unidentified fragments, calcined, medium-large mammal
Subsurface:	
Test Pit 1	1 Possible rib fragment, calcined, medium-large mammal
	66 Long bone and unidentifiable bone fragments, calcined, medium-large mammal

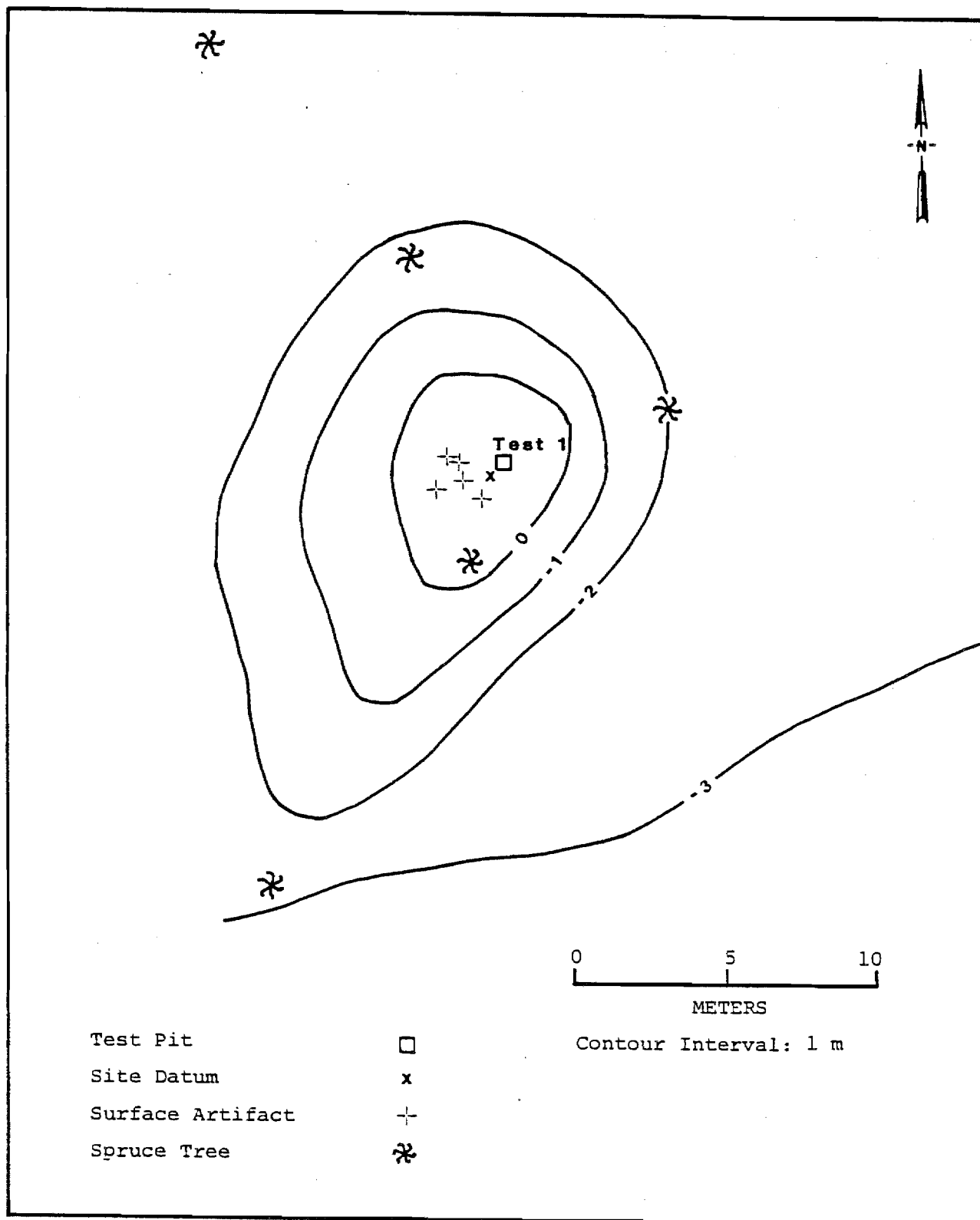


Figure D.176. Site Map, TLM 136

AHRS Number TLM 137; Accession Number UA82-77

Area: Northeast of Tsusena Creek Mouth
Site Map: Figure D.177
Survey Locale 153: Figure E.248
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on a discrete kame northeast of the confluence of Tsusena Creek with the Susitna River at an elevation of 646 m asl (altimeter: 2120 feet). The kame is the highest of a small set of kames forming ridges and knolls that abut the eastern slope of the Tsusena Creek drainage in the vicinity of the site. A 2.5 m deep gully separates the kame from gradually rising or rolling terrain to the south and east, while to the north there is a gradual downward slope to the margin of the Tsusena Creek canyon, which is ca. 600 m to the northwest at its nearest point and ca. 150 m lower in elevation. Two small lakes lie ca. 1 km to the northeast at approximately the same elevation as the site. The cultural material occurred 50 cm below the broad, rounded apex of the kame, which is ca. 70 m (east-west) x 10 m (north-south), and approximately 20 m from its eastern end. The view from the site includes thinly vegetated slopes to the north and south, and the Susitna River valley to the west. The view to the east is obstructed by white spruce stands, but would otherwise encompass rolling terrain of moderate relief. Vegetation at the site consists of well-drained tundra with dwarf birch, paper birch, Labrador tea, lowbush cranberry, crowberry, bearberry, wild rose, grasses, and mosses.

Testing:

A brown chert flake was found 10 cmbs in a shovel test, which was expanded into a 40 x 40 cm test pit (test pit 1). A small black basalt flake was found 10-12 cmbs in test pit 1 in a small area of coarse gray sand (Table D.229). Although the upper stratigraphic units revealed in test pit 1 (interpreted as the Devil and Watana tephras) were largely continuous and well horizoned, the flakes were found in a lower units which were mottled, texturally variable, and evidently cryoturbated, rendering stratigraphic placement difficult or impossible. Seven other shovel tests dug on the kame produced no additional artifacts.

A grid shovel testing program was undertaken to assist in determining site size and distribution of cultural materials. Fifteen grid shovel tests and an additional five survey shovel tests were excavated, however, none contained cultural remains. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.229.

Artifact Summary, TLM 137

Provenience	Description
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Lithic Material

Subsurface:

Test pit 1	1 Basalt flake
	1 Chert flake

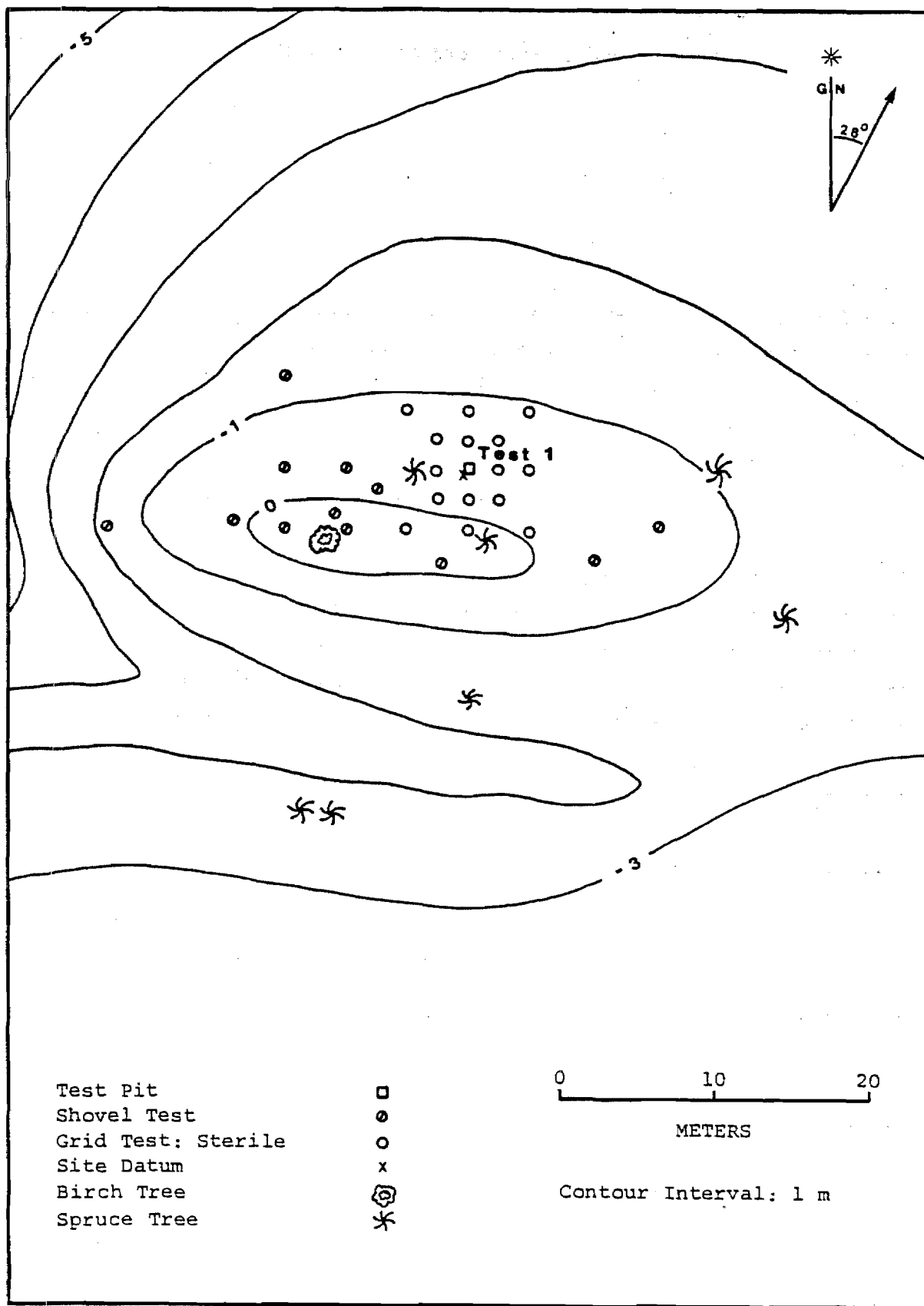


Figure D.177. Site Map, TLM 137

AHRS Number TLM 138; Accession Number UA82-78

Area: North of Jay Creek Mouth
Site Map: Figure D.178
Survey Locale 127: Figure E.200
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is situated on an east-west trending kame forming a ridge located north of the mouth of Jay Creek and northwest of a tight bend in Jay Creek, at ca. 810 m asl (2650 feet) elevation. The ridge is slightly arcuate, and is about 50 (east-west) x 5 m (north-south) at the rounded top. The site occupies the center of the ridge at its crest. It stands about 2 m above a small terrace to the north, while to the south, east, and west it is from 6-10 m higher than the surrounding terrain. A drainage channel curls around the west end of the kame from the terrace to the north, heading southward down a steepening ravine into Jay Creek. A drainage tributary to this ravine lies to the south, leaving the ridge top a relatively high promontory isolated on all sides by relatively deep drainages (10 m for the two tributaries, and over 200 m for the very steep Jay Creek canyon). An excellent view of the surrounding undulating terrace, sloping down southward to the Susitna River canyon, is available from the site. To the north and west, the nearby Jay Creek uplands, rising to ca. 1100 m asl (3650 feet) elevation, are prominent, while to the east the mountains and terrace on the opposite side of Jay Creek can be seen. Jay Creek itself is not visible, nor is it accessible, from the site, because of the extremely steep canyon wall. A mineral lick, favored by sheep, is located in the vicinity. Low lichen and heath vegetation covers much of the surface of the site, with numerous frost boils, rodent burrows, and game trails exposing underlying sediments. Dwarf birch, scattered spruce and paper birch forest the sides of the ridge and surrounding terrain.

Testing:

A black basalt flake was noted on the lichen-covered surface of a frost boil area (Table D.230). A test pit (test pit 1) 40 x 40 cm was placed adjacent to the location of this flake, but no artifacts were encountered. Five shovel tests were also placed on the ridge, with negative results. Surface exposures were also examined, but no additional artifacts were found. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.230.

Artifact Summary, TLM 138

Provenience	Description
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Lithic Material

Surface:	1 Basalt flake
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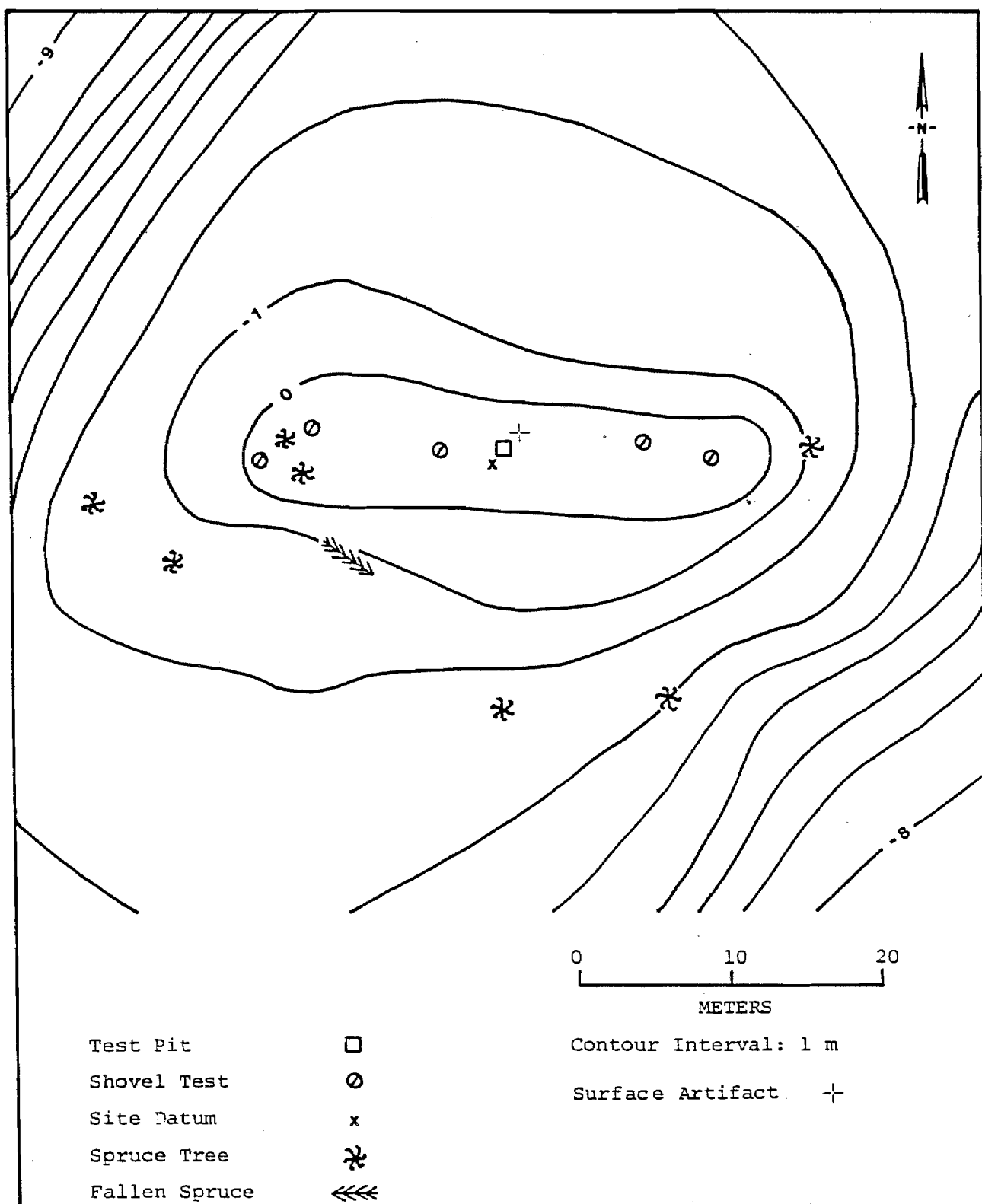


Figure D.178. Site Map, TLM 138

AHRS Number TLM 139; Accession Number UA82-79

Area: North of Jay Creek Mouth
Site Map: Figure D.179
Survey Locale 127: Figure E.200
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site lies on a broad, flat-topped ridge paralleling Jay Creek canyon, on the west side of Jay Creek north of its mouth. The ridge, approximately 400 m (north-south) x 20-100 m, wide descends gradually southward in stepped fashion. It is part of a large, gradually sloping (4-5 degrees) undulating terrace north of the Susitna River, and is divided from the rest of this terrace by Jay Creek canyon, to the east, and by a small unnamed tributary canyon, to the west. The site is located on the eastern edge of the ridge top at ca. 770 m asl (2530 feet) elevation, at the edge of Jay Creek canyon. The ridge is fairly narrow where the site is located, being about 25 m wide. Jay Creek canyon drops steeply to ca. 160 m below the level of the site directly east of the site. To the west, the small drainage canyon is approximately 15 m deep. This small creek is the nearest accessible water. From the site, Jay Creek canyon is visible to the southeast and east. The lower, narrowing reach of the ridge and the adjacent drainage canyon is visible to the south, while to the west the undulating terrace can be seen for a distance of about 500 m before high ground and trees block the view. The uplands beginning ca. 500-1000 m north of the site are plainly visible from the site. The area is covered by dwarf birch scrub, with scattered spruce and paper birch. Cranberry, lichen, blueberry, and Labrador tea make up a fairly continuous ground cover.

Testing:

Cultural material was found in a single test pit in a subsurface context (Table D.231). Forty-five flakes of three different material types and seven pieces of burned bone were collected from a charcoal level beneath the organic mat and above (and slightly mixed with) an ashy silt layer (Devil tephra?). At the lower contact of this charcoal layer and the upper portion of the yellow silt layer (Watana tephra), 48 flakes of three different material types and 76 burned bone fragments were recovered. Faunal material from the site consisted of two probable rib fragments and calcined medium-large mammal long bone and unidentifiable bone fragments. No additional cultural material was encountered on the surface or in two other shovel tests placed in the vicinity of test pit 1. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.231.

Artifact Summary, TLM 139

Provenience	Description
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Lithic Material

Subsurface:

Test Pit 1	60	Argillite flakes
	15	Basalt flakes
	18	Chert flakes

Faunal Material

Subsurface:

Test Pit 1	2	Probable rib fragments, calcined, medium-large mammal
	74	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

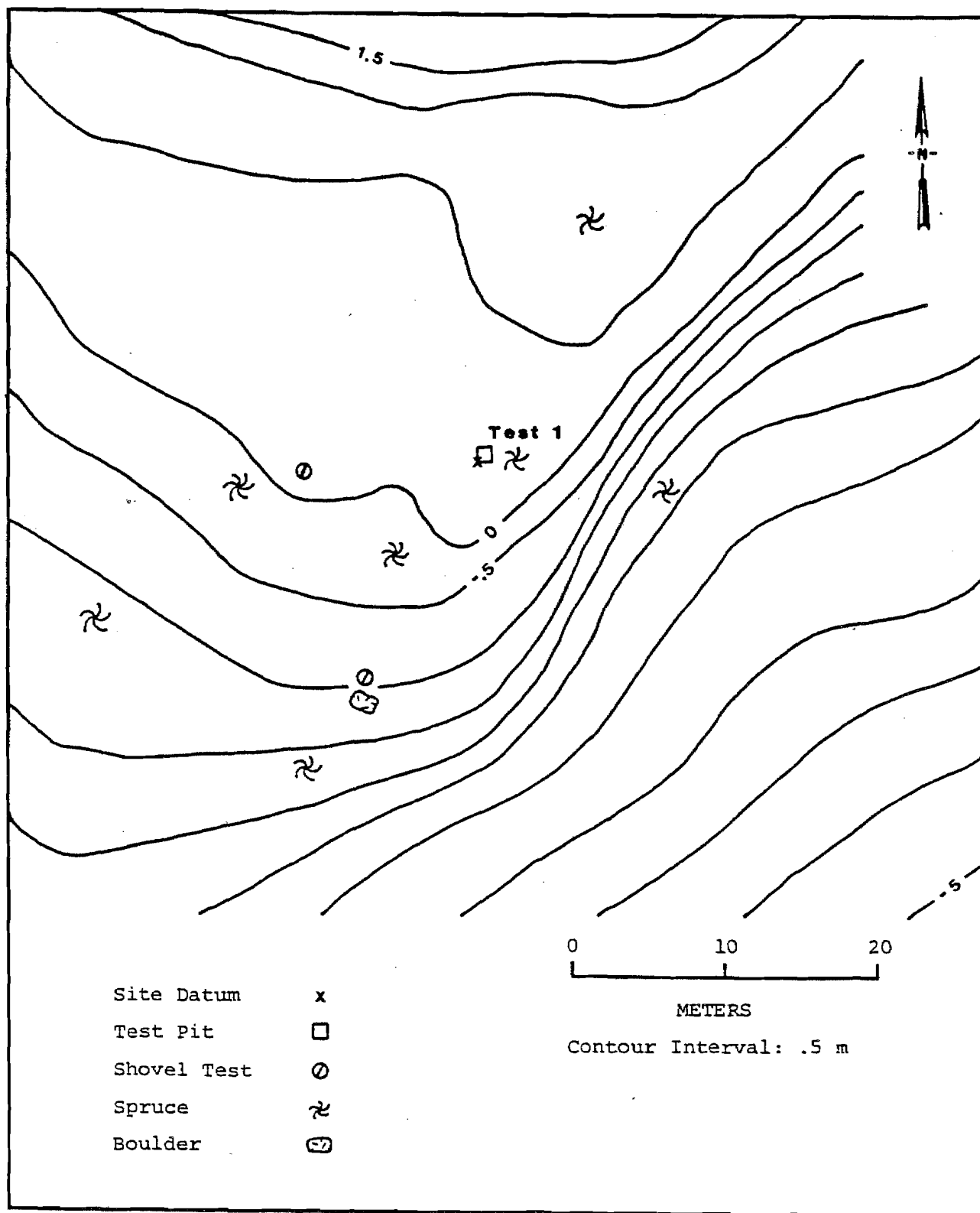


Figure D.179. Site Map, TLM 139

AHRS Number TLM 140; Accession Number UA82-80

Area: North-northeast of Jay Creek Mouth
Site Map: Figure D.180
Survey Locale 127: Figure E.200
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

TLM 140 is located on the crest of a north-south trending ridge along the west side of Jay Creek, north-northeast of the mouth of Jay Creek. The ridge, formed by the convergence of Jay Creek canyon with an unnamed tributary ravine, lies at ca. 757 m asl (2475 feet) elevation, about 153 m above the level of Jay Creek 250 m to the east. The ridge narrows to the south and bends eastward as the tributary ravine steepens and bends towards Jay Creek. At this southern end the ridge is narrow at the crest, but to the north the ridge top is broad and flat, merging with the gradually sloping, undulating terrain surrounding this area. Surface artifacts were found on game trails along this ridge top from the narrow southern end northward about 100 m. West of the site ca. 75 m, the tributary drainage occupies a low broad area about 3-5 m below the level of the site. At the southern end, the ravine is about 15-20 m below the site elevation. The bottom of the ravine is not visible from the site; Jay Creek is not visible, as the view is blocked by trees. The tributary creek is visible to the west, but the view of the surrounding plateau is blocked by higher terrain 150 m to the south-west and west. The slope to the north is not visible, being blocked by forest around the site. Open spruce woodland covers the site area, with a moderately dense cover of dwarf birch, low heath plants, and lichen mat. Extensive exposed areas are present along frequent game trails and on the steep southern end.

Testing:

Cultural material was found on the surfaces of game trails in three localities (Table D.232). A single gray-white argillite flake was found approximately 35 m north of site datum, and a single black basalt flake was encountered on the southern end of the ridge, approximately 50 m south-southeast of site datum. A black basalt modified flake (UA82-80-5) and four flakes of three material types were found in the vicinity of the site datum. A 40 x 40 cm test pit (test pit 1) in this area yielded a black basalt biface fragment (UA82-80-6; Figure D.382e) and 11 flakes of two material types beneath the organic mat and above the pinkish gray silt layer (Devil tephra?). No additional artifacts were found on the surface or in eight other shovel tests. Estimated site size based on the distribution of artifacts is 800 square meters (Table D.2).

Table D.232.

Artifact Summary, TLM 140

Provenience	Description
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Lithic Material

Surface:	3	Argillite flakes
	1	Basalt flake
	1	Chert flake
	1	Basalt modified flake (UA82-80-5)

Table D.232. (Continued)

Provenience	Description
Subsurface:	
Test Pit 1	10 Argillite flakes
	1 Chalcedony flake
	1 Basalt biface fragment (UA82-80-6)

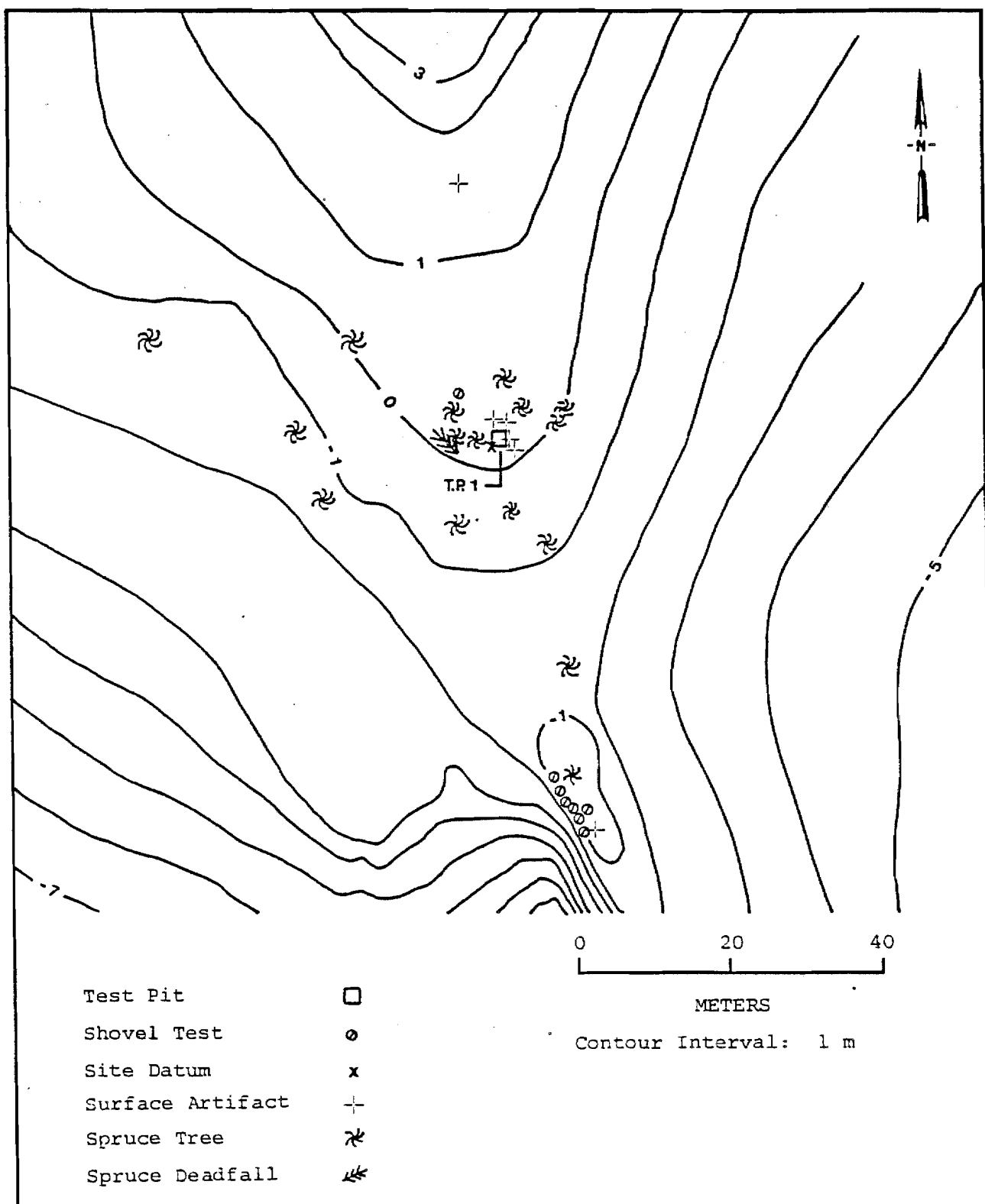


Figure D.180. Site Map, TLM 140

AHRS Number TLM 141; Accession Number UA82-81

Area: North-northeast of Jay Creek Mouth
Site Map: Figure D.181
Survey Locale 127: Figure E.202
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located on a kame, ca. 746 m asl (2450 feet), north-northeast of the mouth of Jay Creek. The site overlooks a tributary ravine to Jay Creek canyon on the east, which drops approximately 150 m down a moderately steep slope to Jay Creek, 500 m to the east. The kame is oriented roughly north-south, and measures approximately 70 x 30 m wide, with a broad, flat top. The site is located midway along the kame on its eastern edge. A clear water creek lies 100 m to the northeast in the steep tributary ravine, and a small (1 ha) marshy pond lies to the west. From the site, a panoramic view of the tributary canyon and Jay Creek canyon is available to the east and south. The undulating kame topography overlying the gradually sloping plateau north of the Susitna River (of which the site kame is a part) is visible to the north, west, and south, although higher terrain blocks the view to the west. Open spruce woodland, with a moderately dense cover of dwarf birch and low heath plants, comprise the vegetation of the site and surrounding areas.

Testing:

Cultural material, consisting of 50 flakes of two material types and one black basalt biface fragment (UA82-81-15; Figure D.382f), was encountered in test pit 1 beneath the organic mat and in the underlying gray-white fine silt (Devil tephra). Three flakes were collected from a small soil exposure on the slope of the terrace, 5 m east-southeast of site datum (Table D.233). Seven shovel tests were placed on the kame, with negative results. No additional surface artifacts were

encountered. Estimated site size based on the distribution of artifacts is 25 square meters (Table D.2).

Table D.233.

Artifact Summary, TLM 141

Provenience	Description
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Lithic Material

Surface: 3 Argillite flakes

Subsurface:

Test Pit 1 32 Argillite flakes
 18 Basalt flakes
 1 Basalt biface fragment (UA82-81-15)

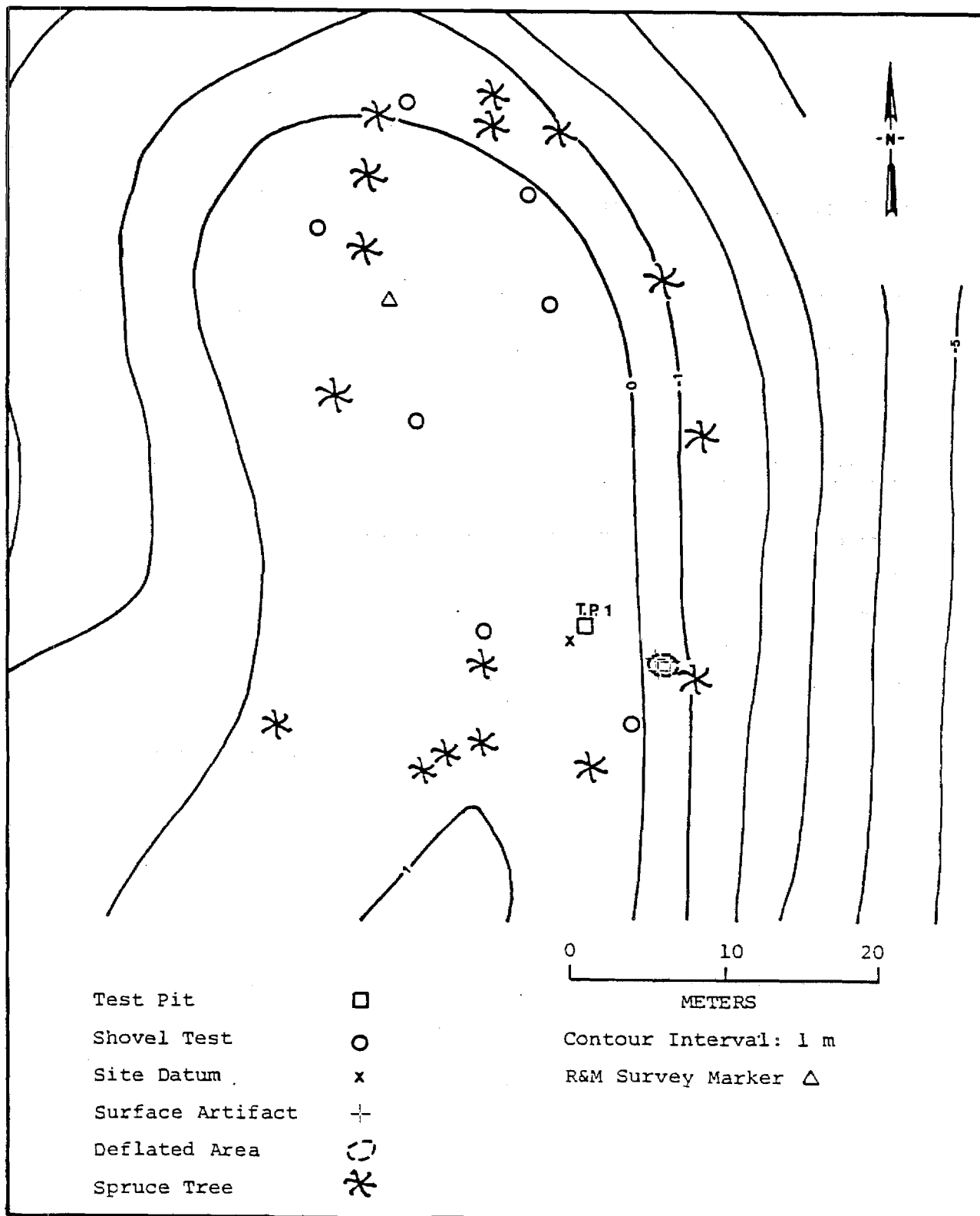


Figure D.181. Site Map, TLM 141

AHRS Number TLM 142; Accession Number UA82-82

Area: North-northeast of Jay Creek Mouth
Site Map: Figure D.182
Survey Locale 127: Figure E.202
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is situated on a low knoll ca. 747 m asl (2450 feet) located upon a plateau west of Jay Creek and north-northeast of Jay Creek mouth. The knoll is elongate, oriented roughly north-south measuring ca. 30 x 11 m at the base, and is ca. 3 m higher in elevation than the surrounding plateau. The area can be described as lacustrine deposits over glacial till. The site is situated in the middle of the knoll 8 m from the northern end. Other similar knolls are present to the southeast, east, and northwest within 200 m of the site knoll. Several small drainages flow east and south off the plateau feeding into Jay Creek to the east and ca. 150 m below, and the Susitna River to the south. Views to the northwest, south, and east are panoramic, encompassing the Jay Creek drainage, Susitna River valley, and intervening rolling terrain. Westerly views are obscured by a nearby stand of black spruce. Vegetation at the site consists of lichens, crowberry, wild rose, Labrador tea, grasses, and some lowbush cranberry. The northern end of the knoll is covered with dwarf birch, as is the perimeter of the knoll. In all directions, except east, the terrain is rolling and covered with dwarf birch and Labrador tea, with small stands of black spruce. A flat, grassy, 1 ha marsh borders the site to the east.

Testing:

Artifacts recovered in subsurface testing include 5 flakes, 10 pieces of thermally altered rock, and 193 bone fragments (Table D.234). No surface artifacts were found. Eight shovel tests were excavated. Only

one of the shovel tests contained cultural remains; this test became test pit 1. Cultural materials came from a stratigraphic unit 4-10 cmbs sandwiched between the Devil and Watana tephras. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.234.

Artifact Summary, TLM 142

Provenience

Description

Lithic Material

Subsurface:

Test Pit 1	1	Basalt flake
	3	Chalcedony flakes
	1	Chert flake
	10	Thermally altered rocks

Table D.234. (Continued)

Provenience	Description
<u>Faunal Material</u>	
Subsurface:	
Test Pit 1	<p>1 Probable deciduous incisor, unburned, caribou (<u>Rangifer tarandus</u>)</p> <p>1 Probable right humerus shaft fragment, unburned, caribou (<u>Rangifer tarandus</u>)</p> <p>1 Left radius/ulna fragment, unburned, caribou (<u>Rangifer tarandus</u>)</p> <p>1 Magnum, calcined, caribou (<u>Rangifer tarandus</u>)</p> <p>1 Metapodial shaft fragment, unburned, probably caribou (<u>Rangifer tarandus</u>)</p> <p>1 Sesamoid bone, calcined, caribou (<u>Rangifer tarandus</u>)</p> <p>2 Phalanx fragments, distal portion, calcined, caribou (<u>Rangifer tarandus</u>)</p> <p>1 Medial phalanx, burned, caribou (<u>Rangifer tarandus</u>)</p> <p>1 Tooth enamel fragment, calcined, artiodactyl</p> <p>6 Long bone and unidentifiable fragments, unburned, medium-large mammal</p> <p>177 Long bone and unidentifiable fragments, burned and calcined, medium-large mammal</p>

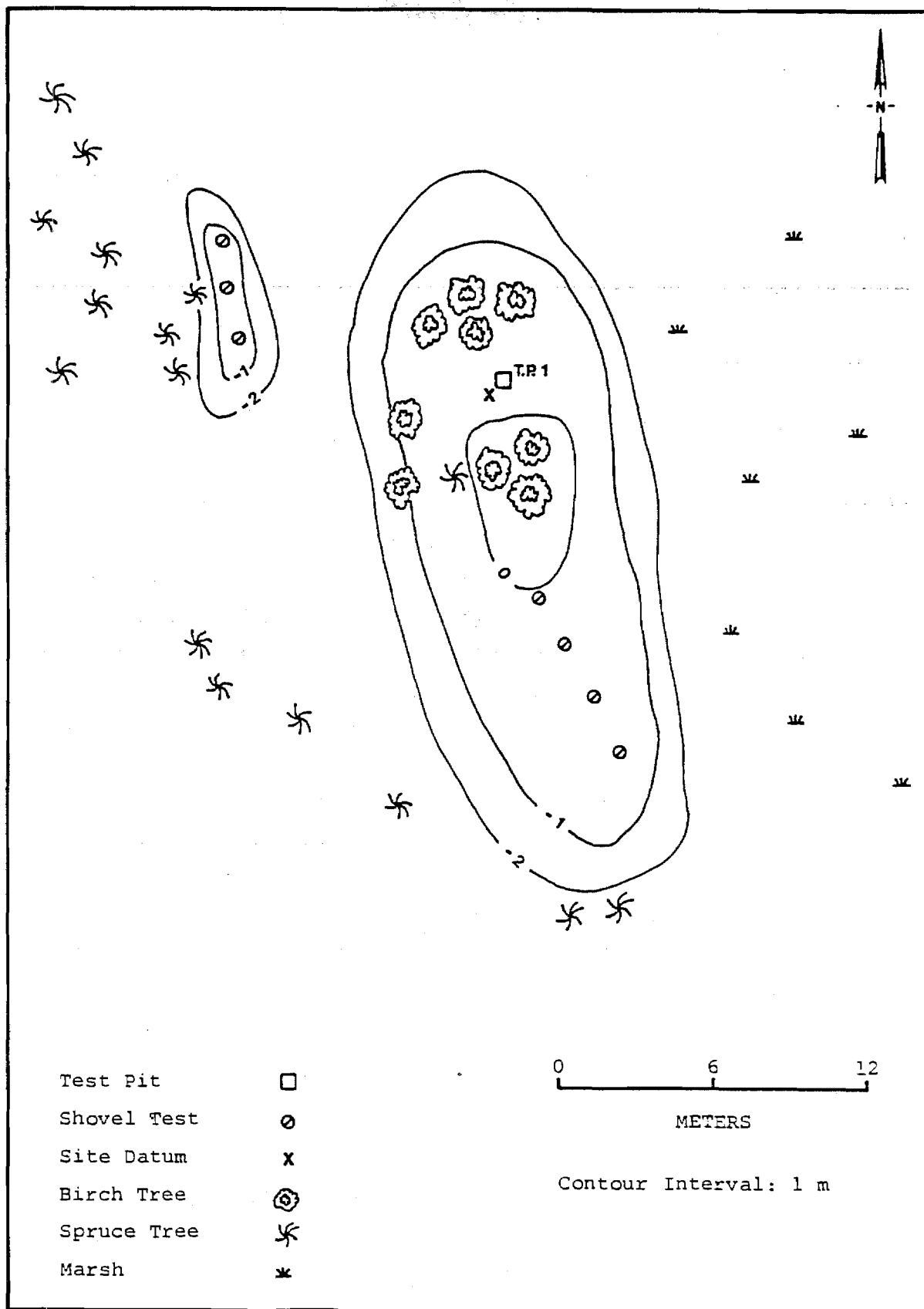


Figure D.182. Site Map, TLM 142

AHRS Number TLM 143; Accession Numbers UA82-83, UA83-216, UA84-104

Area: North of Jay Creek Mouth
Site Map: Figure D.183
Survey Locale 127: Figure E.200
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

TLM 143 is located at 786 m asl (altimeter: 2580 feet) on a broad, slightly undulating, gentle slope west of Jay Creek at the rim of Jay Creek canyon, north of the mouth of Jay Creek. The slope overlooks Jay Creek canyon just north of a very steep cliff face above a constricted meander of Jay Creek, and is approximately 150 m higher than the creek. The site lies on a kame at the edge of this canyon, with some material occurring on a moderately steep slope below the canyon rim leading into the steep canyon itself. The gentle slope descends gradually to the northeast; small linear kames, 1-2 m high and ca. 30 m long trending northwest-southeast, make the surface undulate slightly. This gentle slope is the northeastern edge of a large glaciolacustrine plain on the north side of the Susitna River. The plain has numerous kames on it, and generally descends southward in a gentle, undulating slope. The rest of this plain is not visible from the site due to intervening higher ground to the southwest. That part of the slope on which the site is located descends northeastward. Jay Creek canyon is seen meandering from the northeast to the south of the site. Jay Creek is not easily accessible from the site due to the steepness of the canyon to the south, although moderately steep ridges leading to the creek east of the site may provide access. A small, clear water stream flows 150 m north of the site at the bottom of a gentle slope. This is the nearest accessible water. Beyond this stream the Jay Creek uplands are visible. These uplands extend to the west, blocking the view in that direction. Located in the steep canyon area south of the site is a mineral lick visited by Dall sheep. Over a dozen archeological sites have been found within 1 km of this lick area. TLM 143 is covered with a moderately

dense stand of dwarf birch and fairly complete ground cover of lichen and low heath plants. Spruce, willow, and paper birch are scattered on the gentle slope above the canyon, and become fairly dense on the canyon walls. Game trails, rodent burrows, and frost boils provide a few areas of exposed sediments.

Testing:

During survey, a sparse surface scatter of lithic material was encountered on the rim of the canyon and the edge of the gentle slope leading away from it. Twenty-five flakes, composed of argillite, basalt and chert, were noted on the surface within an area of 70 (northwest-southeast) x 20 m (northeast-southwest). Sixteen of these flakes were collected. These flakes were found in areas of surface exposure (game trails, rodent burrows, frost-boiled areas, and places of active downslope movement of material). A single 40 x 40 cm test pit (test pit 1) was placed on the southeast end of a small kame, 30 m north of the canyon edge. A dense layer of cultural material was encountered in this test pit.

Five 1 x 1 m test squares were excavated at the site during systematic testing. Three of the test squares were located on the southern portion of the kame in the vicinity of test pit 1. These test squares were placed in a checkerboard pattern providing a 3-meter continuous profile along the E100 grid line between N93 and N96, with one of the test squares superimposed over survey test pit 1. The placement of the test squares was designed to further define the cultural component encountered during initial survey. Two additional test squares (N71/E91 and N99/E79) were placed off of the kame to define stratigraphy and site extent.

Grid shovel testing was implemented at TLM 143 to assist in estimating site size and the relative density of artifactual material across the site. One hundred forty-two grid shovel tests were excavated, 42 of which contained cultural material. Refer to Figure D.183 for the distribution of the test pit, test squares, and shovel tests.

Discussion:

During survey testing a scatter of lithic material was encountered in an area ca. 70 x 20 m which borders the Jay Creek canyon rim. Surface artifacts were located in areas of soil exposures including game trails, rodent burrows, frost features, and areas of active downslope movement. A single test pit placed on a kame 30 m north of the canyon rim revealed a layer of cultural material, with ca. 1,300 flakes, ca. 1,300 calcined, long bone fragments, and 2 in situ corner-notched points (UA82-83-1, 2; Figure D.383c,h).

The inventory from grid shovel testing includes 2,208 lithic artifacts, 88 small unidentifiable calcined bone fragments, and a single piece of red ochre. Unmodified flakes account for 2,200 of the lithic artifacts, and the majority of these are of argillite and basalt material types with argillite predominating. While a variety of other lithic material types are included in the assemblage (i.e., chalcedony, chert, obsidian, quartzite, and rhyolite), they account for only 1.2% of the flakes, and can be considered rare. Lithic artifacts with secondary modification include an argillite modified flake (UA84-104-138), an argillite scraper (UA84-104-12; Figure D.384i), and a quartz core (UA84-104-77; Figure D.384q).

While all five of the test squares excavated during systematic testing contained artifactual material the majority of material was recovered from the three test squares located on the kame. Testing at TLM 143 yielded 29,445 lithics, approximately 32,352 bone fragments, 375 thermally altered rock or hearth rocks, 78 ochre pieces, and 100 tools and/or tool fragments. The collection of artifacts is summarized on Table D.236, and the distribution by stratigraphic unit is summarized on Table D.238.

Eight main material types have been recognized in the lithic tools and debitage collected at the site. In order of numerical dominance, they are argillite, basalt, chert, obsidian, chalcedony, rhyolite, quartz, and quartzite.

Nine soil/sediment units were identified at TLM 143 (Figure D.184; Table D.235). No individual test square contained all nine of the recognized units although five of the units were present in all of the test squares. Variability in stratigraphy between tests located on the kame compared to the tests located off of the kame was observed. The stratigraphy of the three test squares located on the kame was generally uniform with less postdepositional disturbance than observed in the two test squares located off the kame, where the processes of downslope movement and reworking of stratigraphic units were evident, particularly in test square N71/E91. This difference was also observed during grid shovel testing.

Three major kinds of stratigraphic units can be identified at the site: natural depositional units, the contacts between them, and a cultural unit. In general, the stratigraphy consists of glacial drift deposits (unit 9) overlain by fine silty eolian sediments (unit 7), which are overlain by silty sediments that have been interpreted as being volcanic in origin. Two and possibly three tephra units were recognized, with the lowermost Oshetna tephra (unit 6b) only defined in one of the test squares (N71/E91), where it showed evidence of reworking. The middle Watana tephra (unit 4) and the uppermost Devil tephra (unit 3) form a continuous unit across the site. The entire stratigraphic sequence is overlain by surface organic material (unit 1).

In addition to the above-mentioned units a number of localized units were also recorded. At the contact between the surface organic mat and the Devil tephra a thin lens of very dark brown finely sorted organic material with charcoal (unit 2) was identified in the test squares on the kame. The unit may be the result of soil processes as indicated by the variation between the O and A horizons. In test square N71/E91 where the Oshetna tephra was observed, a thin layer of finely divided organic material was present at the upper contact of the tephra (unit 6a). In both test squares N71/E91 and N99/E79 a very thin and discontinuous lens of a fine silty organic matrix with charcoal (unit 8) was recorded in the lower extent of the silty sediments and/or on the contact with the glacial drift. This lens may represent a paleosol.

Unit 5, a cultural unit, was identified in the three test squares located on the kame. The unit was stratigraphically positioned immediately beneath the Watana tephra and composed of fine silty sediments which contained an abundance of artifactual material throughout its excavated extent. The silt within the unit was often highly oxidized and contained carbonized matrix and charcoal. The absence of the Oshetna tephra in the test squares located on the kame may indicate that the feature 2 occupation occurred shortly after the deposition of that tephra with the tephra itself becoming incorporated into the cultural unit. Radiocarbon analysis on charcoal from this unit provided three dates. Sample UA82-83-1698, dating the upper contact of feature 2, produced a radiocarbon date of 4100 ± 60 years: 2150 B.C. (Beta-5364). Sample UA83-216-11, dating feature 2 (unit 5a), yielded a radiocarbon date of 4250 ± 110 years: 2300 B.C. (Beta-7697). Sample UA82-83-1701, also dating feature 2 (unit 5a), produced a radiocarbon date of 4440 ± 120 years: 2490 B.C. (Beta-7698).

Cultural material at TLM 143 was associated with five of the nine soil/sediment units (Figure D.184), and the site appears to be multicomponent with three components represented. The exact stratigraphic positions of the uppermost and middle components are difficult to determine at this time as artifacts were located in the organic horizon (units 1, 2), the Devil tephra (unit 3), the oxidized Watana tephra (unit 4a), and at the contacts between them. The lower component (unit 5) was stratigraphically well defined, separated from those above it by the unoxidized Watana tephra which contained very little artifactual material except in the central portion of test square N95/E100 where the unoxidized Watana tephra was absent. Artifacts are illustrated in Figures D.383 and D.384.

Upper Component: The uppermost cultural component can be correlated with the Devil tephra (unit 3). Lithic artifacts were recovered in association with the contact between the organic layer and the Devil tephra and within the Devil tephra in all five of the test squares (Table D.238). One hundred thirty-four lithics were recovered from this contact zone and 174 lithics from within the Devil tephra in the test squares. Lithic artifacts consisted primarily of small flakes, the majority of which were basalt and argillite, although chert and obsidian flakes were also recovered.

Middle Component: The distribution of artifactual material at the upper contact of the oxidized Watana tephra suggests that a middle component is represented in all five test squares at the site. While sterile strata do not separate the artifactual material from the middle and upper components, a number of factors indicate that they are distinct. These include the increase in quantity of artifactual material at the Watana tephra contact, the conformable nature of the stratigraphic units on the kame, minimal movement of artifacts from their original stratigraphic positions, and the presence of feature 1 which was defined in test square N95/E100.

The feature 1 designation was assigned to a possible occupation surface associated with the oxidized Watana tephra. Numerous lithic artifacts and small pieces of charcoal were observed at the contact between the Devil tephra and oxidized Watana tephra (unit 3/4a) and within the oxidized Watana. Definition of occupations was complex in this area of the site and the feature 1 designation was used in test square N95/E100 as a field procedure to assist in defining components at the site. Feature 1 was a continuous lens across the horizontal extent of the test square. In the northern and southern portion of the square, feature 1 was separated from the underlying component, feature 2, by the unoxidized Watana tephra (unit 4b). In the central portion of the test square this separation was not evident and feature 1 articulated with feature 2. The lower boundary of feature 1 was defined by the contact with the unoxidized Watana tephra or, where this stratigraphic unit was

not present, with the contact with a grayish brown lens which is the upper extent of feature 2.

The lithic material associated with the middle component consisted predominantly of small, flakes of argillite and basalt. A total of 817 lithics, 150 small, calcined bone fragments, and 6 tools were associated with this component. Of these, 378 of the lithics, 115 bone fragments, and 3 tools were recorded as part of feature 1 in test square N95/E100. These tools included a basalt modified flake (UA82-83-375), an argillite modified flake (UA82-83-376), and an argillite biface fragment (UA82-83-377; Figure D.383a). Two tools, a basalt modified flake (UA82-90) and an argillite biface (UA82-83-193), were collected from the contact between the Devil and Watana tephras in test square N99/E79. Grid shovel testing produced a quartz biface fragment (UA84-104-77) at the same contact.

Lower Component: The highest density of artifactual material is associated with the lower cultural component, a discrete stratigraphic unit 4-12 cm thick (unit 5), which was defined only in the three test squares located on the kame and includes feature 2. Feature 2 was a continuous layer which contained numerous tools, lithic debitage, bone fragments, thermally altered rock, and charcoal. Feature 3, a hearth, was associated with the lower extent of feature 2.

The lower component is stratigraphically between the Watana tephra (unit 4) and a silty eolian sediment (unit 7). Both the upper and lower boundaries of feature 2 were distinct during excavation and in the unit profiles. The upper boundary was defined by a grayish brown matrix which contained an abundance of artifactual material, and the lower boundary was distinguished by its contact with a silty eolian sediment or glacial drift. In general, the stratigraphy of the lower component includes a thin, discontinuous lens of reddish brown to dark brown matrix (unit 5c) which is correlated with the hearth, feature 3. This unit is overlain by a continuous, fine silty matrix, strong brown in color (unit 5b), possibly due to oxidization. A thin, continuous lens of grayish brown matrix (unit 5a) was present at the upper extent of the

component. While three different stratigraphic units were recognized within feature 2, these units were not defined until the test square profiles were exposed because of the indistinct nature of the boundaries between these units.

Feature 3 describes an area of thermally altered rocks at the lower extent of feature 2. These large rocks at the base of the artifact concentration define the boundary between the two features. Feature 3 was present primarily in the eastern half of test square N94/E99 and the southern portion of N95/E100, but was also defined along the northern edge of N93/E100. The configuration of rocks, highly oxidized matrix, carbonized matrix, and charcoal suggests that feature 3 represents a hearth feature associated with the initial occupation of TLM 143.

Thirty-eight thermally altered rocks were collected in association with this feature. The largest rock measured 52 x 19.5 x 12 cm. Many of the larger rocks were not cracked but were charred or stained. Numerous small pebble size angular rock fragments were also collected and may possibly be rock spalls.

The basal elevation of the larger rocks correlate to the lower boundary of the cultural component. Beneath several of the rocks in this feature was a very thin lens of carbonized matrix with artifactual material including flakes, bone fragments, and a basalt corner-notched point (UA82-83-364; Figure D.383g). When the large rocks were removed, the silty matrix (unit 7) surrounded the rocks with carbonized matrix in the slightly concave depressions. The estimated dimension of this hearth feature is 2 m in diameter with the three test squares intersecting the northern, western, and southern boundaries.

Artifacts collected as part of features 2 and 3, and artifacts associated with the upper and lower boundaries of these features consisted of ca. 26,869 flakes, ca. 31,200 bone fragments, 77 small pieces of red ochre, and 87 tools and/or tool fragments. The majority of tools consisted of modified flakes with unifacial and/or bifacial marginal retouch.

Feature 2 yielded 13805 flakes of basalt, argillite, chert, obsidian, chalcedony, rhyolite, quartz, and quartzite (in descending order of occurrence). Feature 2 contained 27 modified flakes: 11 argillite, 11 basalt, and 5 chert. Eight biface fragments were recovered from feature 2: 2 argillite tip fragments (UA82-83-403, 1339; Figure D.383l), 2 argillite fragments (UA82-83-359, 733; Figure D.383m), 1 basalt tip fragment (UA82-83-398; Figure D.384o), and 3 basalt fragments (UA82-83-310, 342, 348; Figures D.384l,k, D.383p). Feature 2 also yielded six notched points and point fragments: 4 basalt corner-notched points (UA82-83-306, 347, 349, 358; Figure D.383b,d,e) and 2 articulating fragments of a chert corner-notched point (UA82-83-330, 1220; Figure D.383i). The basalt points have concave bases and show evidence of basal thinning. The chert point consists of a corner-notched point (UA82-83-1220) and a detached tang (UA82-83-330). A sandstone abrader (UA82-83-355) was also found in association with feature 2. At the upper boundary of feature 2 (unit 4/5) four tools were found; three modified flakes and an argillite scraper (UA82-83-327; Figure D.384f).

Associated with feature 3 were 7,374 flakes of basalt, argillite, chert, chalcedony, and obsidian (in descending order of occurrence). Feature 3 contained 14 modified flakes: 10 argillite, 3 basalt, and 1 quartzite. Eight scrapers were recovered from this feature: 3 argillite (UA82-83-309, 356, 361; Figure D.384h,g,e), 3 basalt (UA82-83-340, 352, 365; Figure D.384d,c,b), and 2 chert (UA82-83-339, 346; Figure D.384m,a). These scrapers range in shape from discoidal to elongated endscrapers. Two specimens (UA82-83-346, 356) show evidence of thermal spalling. Four biface fragments were found associated with feature 3: 2 argillite (UA82-83-316, 325; Figure D.383o), 1 basalt (UA82-83-395), and 1 chert (UA82-83-417; Figure D.384n). Two are triangular in shape (UA82-83-316, 395), one is ovate (UA82-83-325), and the fourth is irregular. Four notched points were recovered from this hearth feature: 2 argillite side-notched points (UA82-83-313, 319; Figure D.383k,j) and 2 basalt corner-notched points (UA82-83-364, 410; Figure D.383f). All have concave bases with basal thinning. An ovate basalt flake core (UA82-83-324; Figure D.384r) was also recovered from feature 3.

A mixed feature 2 and 3 unit produced 1,659 flakes of argillite, basalt, chert, and chalcedony (in descending order of occurrence). An angular, subovate, chert biface fragment (UA82-83-921; Figure D.384p) was also recovered from this mixed unit.

Faunal remains associated with features 2 and 3 consisted of ca. 31,200 bone and teeth fragments, with the majority (ca. 31,150) being calcined medium-large mammal long bone fragments, one of which has cut marks. Thirty-five large mammal molar fragments were found, some of which may be from caribou (Rangifer tarandus). Three calcined medium-large to large mammal phalanx fragments were also found, which represent probable caribou (Rangifer tarandus), as well as a calcined small mammal astragalus. Most of the faunal material was concentrated within unit 5, with only ca. 500 fragments recovered from the upper and lower contacts (Table D.237).

In test square N99/E79, which is located ca. 20 m west of the kame, 35 flakes, 14 bone fragments, and an argillite biface fragment (UA82-83-273) were collected from the contact between the Watana tephra (unit 4) and a silty sediment (unit 7) and from within the silty sediment. The stratigraphic position of this artifactual material suggests that it may be correlated with the feature 2 component.

The units below feature 2 yielded 10 tools: 6 modified flakes (1 argillite, 3 basalt, and 2 chert), 1 argillite scraper (UA84-104-12), 1 argillite notched point (UA82-83-370), and 2 basalt corner-notched points (UA82-83-1, 2).

The occurrence of artifactual material in all five test squares suggests that the site extends over a large area. In test square N71/E91, located 7 m north of the canyon rim, only 5 flakes were recovered and reworking of the stratigraphic units was evident, indicating that this area of the site was unstable. Surface material recovered on the slope leading into the canyon and in the vicinity of test square N99/E79 indicates that the canyon rim may define the southern boundary of the site although surface artifacts and 15 positive grid shovel tests were

located on a moderately steep slope below the canyon rim, leading into the canyon itself, in the vicinity of the mineral lick. The artifact densities from the upper and middle components did not vary significantly between the three test squares located on the kame (N93/E100, N94/E99, and N95/E100) and the test square 20 m west of the kame (N99/E97). The only tool associated with the upper component and two of the five tools associated with the middle component were located in test square N99/E79. The lower component appears to be focused on the kame and the quantity of artifacts suggests intensive use of this area of the site during the occupation(s) associated with the lower component.

Evaluation

TLM 143 is located on the edge of Jay Creek canyon directly north and west of the steep canyon walls in the vicinity of a mineral lick. The strategic location of the site in conjunction with the content of the artifact assemblage suggests that TLM 143 functioned as a hunting camp, exploiting the fauna attracted by the mineral lick. The high frequency of lithic debitage indicates intensive tool manufacture and modification occurred at the site. Three cultural components were defined during systematic testing. Radiocarbon determinations of a charcoal samples collected from the lower component yielded dates between 2150 and 2490 B.C. The upper and middle components can be tentatively dated based on the stratigraphic position of each component relative to the three tephra defined at the site. Although artifactual material from the middle component occurred within the oxidized Watana tephra, the interval of occupation probably occurred between the Watana and Devil tephra depositions. The upper component occurs at the upper extent of, and within, the Devil tephra.

The majority of artifactual material recovered at TLM 143 was derived from the lower component. This component can be ascribed to the Northern Archaic tradition on the basis of stratigraphic position, radiocarbon dating, and diagnostic elements of the artifact assemblage. The lower component is stratigraphically below the Watana tephra and the

radiocarbon determinations fall within the temporal range of this cultural tradition. The component contained notched points, endscrapers, and a variety of bifaces, all of which are characteristic of the Northern Archaic tradition.

While no structures were located during systematic testing of three 1 x 1 m squares on the kame, evidence that the site functioned as more than a hunting overlook during the occupation(s) associated with the lower component is suggested by the presence of a wide range of tools, i.e., 45 modified flakes, 9 scrapers, 16 bifaces, 1 flake core, 1 abrader, and 9 notched points. These tools, in association with more than 24,000 flakes, suggest various stages of tool manufacture, repair, and a variety of activities. Large rocks, mammal bone (caribou), lithic debitage, and tools were distributed about a hearth. It is possible that the large rocks, while apparently associated with the hearth, may constitute the remains of a larger feature or structure which at present cannot be defined based on the extremely limited extent of the testing.

The distribution of surface and subsurface artifactual material indicates that the site extends over a large area.

The site is topographically restricted to the south by the steep slope of the Jay Creek canyon. The correlation of artifactual material between the test squares suggests that the upper and middle components occur over a vast portion of the site, while the lower component is possibly localized or focused on the kame. Alternatively, this pattern may indicate that areas of intensive use associated with the lower components have not been located at this time.

Shovel testing indicates that the density of artifacts is variable, with higher densities occurring in areas of higher relief. The intervening areas were characterized by either low artifact counts, or the absence of artifacts. Frequently the stratigraphic section in these areas had evidence of reworking of the sediments suggesting less stable ground conditions. An exception is found in the southern area of the site which is higher in relief and associated with a lithic scatter.

The presence of three components indicates repeated use of this site over more than 4000 years. Presently only very limited systematic testing has been conducted over this large site and additional testing is necessary to identify patterns relating to activity areas within the site. TLM 143 is one of the most significant sites yet discovered during the course of the Susitna Hydroelectric Project Cultural Resources Survey because it is the first archeological site discovered in Alaska to document human exploitation of fauna attracted by a mineral lick, and the site is multicomponent and the nature of the components may lead to an understanding of the Northern Archaic tradition. Observed site size based on the distribution of artifacts is 844 square meters (Table D.2).

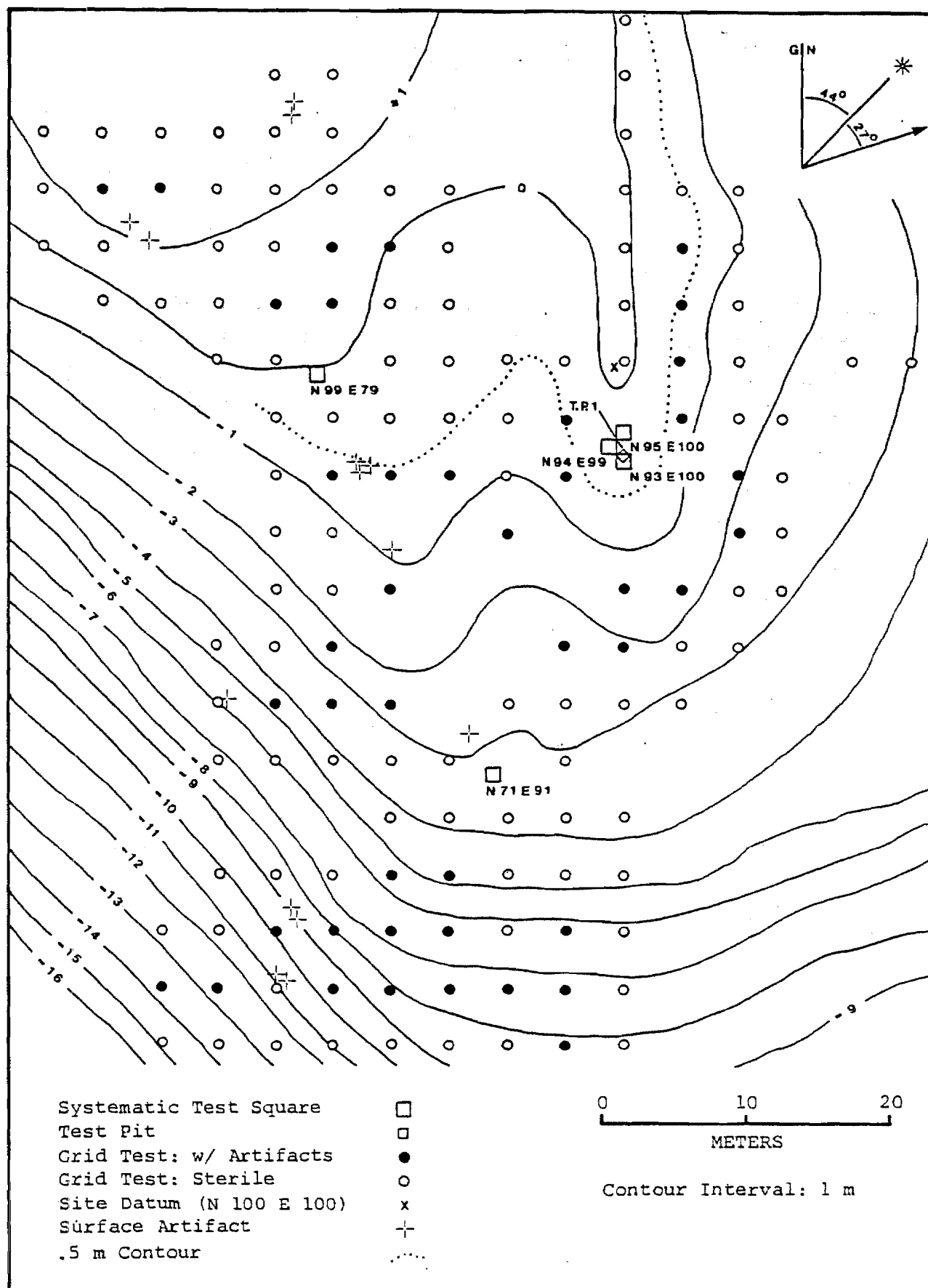


Figure D.183. Site Map, TLM 143

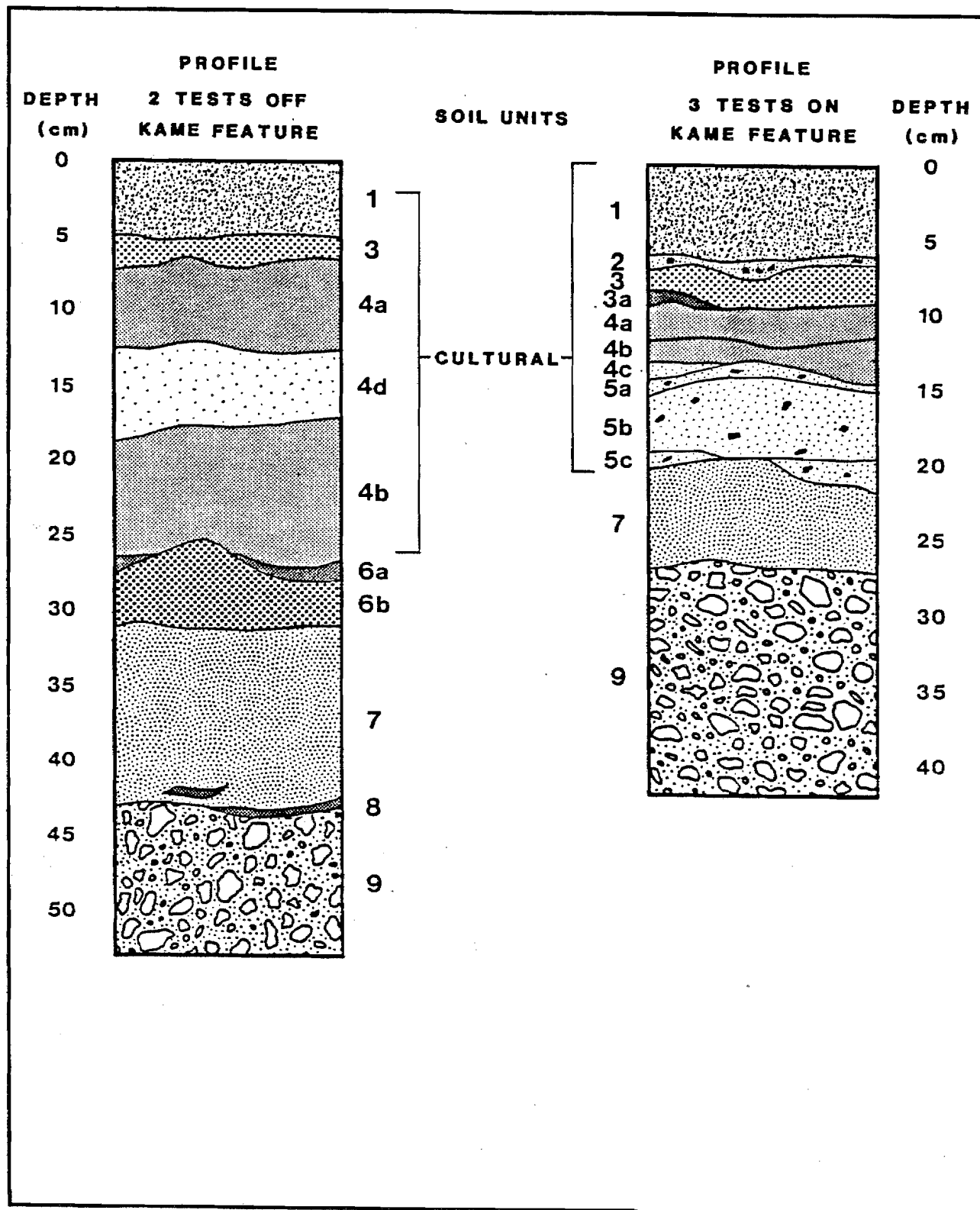


Figure D.184. Composite Profile, TLM 143

Table D.235.

Soil/Sediment Description for Composite Profile, TLM 143

Unit	Description
1	Organic layer: lichen, crowberry, and sphagnum moss underlain by poorly consolidated soil with roots and finely divided organic material; dark reddish brown (5YR 3/2). Thickness of organic unit is partially dependent on the type of surface organics, i.e., up to 16 cm in areas where surface organic material consists of sphagnum moss; to 2-6 cm in depth where lichen cover is on the surface.
2	Very fine sandy matrix with finely sorted organic material and small charcoal pieces; black (5YR 2.5/1). Thin, discontinuous lens. Leaching of carbon and organic material into the underlying tephra was evident. Unit only present on the kame.
3	Very fine silt size particles consolidated by roots and rootlets. Variation in color dependent on degree of leaching; gray (10YR 5/1) to pinkish gray (5YR 6/2). Tephra (Devil); A horizon. Continuous. Thickness varies from 1-5 cm. Sharp contact with underlying unit 4. Extensive reworking of this unit was evident in N71/E91. Small amount of charcoal observed.

Table D.235. (Continued)

Unit	Description
3a	Fine grain organic matrix with small charcoal pieces; dark brown (7.5YR 4/2). Very thin, approximately 1 cm thick. Discontinuous lens stratigraphically positioned between units 3 and 4. Unit only observed in north wall profile of N94/E99.
4a	Fine to medium grain silt with medium to coarse sand size granule concretions in the most highly oxidized zones; strong brown (7.5YR 4/6 to 7.5YR 5/8). Tephra (Watana); B horizon. Generally continuous; 1-2 cm thick on the kame (N93/E100, N94/E99, N95/E100) and 1-10 cm thick off the kame (N71/E91, N99/E79). Sharp contact with the overlying strata. Oxidized zone at upper extent of tephra unit.
4b	Very fine silt size particles; yellowish brown (10YR 5/6). Tephra (Watana). Gradational and undulating contact with oxidized tephra at the upper extent of unit. Identified in all test squares although reworking of soil was evident in N71/E91 and in N99/E79. Thickness varied from 1-11 cm off the kame to 1-6 cm on the kame. Generally continuous and horizontal appearance. Some mixing evident.

Table D.235. (Continued)

Unit	Description
4c	Very fine silty matrix similar in texture and stratigraphic position to unit 4b although variable in color; strong brown (7.5YR 5/8). Identified only in N95/E100 stratigraphically positioned above 5a, above a concentration of charcoal. Possibly the result of thermal oxidization of unit 4b.
4d	Fine silty matrix with mixed and mottled appearance; brown (10YR 3/3). Only identified in N71/E91 which had considerable evidence of reworking of the soil units. Discontinuous unit stratigraphically positioned above unit 4b, and varying in thickness from 2-21 cm.
5a	Fine silt size particles; dark grayish brown (2.5YR 4/2) to brown dark brown (10YR 4/3). Culturally altered Oshetna tephra. Thin, 1-2 cm, continuous lens defined in test squares located on the kame. Sharp contact with overlying unit (unit 4). Defined on the basis of color, texture, and the quantity of artifactual material. Contains charcoal. Unit defines the upper extent of feature 2.
5b	Oxidized silt similar in texture to unit 5a; strong brown (7.5YR 4/6 to 7.5YR 5/8). Culturally altered Oshetna tephra. Continuous in test squares on the kame and associated with artifacts, thermally altered rock, and carbon. Varies from 2-6 cm in thickness and is associated with features 2 and 3. Sharp contact with unit 7 but diffuse elsewhere.

Table D.235. (Continued)

Unit	Description
5c	Silty matrix which underlies unit 5b and associated with feature 3; reddish brown (5YR 4/4) to dark brown (10YR 3/3). Culturally altered Oshetna tephra. Contains numerous bone fragments, carbonized matrix, and thermally altered rock. Indistinctive unit observed in the east and south walls of N95/E100 and the north wall of N93/E100. Unit observed during excavation of N94/E99 not defined in profiles. Sharp contact with underlying units.
6a	Thin lens of organic matrix and charcoal; very dark gray (10YR 3/1). Varies in thickness from 1-3 cm and occurs at upper contact of unit 6b. Only defined in N71/E91.
6b	Very fine silt size particles; dark grayish brown (10YR 4/2). Only defined in N71/E91. Tephra (Oshetna). Undulating and irregular appearance which may be the result of reworking of the soil and sediment units..
7	Silt size particles with some sand; olive brown (2.5Y 4/4). Continuous. Contacts vary from sharp to gradational; sharp upper contacts with unit 5b or 5c. Thickness varies from 1-10 cm on the kame and 4-20 cm off the kame. Sediment is possibly eolian in origin.

Table D.235. (Continued)

Unit	Description
8	Fine silty organic matrix with charcoal; very dark gray (10YR 3/1) to black (10YR 2/1). Lacks continuity. Where present it is both thin (1 cm or less) and discontinuous. Possibly a buried soil. Located in N99/E79 and N71/E91.
9	Coarse sand with pebbles, cobbles, and small boulders. Maximum boulder size 35 cm. Majority of cobbles were rounded, 7-13 cm in diameter. Frost shattering observed but not extensive. Weathered rock and grus also observed. Excavation into this unit determined limit of excavation.

Table D.236.

Artifact Summary, TLM 143

Tools

54	Modified flakes 25 Argillite (UA82-83-307, 308, 311, 312, 314, 315, 317, 320, 326, 331, 334, 350, 372, 376, 384, 388, 389, 407, 408, 419, 421, 422, 423, 1704; UA84-104-138) 21 Basalt (UA82-83-90, 305, 322, 332, 335, 345, 366, 367, 371, 375, 385, 386, 387, 390, 391, 396, 400, 401, 404, 414; UA83-216-8) 7 Chert (UA82-83-333, 338, 351, 369, 373, 394, 399) 1 Quartzite (UA82-83-360)
11	Scrapers 5 Argillite (UA82-83-309, 327, 356, 361; UA84-104-12) 3 Basalt (UA82-83-340, 352, 365) 3 Chert fragments (UA82-83-339, 346 (2 fragments))
20	Bifaces and fragments 11 Argillite (UA82-83-193, 273, 316, 325 (2 fragments), 357, 359, 377, 403, 733, 1339) 6 Basalt (UA82-83-310, 342, 348 (2 fragments), 395, 398) 2 Chert (UA82-83-417, 921) 1 Quartz (UA84-104-77)

Table D.236. (Continued)

13	Notched points
	3 Argillite (UA82-83-313, 319, 370)
	8 Basalt (UA82-83-1, 2, 306, 347, 349, 358, 364, 410)
	2 Chert fragments (UA82-83-330 articulates with 1220)
1	Flake core
	1 Basalt (UA82-83-324)
1	Abrader
	1 Sandstone (UA82-83-355)

100

Lithic Material

14,375	Argillite flakes
14,168	Basalt flakes
39	Chalcedony flakes
388	Chert flakes
58	Obsidian flakes
2	Quartz flakes
2	Quartzite flakes
28	Rhyolite flakes
329	Flakes less than 1/8" mesh
	316 Argillite
	12 Basalt
	1 Chalcedony
375	Thermally altered rocks
4	Cobbles and fragments
52	Rock fragments

29,820

Table D.236. (Continued)

Faunal Material

ca. 32,352 Bone fragments

Other

78 Ochre

78

Table D.237.

Faunal Material by Stratigraphic Unit, TLM 143

Unit		Description
1/3	3	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
Contact between organic mat and Devil tephra		
3/4	2	Long bone fragments, calcined, medium-large mammal
Contact between Devil and Watana tephtras		
4	50	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
Within Watana tephra		
4 and 4/5	2	Molar fragments, calcined, possible caribou (<u>Rangifer tarandus</u>)
Within Watana tephra and at contact between Watana tephra and cultural unit	119	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
	18	Long bone and unidentifiable bone fragments, calcined, mammal
4/5	115	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
Contact between Watana tephra and cultural unit		

Table D.237. (Continued)

Unit	Description
4, 6, 7 Watana tephra, Oshetna tephra, or silty sand	30 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
4/7, 4, 7 Contact between Watana tephra and silty sand or in Watana tephra or silty sand	17 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
5 Feature 2	<div>1 Molar fragment, calcined, possible caribou (<u>Rangifer tarandus</u>)</div> <div>30 Molar fragments, calcined, large mammal</div> <div>1 Astragalus fragment, calcined, small mammal</div> <div>3 Phalanx fragments, calcined, large mammal</div> <div>19,405 Long bone and unidentifiable bone fragments, calcined, medium-large mammal</div> <div>11 Long bone and unidentifiable bone fragments, calcined, small-medium mammal</div> <div>2 Long bone fragments, calcined, mammal</div>

Table D.237. (Continued)

Unit	Description
5 Feature 3	1 Molar fragment, calcined, possible caribou (<u>Rangifer tarandus</u>) 1 Molar fragment, calcined, large mammal 7,258 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
5 Features 2 and 3	3,264 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
5, 5/7 Silty matrix and at contact between silty matrix and silty sand	1 Phalanx fragment, calcined, probable caribou (<u>Rangifer tarandus</u>)
5/7 Contact between silty material and silty sand (Feature 3)	237 Long bone and unidentifiable bone, fragments, calcined, medium-large mammal
6, 7 Oshetna tephra and silty sand	1 Possible rib or spinous process fragment, calcined, medium-large mammal

Table D.237. (Continued)

Unit	Description
7 Silty sand	5 Long bone fragments, calcined, medium-large mammal
5/7, 9 Rodent burrow	419 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
Subsurface Unknown 1,356 (Survey testing)	Long bone and unidentifiable bone fragments, calcined, medium-large mammal

Table D.238.

Artifact Summary by Stratigraphic Unit, TLM 143

Unit		Description
Surface	5	Argillite flakes
	10	Basalt flakes
	1	Chert flake
1, 2, 3	1	Argillite flake
Within organic	9	Basalt flakes
unit, organic and	1	Flake less than 1/8" mesh, (Basalt)
Devil tephra contact, or within Devil tephra		
1/3	34	Argillite flakes
Contact between	88	Basalt flakes
organic mat and	2	Chert flakes
Devil tephra	7	Obsidian flakes
	1	Rock fragment
1/3, 1/4	8	Basalt flakes
Contact between	1	Chert flake
organic mat and		
Devil tephra or		
organic mat and		
Watana tephra		
1/3-4a, 1-3/3a	194	Argillite flakes
Contact between	150	Basalt flakes
surface and Devil	3	Chert flakes
and Watana tephra		

Table D.238. (Continued)

Unit		Description
2	3	Argillite flakes
Within finely sorted organics	7	Basalt flakes
2/3	4	Argillite flakes
Contact between	9	Basalt flakes
finely sorted	2	Chert flakes
organics and Devil tepha	1	Granite cobble
2/3, 3	9	Basalt flakes
Contact between finely sorted organics and Devil tephra, or within Devil tephra		
3	63	Argillite flakes
Within Devil tephra	70	Basalt flakes
	5	Chert flakes
	2	Rhyolite flakes
	2	Thermally altered rocks
	1	Rock fragment
3/4	82	Argillite flakes
Contact between	89	Basalt flakes
Devil and Watana tephras	1	Chert flake
	4	Obsidian flakes
	1	Basalt modified flake (UA82-83-90)
	1	Argillite biface (UA82-83-193)

Table D.238. (Continued)

Unit	Description
	1 Quartz biface (UA84-104-77)
	3 Rock fragments
3/4, 3/7	4 Argillite flakes
Contact between Devil and Watana tephras, or contact between Devil tephra and silty sand	11 Basalt flakes
3/7	1 Argillite flake
Contact between Devil tephra and silty sand	6 Basalt flakes
	4 Rhyolite flakes
4	287 Argillite flakes
Within Watana tephra	347 Basalt flakes
	1 Chalcedony flake
	9 Chert flakes
	2 Obsidian flakes
	1 Argillite modified flake (UA82-83-376)
	1 Basalt modified flake (UA82-83-375)
	1 Argillite biface (UA82-83-377)
	1 Ochre piece
	2 Cobbles

Table D.238. (Continued)

Unit		Description
4	77	Argillite flakes
Feature 1	21	Basalt flakes
within oxidized	1	Obsidian flake Watana tephra
Watana tephra		
4/5	184	Argillite flakes
Contact between	152	Basalt flakes
Watana tephra	2	Chert flakes
and feature	1	Obsidian flake
2 and 3	1	Rhyolite flake
	2	Argillite modified flakes (UA82-83-326, 384)
	1	Basalt modified flake (UA82-83-385)
	1	Argillite scraper (UA82-83-327)
4/6	1	Basalt flake
Contact between		
Watana and Oshetna		
tephra		
4, 4/6, 6	38	Argillite flakes
Within Watana	35	Basalt flakes
tephra, contact	1	Argillite modified flake (UA84-104-138)
between Watana and		
Oshetna tephras, or		
within Oshetna tephra		

Table D.238. (Continued)

Unit		Description
4/7	9	Argillite flakes
Contact between Watana tephra and silty sand	3	Basalt flakes
4, 7	39	Argillite flakes
Within Watana tephra or silty sand	23	Basalt flakes
4, 4/6, 6, 6/7, 7	1,308	Argillite flakes
Watana tephra to	105	Basalt flakes
silty sand beneath	3	Chalcedony flakes
Oshetna	2	Chert flakes
	2	Rhyolite flakes
	327	Flakes less than 1/8" mesh
		316 Argillite
		11 Basalt
	1	Ochre piece
4, 5	7	Thermally altered rocks
Features 1 and 2		
5	6,117	Argillite flakes
Feature 2	7,450	Basalt flakes
	25	Chalcedony flakes

Table D.238. (Continued)

Unit		Description
	163	Chert flakes
	38	Obsidian flakes
	2	Quartz flakes
	1	Quartzite flake
	9	Rhyolite flakes
	10	Argillite modified flakes (UA82-83-311, 312, 314, 320, 331, 334, 350, 388, 389, 1704)
	12	Basalt modified flakes (UA82-83-305, 322, 332, 335, 386, 387, 390, 391, 396, 400, 401; UA83-216-8)
	5	Chert modified flakes (UA82-83-333, 338, 351, 394, 399)
	5	Argillite bifaces and fragments (UA82-83-357, 359, 403, 733, 1339)
	5	Basalt biface fragments (UA82-83-310, 342, 348 (2 fragments), 398)
	4	Basalt notched points (UA82-83-306, 347, 349, 358)
	2	Chert notched point fragments (UA82-83-330 articulates with 1220)
	1	Sandstone abrader (UA82-83-355)
	158	Thermally altered rocks
	47	Rock fragments
	56	Ochre pieces
5	3,395	Argillite flakes
Feature 3	3,844	Basalt flakes
	9	Chalcedony flakes

Table D.238. (Continued)

Unit		Description
	123	Chert flakes
	3	Obsidian flakes
	10	Argillite modified flakes (UA82-83-307, 308, 315, 317, 407, 408, 419, 421, 422, 423)
	3	Basalt modified flakes (UA82-83-345, 404, 414)
	1	Quartzite modified flake (UA82-83-360)
	3	Argillite scrapers (UA82-83-309, 356, 361)
	3	Basalt scrapers (UA82-83-340, 352, 365)
	3	Chert scrapers (UA82-83-339, 346 (2 fragments))
	3	Argillite biface fragments (UA82-83-316, 325 (2 fragments))
	1	Basalt biface fragment (UA82-83-395)
	1	Chert biface fragment (UA82-83-417)
	2	Argillite notched point (UA82-83-313, 319)
	2	Basalt notched points (UA82-83-364, 410)
	1	Basalt flake core (UA82-83-324)
	153	Thermally altered rocks
	7	Ochre pieces
5	996	Argillite flakes
Mixed feature	633	Basalt flakes
2 and 3	1	Chalcedony flake
	29	Chert flakes
	1	Chert biface fragment (UA82-83-921)
	43	Thermally altered rocks
	10	Ochre pieces

Table D.238. (Continued)

Unit		Description
5/7	229	Argillite flakes
Contact between	194	Basalt flakes
feature unit and	8	Chert flakes
silty sand	2	Basalt modified flakes (UA82-83-366, 367)
	1	Chert modified flake (UA82-83-369)
	11	Thermally altered rocks
	3	Ochre pieces
5, 5/6, 6, 6/7, 7	856	Argillite flakes
Beneath Watana to	481	Basalt flakes
lacustrine (?)	19	Chert flakes
deposits	1	Obsidian flake
(Survey testing)	10	Rhyolite flakes
	2	Basalt notched points (UA82-83-1, 2)
6, 6/7, 7	100	Argillite flakes
Oshetna tephra	41	Basalt flakes
to silty sand	1	Obsidian flake
	1	Quartzite flake
	1	Flake less than 1/8" mesh, (Chalcedony)
	1	Argillite scraper (UA84-104-12)
	1	Thermally altered rock
	1	Basalt cobble fragment

Table D.238. (Continued)

Unit	Description
7	338 Argillite flakes
Within silty sand	365 Basalt flakes
	17 Chert flakes
	1 Argillite biface fragment (UA82-83-273)
	1 Argillite notched point (UA82-83-370)
Rodent burrow	1 Argillite modified flake (UA82-83-372)
	1 Basalt modified flake (UA82-83-371)
	1 Chert modified flake (UA82-83-373)
Subsurface unknown	11 Argillite flakes
	9 Basalt flakes
	1 Chert flake

AHRS Number TLM 144; Accession Number UA82-84

Area: Northeast of Jay Creek Mouth
Site Map: Figure D.185
Survey Locale 127: Figure E.200
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

TLM 144 is located north of the Susitna River and northeast of the mouth of Jay Creek. The site includes a prominent elongated knoll and two small circular knolls to the north and within 10 m of the elongated knoll. The elongated knoll, at an elevation of ca. 831 m asl (2725 feet), is the highest point of topographic relief between its location and Jay Creek. This elongated knoll is oriented southwest-northeast and is ca. 20 x 5 m on its level summit. The two small circular knolls are 1-1.5 m lower in elevation and from 7-9 m in diameter. The southern face of the elongate knoll slopes moderately steeply at about a 10-degree angle for 75 m at which distance the slope becomes more gradual and merges into a glaciolacustrine plain which continues for about 500 m to the Jay Creek canyon rim. North and east of the site, slopes are more gradual and continue for 25 m before rising to upland hills which reach elevations of 1113 m asl (3650 feet). A small clear water creek was observed southwest of the site. This creek is a tributary of Jay Creek flowing northwest-southeast, draining the upland areas, and is accessible from the site. The view from the elongate knoll encompasses the Jay Creek valley and surrounding terrain and is obscured only minimally by present vegetation on the southern slope. This site is an excellent vantage point for observing the uplands down to the vicinity of a reported mineral lick. In the northern directions visibility is obscured by upland hills. The predominant vegetation on the site consists of low brush with a ground cover of lichens, crowberry, blueberry, Labrador tea, cranberry, and scattered grasses. The southern slope includes dwarf birch, alder, and spruce cover with denser spruce stands at lower elevations. North of the site, as

elevation increases, the vegetation zone changes to open shrub. Erosional features are apparent on the east and southwest slope of the knoll as well as on the central portion of the crest.

Testing:

The site includes two areas, the prominent elongate knoll and one of the smaller circular knolls. The site was initially located by surface lithic debitage found on an exposure on the knoll crest (Table D.239). Surface survey resulted in the collection of four lithic artifacts, including a basalt side-notched point (UA82-84-1; Figure D.385a) found on the southern slope of the knoll. A 40 x 40 cm test (test pit 1) was placed in the vicinity of the surface lithic scatter and a site datum established in the southwest corner. Excavation of this test pit yielded two flakes and one calcined long bone fragment. These cultural remains were recovered from different stratigraphic contexts indicating that this site is multicomponent. In addition to the previously mentioned cultural material, lithics were found in two of five shovel tests placed in the site area. One of these shovel tests was located on the western end of the elongate knoll and contained five flakes. The other shovel test situated on a small circular knoll, north of the western portion of the elongate knoll, contained three small flakes. One sterile shovel test is located beyond the site map perimeter. Estimated site size based on the distribution of artifacts is 288 square meters (Table D.2).

Table D.239.

Artifact Summary, TLM 144

Provenience		Description
<u>Lithic Material</u>		
Surface:	1	Argillite flake
	2	Basalt flakes
	1	Basalt notched point (UA82-84-1)
Subsurface:		
Test Pit 1	4	Argillite flakes
	4	Basalt flakes
	2	Chert flakes
<u>Faunal Material</u>		
Subsurface:		
Test Pit 1	1	Long bone fragment, calcined, medium-large mammal

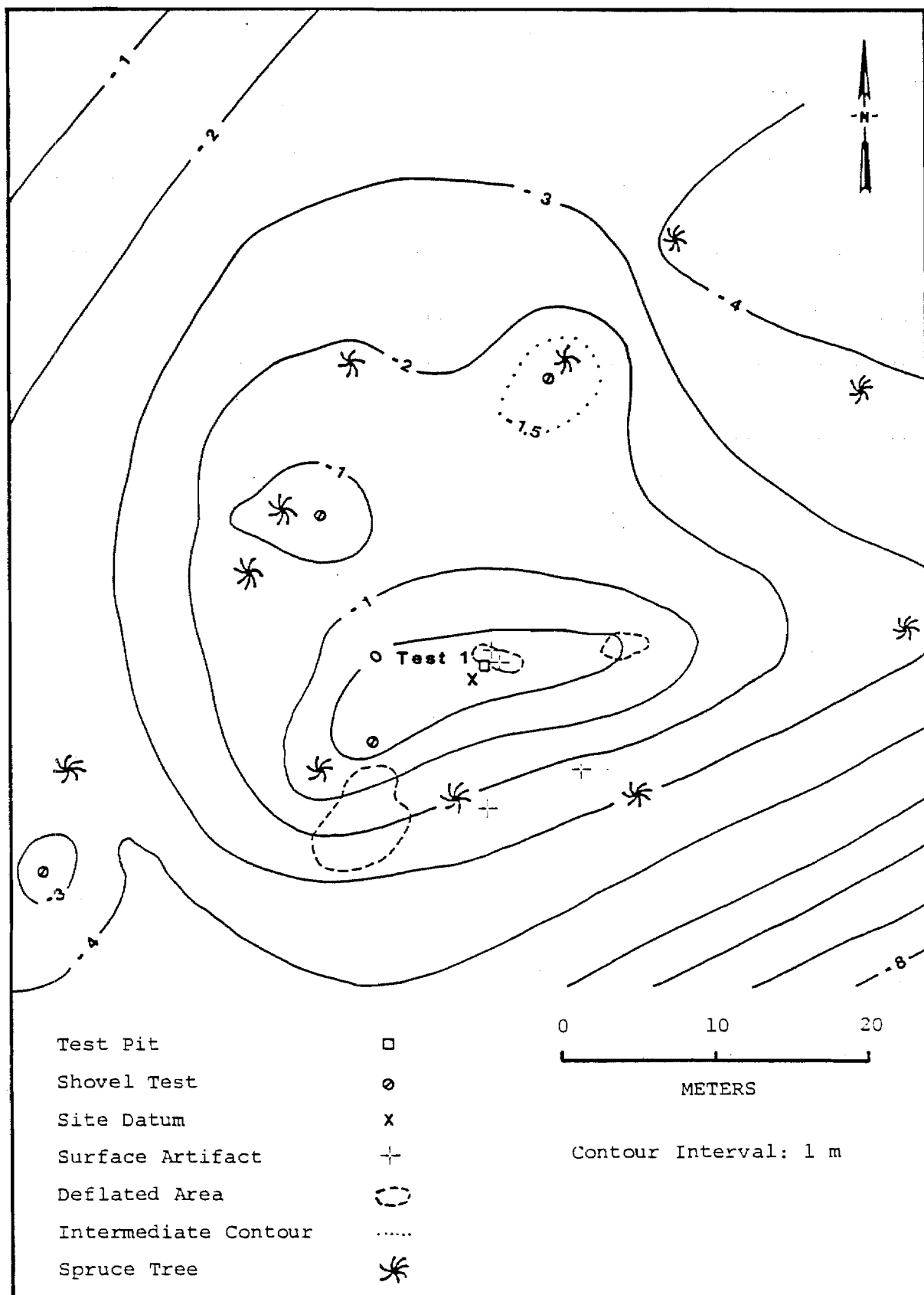


Figure D.185. Site Map, TLM 144

AHRS Number TLM 145; Accession Number UA82-85

Area: Northeast of Jay Creek Mouth
Site Map: Figure D.186
Survey Locale 127: Figure E.202
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site, at approximately 716 m asl (2350 feet), is located on a ridge along the rim of Jay Creek canyon which extends eastward from a glaciolacustrine plain northeast of the confluence of Jay Creek with the Susitna River. Jay Creek, east of the site, flows southward ca. 137 m below the site area. The creek is relatively inaccessible due to the steepness of the canyon walls. The site is situated on the central portion of the ridge which is ca. 200 m in length. The ridge slopes eastward at a moderate angle in the site vicinity for a distance of 15 m, and then levels for 40 m. The ridge rises at this point, reaching its apex ca. 100 m east of the site. North and northeast the terrain broadens out for a distance of 35 m to the rim of the Jay Creek canyon. Visibility from the site is partially obscured to the east, north, and south by present vegetation. From the level area above the site, 2 m higher in elevation, there is a view of an amphitheater-shaped cliff. This formation is the location of a reported mineral lick and is ca. 1 km north of the site. To the south the Jay Creek mouth is visible. Vegetation on the site includes both low and high shrub, scattered spruce trees, shrub birch, alder, blueberry, willow, lowbush cranberry, with a ground cover of lichens, mosses, and scattered grasses. The eastern, northern, and southern slopes are characterized by closed mixed spruce-hardwood forest. This forest includes stands of birch and spruce with undergrowth of mosses and grasses, and brush in the open areas.

Testing:

The site contains both surface and subsurface material. A lithic scatter containing argillite, basalt, and chert flakes is located on a game trail which runs along the crest of the ridge. The scatter is confined to an 8 x 1 m area on an eastward facing 4-5 degree slope. Four flakes were collected. The ground surface of the slope appears to be eroded by weathering processes. A 40 x 40 cm test (test pit 1) was placed north of the lithic scatter off the edge of the game trail. Subsurface material from this test pit included 103 flakes and 93 calcined bone fragments (Table D.240). Only two stratigraphic units were recognized, a dark brown finely sorted organic layer and an underlying light grayish brown silty matrix with gravels. The artifactual material was associated with the upper strata. Partially burned wood was also visible within this strata in the unit profile. Two additional basalt flakes were located 22 m west of the scatter on the level area of the ridge 2 m higher in elevation. Three shovel tests were placed in this area, all with negative results. Estimated site size based on the distribution of artifacts is 12 square meters (Table D.2).

Table D.240.

Artifact Summary, TLM 145

Provenience	Description
<u>Lithic Material</u>	
Surface:	2 Argillite flakes
	3 Basalt flakes
	1 Chert flake
Subsurface	
Test pit 1	67 Argillite flakes
	20 Basalt flakes
	16 Chert flakes
<u>Faunal Material</u>	
Subsurface:	
Test pit 1	1 Cranial fragment, calcined, medium-large mammal
	92 Long bone and unidentifiable bone fragments, calcined, medium-large mammal

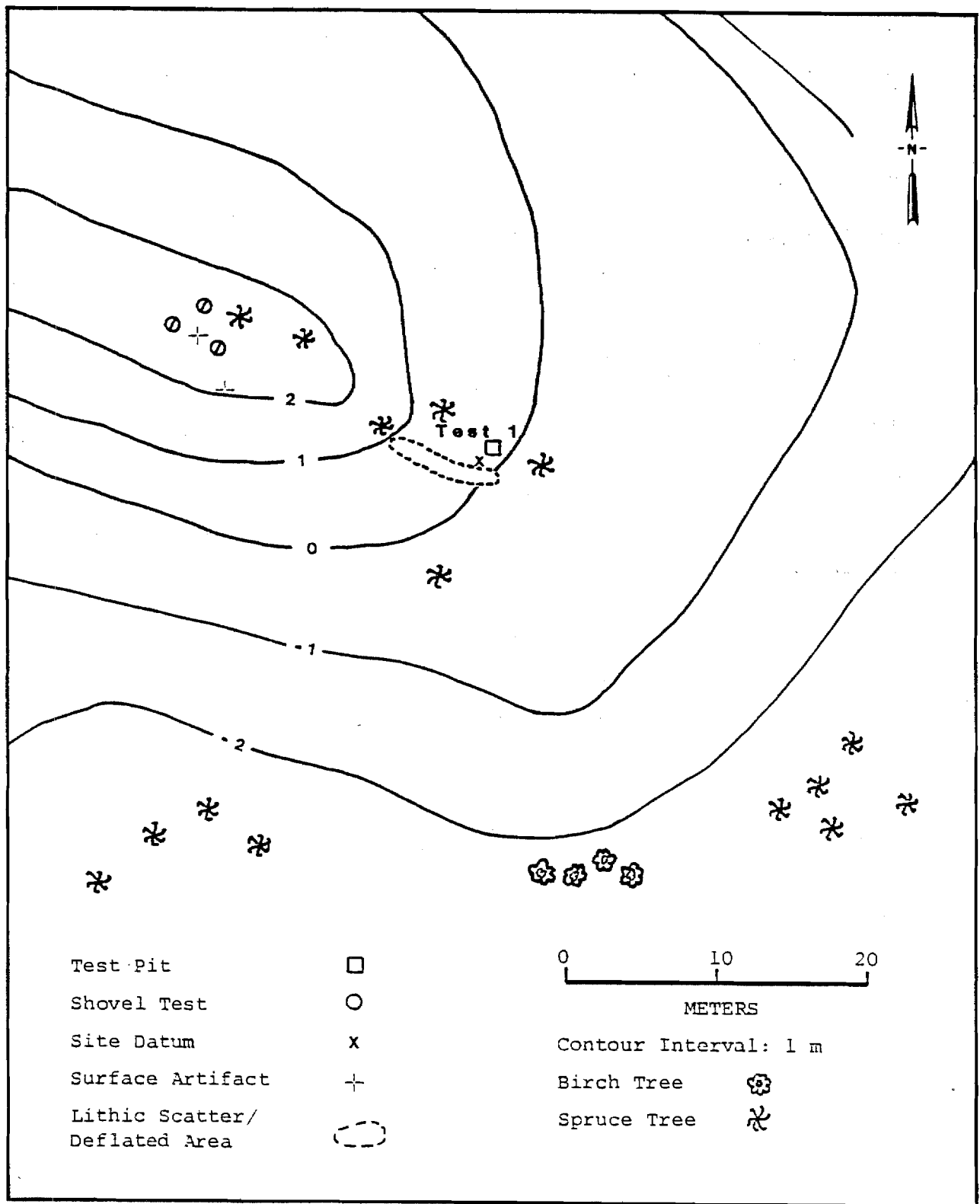


Figure D.186. Site Map, TLM 145

AHRS Number TLM 146; Accession Number UA82-86

Area: North of Jay Creek Mouth
Site Map: Figure D.187
Survey Locale 131: Figure E.208
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located on a broad, sloping hill that descends from upland elevations ca. 1114 m asl (3654 feet) down to a glaciolacustrine plain ca. 762 m asl (2500 feet). The site is topographically higher than terrain to the south and southeast, which is approximately 7-8 m above the lower undulating plain, at a position intermediate between the Susitna River and the Watana Hills to the north. The site is at an elevation of ca. 834 m asl (2750 feet) where the plain begins a gradual northward rise to the Watana Hills. The south-facing slope of the hill gradually descends to the undulating plain, ca. 30 m distant. Neither Jay Creek nor the Susitna River are visible from the site, however their valleys can be seen. A gradual east-sloping draw levels out approximately 125 m northeast of the site. A small ravine adjacent to TLM 138 is situated at the eastern extent of the draw. Another narrow and shallow clear water stream is situated directly south of the site. The latter stream originates from two kettle lakes of 1 and 2 ha west of the site. Although not visible from the site, the stream is visible from a kame crest south of TLM 146. In addition to the two lakes mentioned above, a third lake, locally known as Laha Lake, is visible from the site to the southwest. The three lakes are within a radius of 700 m and are easily accessible. Site vegetation includes willow, dwarf birch, white and yellow lichen, Labrador tea, blueberry, crowberry, heath, and spruce. Surrounding vegetation includes all of the site species plus fireweed and mosses. Dwarf birch and blueberry stands are considerably more dense below the site.

Testing:

Intensive surface and subsurface survey was conducted after a shovel test revealed a basalt flake (Table D.241). No artifacts were found on the surface nor in six subsurface shovel tests and a 40 x 40 cm test pit (test pit 1). The flat, level area north of the site (ca. 40 x 20 m) was extensively examined with negative results. Adjacent deflated areas, across the crest of the hill, were examined but produced negative results. Frost heaving (boiling) is apparent across the level crest north of the site area and discontinuous stratigraphic units observed also evidence cryoturbation. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.241.

Artifact Summary, TLM 146

Provenience

Description

Lithic Material

Subsurface:

Test Pit 1

1 Basalt flake

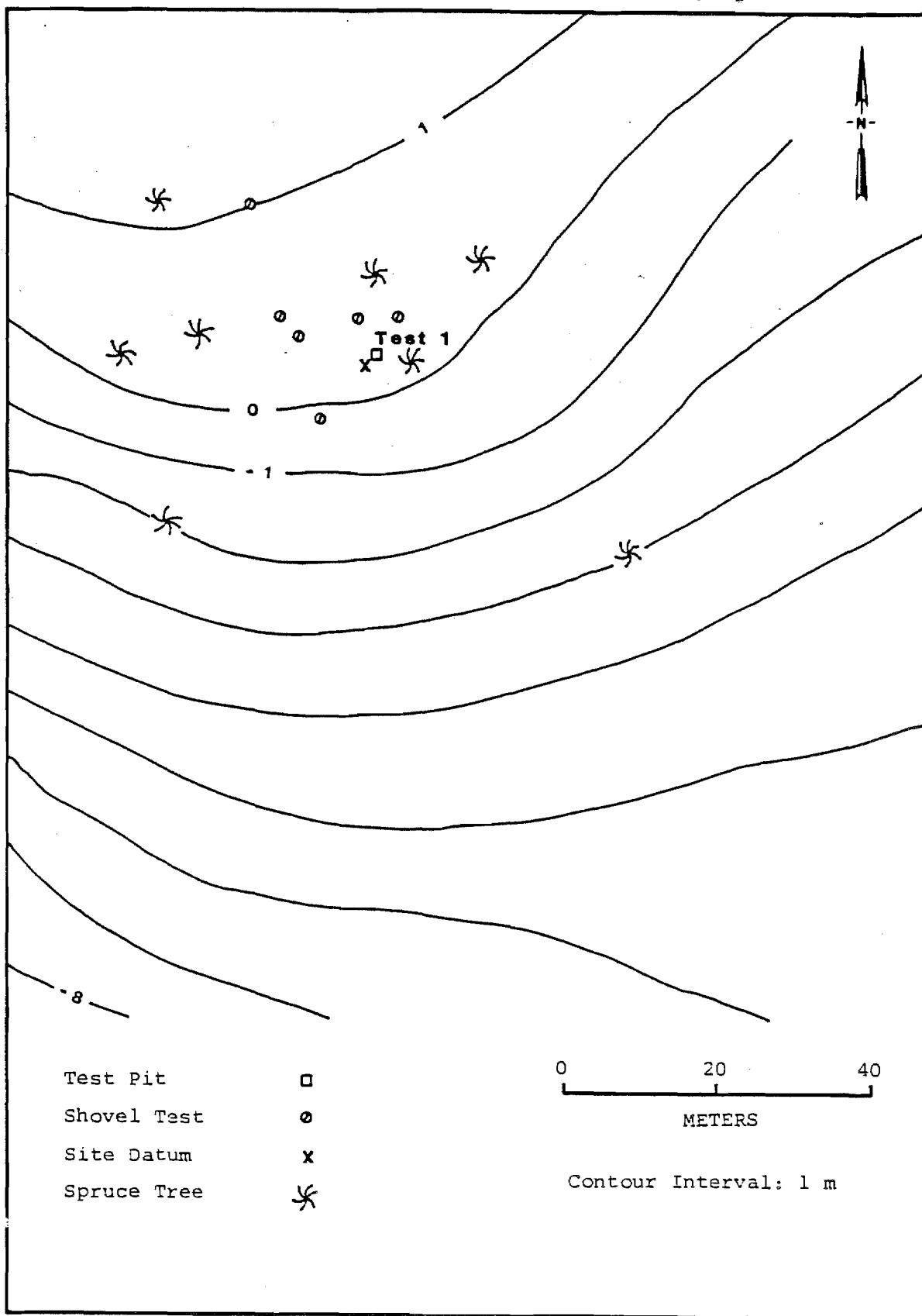


Figure D.187. Site Map, TLM 146

AHRS Number TLM 147; Accession Number UA82-87

Area: North of Jay Creek Mouth
Site Map: Figure D.188
Survey Locale 127: Figure E.202
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located at an elevation of ca. 735 m asl (2410 feet) on a broad flat terrace north of the mouth of Jay Creek and west of Jay Creek. The site is on the east side of the terrace, which measures 100 (east-west) x 250 m (north-south), north of the terrace's southern limit. The terrace slopes southward in a stepped fashion; dropping abruptly 10 m south of the site, then flattening out for 50 m, 1 m lower than the site. A circular basin lies 50 m southwest of the site; it is 5 m lower in elevation, and measures 50 m in diameter. Beyond this basin the terrace descends gently into a well-defined drainage, to the southwest. On the terrace, to the west of the site, lies a small kame 20 (northwest-southeast) x 6 m. It is 1 m higher in elevation than the level terrace. The terrace extends to the northwest and west, where it merges with undulating kame topography. To the northeast and east the terrain is low and boggy, about 2 m lower in elevation than the site. Views from the site are good in every direction except west, where the small kame obstructs the view in that direction. However, the area west of the kame contains a small drainage that flows south joining the major drainage southwest of the site. West of the small drainage the terrain rises 10 m higher than the site. A 2 ha. marshy basin is visible south and southeast of the site. Vegetation on the site and surrounding terrace consists of dwarf birch and Labrador tea with a groundcover of blueberry, cranberry, fireweed, wild rose, and white lichens. To the north, the plateau is forested with black spruce. The low bog area to the northeast and east has grasses, willow, cinquefoil, and crowberry with numerous black spruce. The marshes to the southeast and south are grassy, while the nearer (more westerly) marsh is transitional with

willow and dwarf birch present. Black spruce are present in the drainage area along the west side of the terrace, and abundant on the high terrain west of the site.

Testing:

One large gray argillite modified flake with black streaking (UA82-87-1) was found in a shovel test (Table D.242). Its stratigraphic position is not known. Four shovel tests placed nearby, and five more excavated about 50 m to the west, did not reveal additional cultural material. One test pit (test pit 1) was superimposed over the shovel test where the flake was found, but no other artifacts were observed. Surface survey of ground squirrel burrow berms was also negative. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.242.

Artifact Summary, TLM 147

Provenience	Description
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Lithic Material

Subsurface:

Test Pit 1	1 Argillite modified flake (UA82-87-1)
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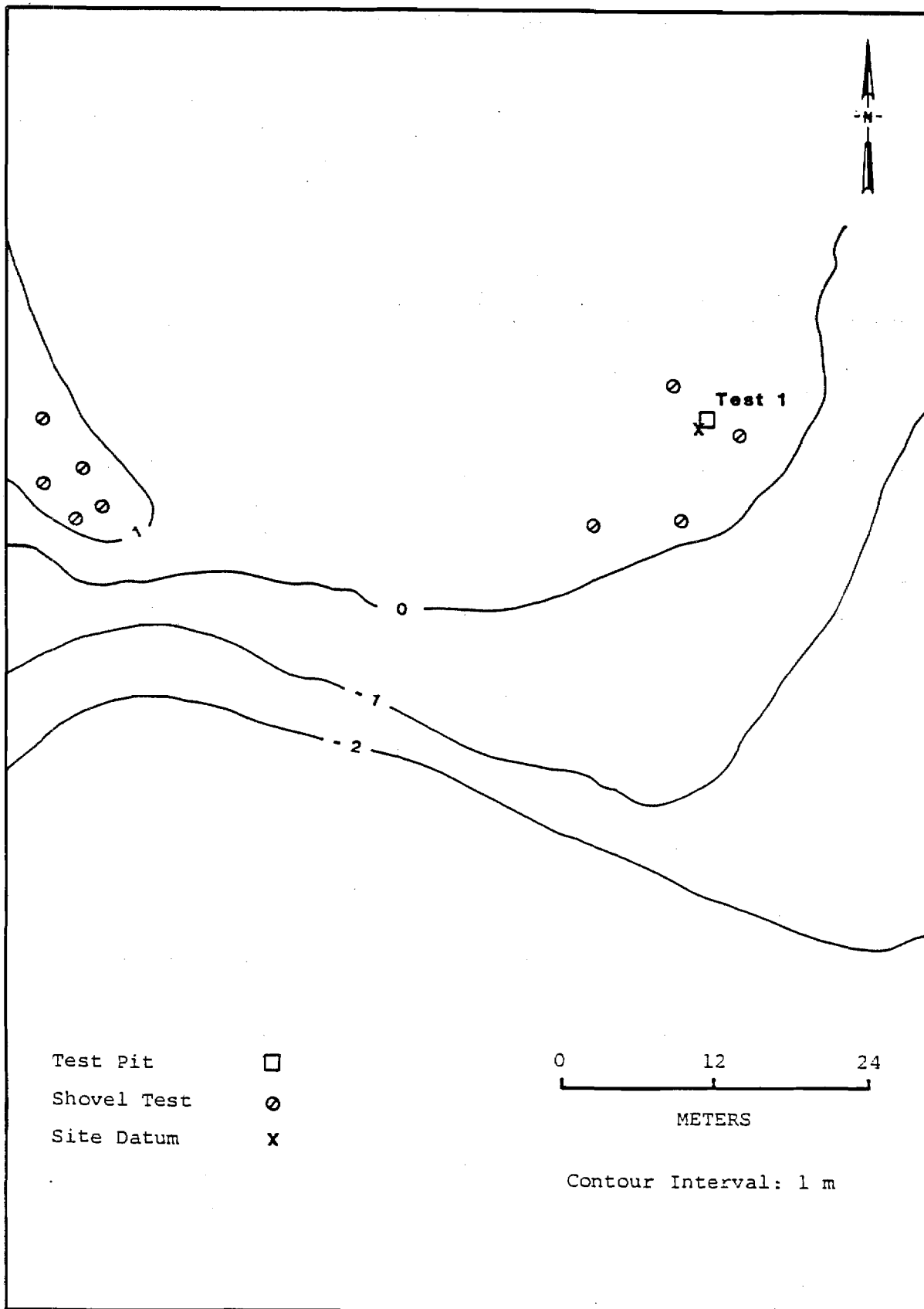


Figure D.188. Site Map, TLM 147

AHRS Number TLM 148; Accession Number UA82-88

Area: North-northeast of Jay Creek Mouth
Site Map: Figure D.189
Survey Locale 127: Figure E.202
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located on the northwest corner of a roughly triangular, broad, flat terrace, west of Jay Creek and north-northeast of the confluence of Jay Creek with the Susitna River. The terrace lies at ca. 732 m asl (2400 feet) elevation, and is part of the gradually sloping, undulating glaciolacustrine plain north of the Susitna River. It is separated from the rest of this plain by Jay Creek canyon to the east, an unnamed tributary ravine to the north, and a small drainage to the west of the site. The small drainage to the west is 5 m lower in elevation than the terrace top. The larger drainage north of the site drops abruptly to a depth of about 60 m. The site lies on the upper edge of the western slope of the terrace, approximately 50 cm below the level top of the terrace. From the site, Jay Creek canyon and the canyon ravine to it are visible to the north, and the Jay Creek uplands, 2-3 km distant, are visible as well. Portions of the undulating plain are visible to the west (up to 500 m distant) but the view is obscured by spruce forest and intervening hills. The marsh and a small, slow creek 100 m to the west provide the nearest easily accessible water. Clear running water is available from the tributary ravine to the north, 250 m away. Several small (1 ha or less) ponds and marshes are found to the west. To the south, the view of the terrace and Susitna River canyon rim is obscured by spruce forest. The terrace top is visible to the east, but Jay Creek canyon cannot be seen. Numerous other archeological sites in the area (TLM 128, TLM 138, TLM 139, TLM 140, TLM 141, TLM 143, and TLM 147) are visible to the north and west. The terrace is vegetated with moderately dense dwarf birch, lichen, Labrador tea, blueberry, and other heath shrubs. A few scattered spruce occur in

the vicinity of the site, and are more common on the plain west and south of the site. The marsh, west of the site, contains low boggy heath plants and grasses. Spruce and birch forests are dense on the slopes of canyons to the north and east.

Testing:

Twenty white argillite flakes were found in an initial shovel test, occurring from 1-6 cmbs in depth (Table D.243). Eleven additional white argillite flakes were encountered during excavation of a 40 x 40 cm test pit (test pit 1). Flakes occur in a charcoal unit directly below the organic mat, from 4-7.5 cmbs, in a pinkish gray, fine silt unit (Devil tephra), and in the contact between them. A few flakes appeared to come from within the organic mat in the shovel test. Despite seven additional shovel tests placed in the vicinity of test pit 1 and extensive surface examination, no other artifacts were found. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.243.

Artifact Summary, TLM 148

Provenience	Description
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Lithic Material

Subsurface:

Test Pit 1	31 Argillite flakes
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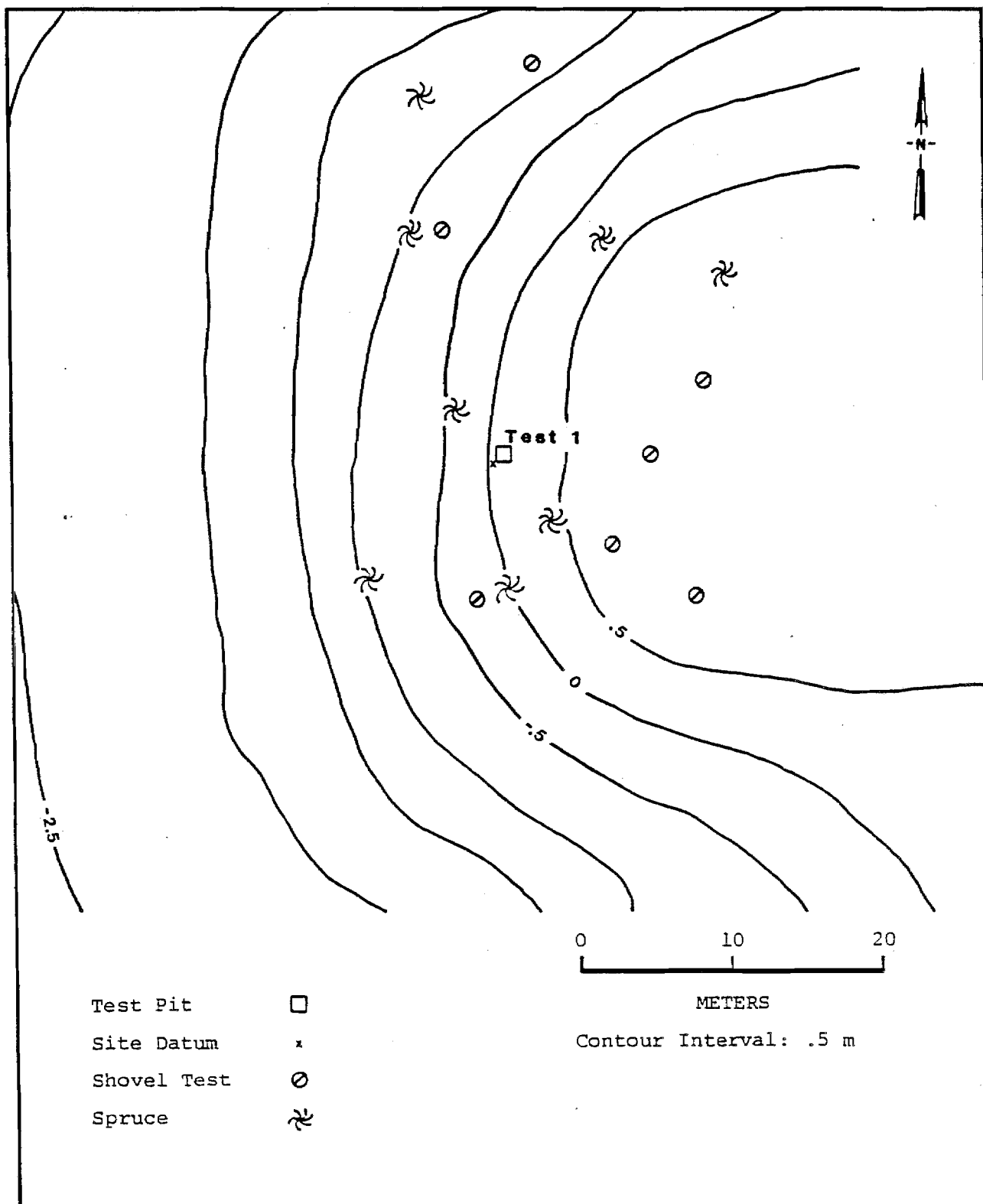


Figure D.189 Site Map, TLM 148

AHRS Number TLM 149; Accession Number UA82-89

Area: North of Jay Creek Mouth
Site Map: Figure E.190
Survey Locale 131: Figure E.208
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

TLM 149 is located at approximately 808 m asl (2650 feet) on a low kame, north of the mouth of Jay Creek. The kame is crescent-shaped with a 30 x 15 m southern portion oriented northwest-southeast. The northern portion is 20 x 8 m and oriented north-south. The site is situated in the middle of the northern portion of the kame which is about 5 m above the surrounding terrain on its west side and about 1 m above the surrounding terrain on its east side. The site kame is one of many kames within a 200 m radius that vary between ca. 800 and 823 m asl. This large group of kame knolls trends east-west from the east side of a lake locally known as Laha Lake. The site kame is east of the easternmost tip of Laha Lake and north of a small, unnamed creek. The view from the site to the north and northwest includes a series of kames, mountainous foothills 2 km distant, and mountain peaks. The northeast view is obscured by a higher knoll 40 m distant. Beyond kames to the east, high terrain on the east side of Jay Creek is visible. To the southeast the kame terrain descends gently for 100 m. The Susitna River drainage is visible, as is high terrain on its south side. A plateau on the east side of Jay Creek is also visible to the southeast. The creek is not visible from the site, although it is audible. Site vegetation consists of a white lichen mat, lowbush cranberry, crowberry, blueberry, Labrador tea, and low-lying dwarf birch, along with a few willow. One young black spruce is growing 4 m west of the site datum. Other kames within a 200 m radius are similarly vegetated. Kame slopes tend to exhibit exposed gravelly soil and are lichenous. Swales or shallow draws between kames are covered with dwarf birch. Dense black spruce thickets stand in seasonal drainages between kames. Other sites

within this stretch of undulating kame topography east of Laha Lake are TLM 138, TLM 146, TLM 150, TLM 151, TLM 152, and TLM 154.

Testing:

No surface artifacts were observed at TLM 149. The subsurface assemblage consists of burned bone (981 fragments) coming from a cultural layer between 5 and 10 cmbs in a 40 x 40 cm test pit (test pit 1). The cultural layer lies between the Devil and Watana tephra units. Dense bone concentrations were encountered in the south half of the test pit. Two small light brown argillite flakes were also located in association with the burned bone in the southwest quarter of the test pit (Table D.244). Three additional shovel tests placed on the kame did not produce cultural material. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.244.

Artifact Summary, TLM 149

Provenience

Description

Lithic Material

Subsurface:

Test Pit 1

2 Argillite flakes

Table D.244. (Continued)

Provenience	Description
<u>Faunal Material</u>	
Subsurface:	
Test Pit 1	2 Tooth fragments, calcined, possible caribou (<u>Rangifer tarandus</u>)
	1 Scaphoid fragment, calcined, caribou (<u>Rangifer tarandus</u>)
	3 Possible rib fragments, calcined, medium-large mammal
	1 Rib fragment, calcined, small-medium mammal
	1 Astragalus fragment, calcined, small mammal
	4 Distal portions of phalanx, calcined, small mammal
	2 Epiphyses, calcined, small mammal
	1 Phalanx, calcined, small mammal
	565 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
	1 Long bone fragment, calcined, small mammal
	10 Unidentifiable bone fragments, calcined, small mammal
ca. 390	Long bone and unidentifiable fragments, calcined, mammal

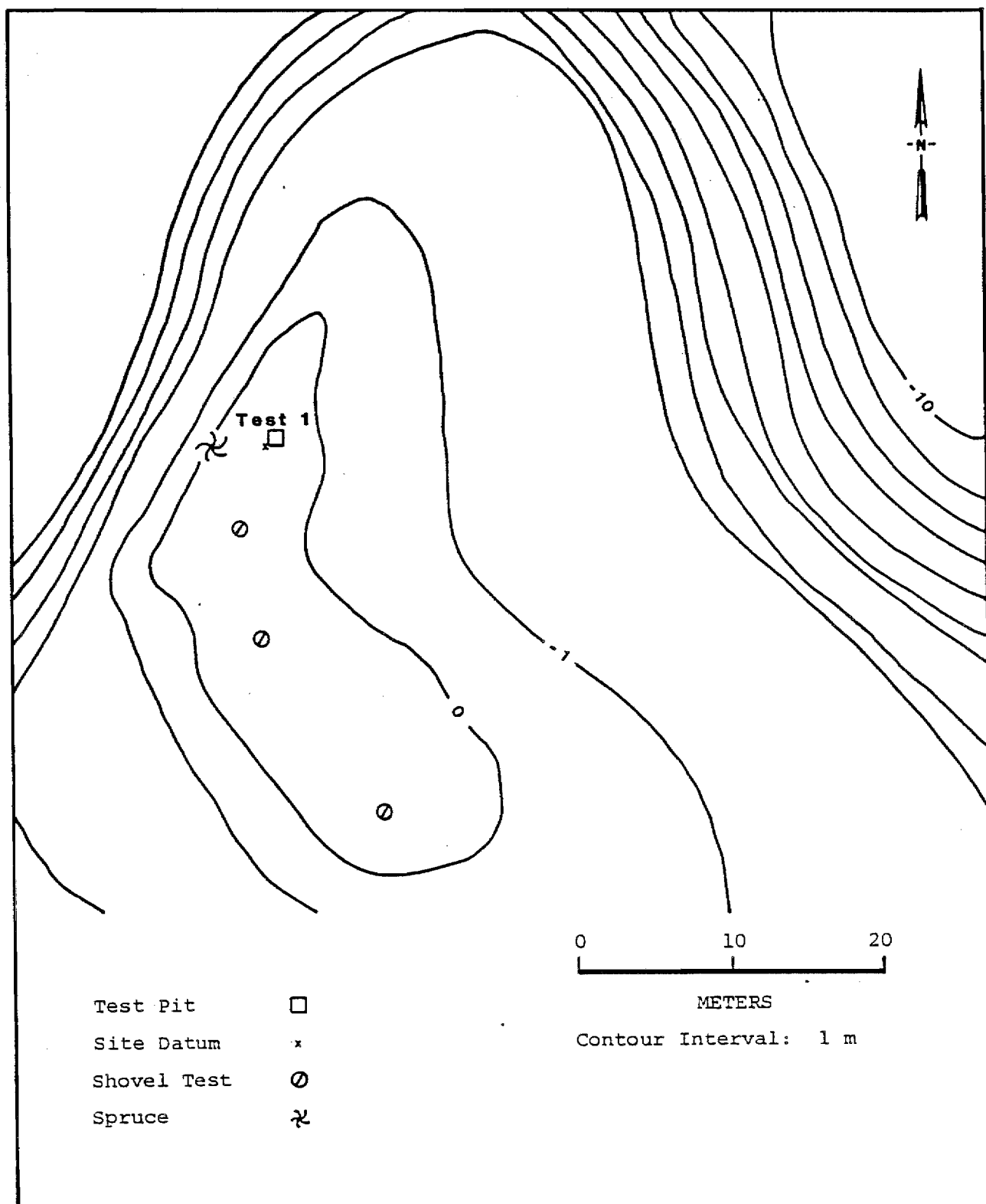


Figure D.190. Site Map, TLM 149

AHRS Number TLM 150; Accession Number UA82-90

Area: North of Jay Creek Mouth
Site Map: Figure D.191
Survey Locale 131: Figure E.208
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

Located on the crest of a small kame, TLM 150 lies at an elevation of ca. 802 m asl (2630 feet), north of the mouth of Jay Creek. The kame is one of a series of similar kames on an undulating terrace between Jay Creek, to the east, and a 7 ha lake locally known as Laha Lake to the west. The kame forms a ridge oriented roughly northeast-southwest, and is approximately 150 x 20-30 m. It is fairly linear and broadly rounded in cross section. The site is on the flattened crest, southwest of the central summit of the ridge. A slight swale, 1-2 m lower in elevation than the ridge top, separates the ridge from a slightly higher ridge to the west and northwest. Higher ground also lies to the southwest across a ca. 4 m deep swale. To the southeast and east across a relatively low drainage (7-10 m lower than the site elevation) are similar but smaller ridges. Low kames and ridges are found to the northeast and north. A small clear water creek, the outlet stream from a small pond northeast of a lake, locally known as Laha Lake, flows to the north. Beyond this creek, rolling uplands lead to hills of up to 1113 m asl (3652 feet) to the north. From the site, a good view of the rolling kame topography to the east and north is available. The view to the south and west is partially to completely obscured by open spruce woodland and intervening terrain. Jay Creek lies in a steep-walled canyon to the east. It is inaccessible, owing to the sheer walls. A mineral lick favored by game is reported from here, and numerous other archeological sites have been discovered in this area. The site and surrounding terrain are vegetated by dwarf birch scrub, with Labrador tea, blueberry, and other low heath plants, and lichen providing a fairly continuous ground cover. Spruce are scattered on the kame top, and are denser in the lower swale areas.

Testing:

Cultural material was encountered in a single 40 x 40 cm test pit (test pit 1). Four black basalt flakes were found in an initial shovel test, beneath the organic mat and above 7.5 cmbs. Upon expansion of this shovel test to test pit 1, four additional black basalt flakes were encountered from 4-6 cmbs, beneath the organic layer and within and above the underlying pink-gray silty Devil tephra. At 9-12 cmbs, beneath the Watana tephra, five calcined mammal bone fragments were encountered. One piece, found at 9 cmbs in the west wall of test pit 1, was located within the gray, silty Oshetna tephra; the others were found within or at the upper contact of this unit (Table D.245). The stratigraphic distribution of cultural material in test pit 1 strongly suggests that the site contains more than one component. Despite extensive surface examination and the placement of eight additional shovel tests, no other artifactual material was found. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.245.

Artifact Summary, TLM 150

Provenience	Description
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Lithic Material

Subsurface:

Test Pit 1	8	Basalt flakes
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Faunal Material

Subsurface:

Test Pit 1	5	Unidentifiable bone fragments, calcined, mammal
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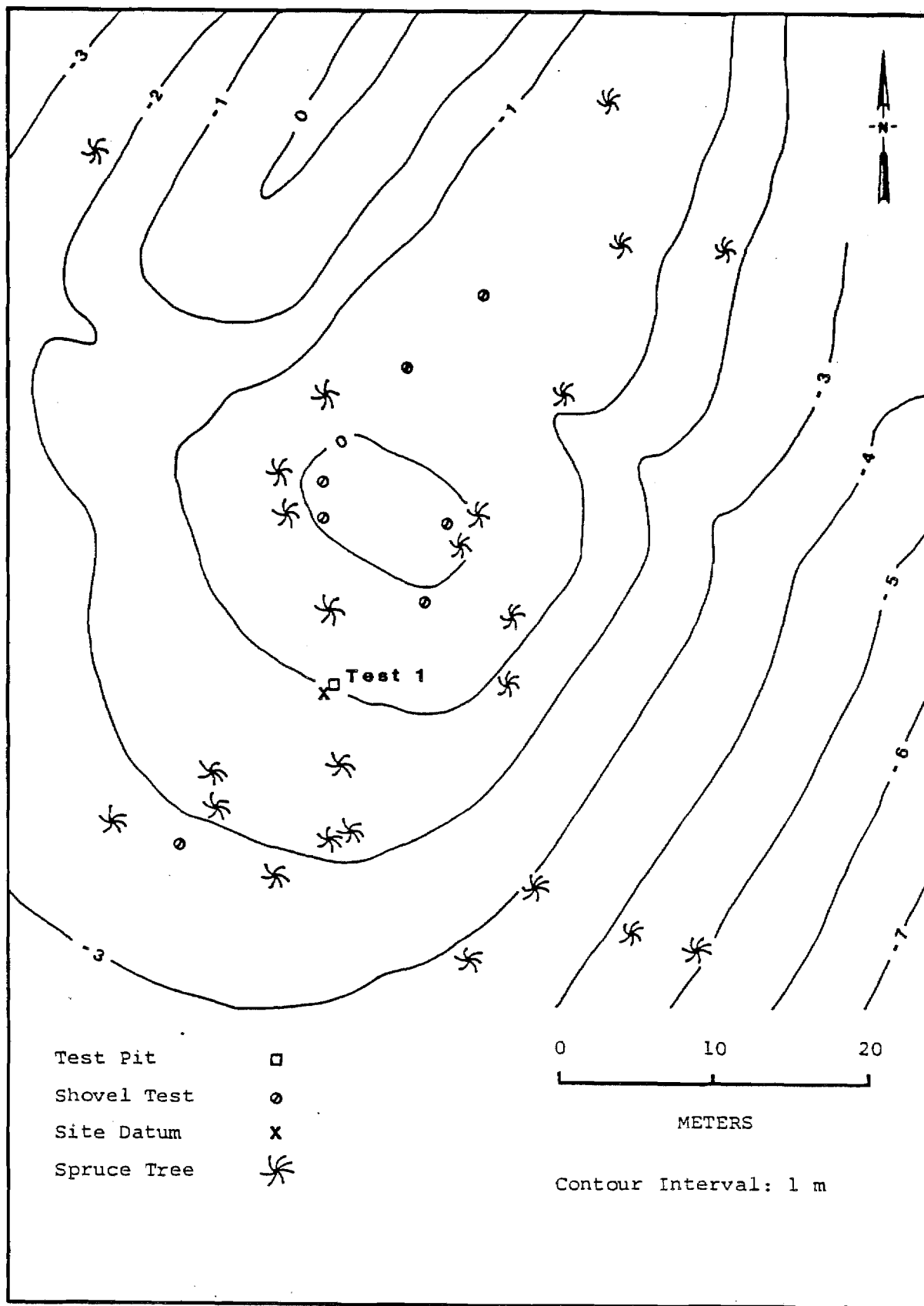


Figure D.191. Site Map, TLM 150

AHRS Number TLM 151; Accession Number UA82-91

Area: North of Jay Creek Mouth
Site Map: Figure D.192
Survey Locale 131: Figure E.208
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

The site is located in an area characterized by kettle and kame topography north of the confluence of Jay Creek with the Susitna River. The kame features are dissected by a series of swales, drainages, and creeks. The kame on which this site is situated is approximately 100 m in length and is oriented northeast-southwest. This kame has the appearance of a ridge with three discrete rises. The site is on a circular rise on the southwest end of the kame ca. 732 m asl (2400 feet), 15 x 6 m in area. Another circular rise on the center of the kame ca. 1 m higher than TLM 151 is the highest point of relief on this topographic feature. The rise associated with TLM 151 is defined primarily by the slope of the south and west faces which descend 2-3 m over a distance of ca. 10 m. The kame is bordered on the north and south sides by swales, ca. 15 m in width, with creeks on both the western and eastern sides. There is excellent access from the site to the small creek on the west side of the kame. This creek is an outlet for an unnamed kettle lake which is one of three kettle lakes northwest of the site and is also a Jay Creek tributary. The creek flows south past the site, bending northwest upstream. The Jay Creek valley rim is west of the site. At that location Jay Creek makes a sharp turn and an amphitheater formation is evident. This formation is the location of a mineral lick. The location of this site between the uplands to the north and northwest and Jay Creek to the east may be correlated to movement of game toward the mineral lick. Visibility from the site is partially obscured in all directions by scattered spruce trees. To the north, upland hills which attain elevations of ca. 1097 m asl (3599 feet) can be seen. Kame features are in view for 150-250 m. The site

vegetation consists of scattered spruce trees and brush including dwarf birch, blueberry, and heath. Lichen, mosses, and scattered grasses are common on the surface. Vegetation in the site area is similar to that on the site with denser brush in swales, drainages, and along creek margins.

Testing:

This site contains only subsurface material; there was no surface indication of the site. Fifteen bone fragments were recovered from a shovel test located on a level area on the eastern end of the kame. This shovel test was expanded into a 40 x 40 cm test (test pit 1). Collectively approximately 531 calcined bone fragments, and 13 flakes representing four material types were found in this test (Table D.246). The faunal remains are largely unidentifiable fragments of medium-large mammal, but three cranial fragments and one rib fragment of the same size class were isolated. The material was associated with a cultural unit (7-20 cmbs) beneath a unit of dark brown, finely sorted organics. The cultural matrix truncates a unit of yellowish brown, fine-grained matrix (Watana tephra) which is stratigraphically lower than the cultural unit. This may indicate a cut and fill type of relationship and consequently a pit feature. The cultural unit itself had a mixed appearance with a reddish brown silty matrix, a grayish matrix (tephra or cultural ash), and charcoal lenses and flecks. No additional subsurface testing was conducted in the 15 x 6 m level area on which the site is situated. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

AHRS Number TLM 152; Accession Number UA82-92

Area: Northwest of Jay Creek Mouth
Site Map: Figure D.193
Survey Locale 131: Figure E.208
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

TLM 152 is located in an area of ice-contact drift consisting of kettle and kame topography northwest of the confluence of Jay Creek with the Susitna River. The site, at an elevation of ca. 802 m asl (2630 feet), is situated on a prominent, elongate kame overlooking two kettle lakes. These lakes are ca. 2 and 7 ha in size with the larger lake west and the smaller lake south of the kame. An additional 1 ha kettle lake is located northeast of the site, but is obscured from view by intervening terrain. The 50 (northeast-southwest) x 20 m (northwest-southeast) kame, is separated from kames to the east by an outlet stream which drains the 2 ha lake and flows eastward eventually draining into Jay Creek. The site is situated on a ca. 50 cm rise on the eastern portion of the kame. An additional rise, at the same elevation, is evident on the western end. The southern and eastern sides of the kame facing the drainage and lake have moderate slopes dropping ca. 8-10 m to the lake margin. Slopes in all other directions are more gradual and undulating in appearance. Visibility varies from 1-5 km depending on the position of surrounding kames. There is a clear view to the southeast of the kame on which TLM 154 is located. The site has a fairly continuous cover of blueberry, Labrador tea, crowberry, dwarf birch, and lichens. Small surface exposures are present. Vegetation in the surrounding area is similar to that of the site with denser brush along the outlet stream and small stands of spruce in lower areas between kames.

Testing:

The site consists of a single gray chert flake located in a shovel test on the eastern upper extent of the kame (Table D.247). Surface survey and five shovel tests placed along the kame failed to reveal any additional artifactual material. The shovel test which contained the chert flake was expanded into a 40 x 40 cm test (test pit 1), with negative results. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.247.

Artifact Summary, TLM 152

Provenience	Description
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Lithic Material

Subsurface:

Shovel test 1	1 Chert flake
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Table D.246.

Artifact Summary, TLM 151

Provenience

Description

Lithic Material

Subsurface:

Test Pit 1	1	Argillite flake
	8	Basalt flakes
	2	Chalcedony flakes
	2	Chert flakes

Faunal Material

Subsurface:

Test Pit 1	3	Cranial fragments, calcined, medium-large mammal
	508	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
	20	Unidentifiable bone fragments, calcined, mammal

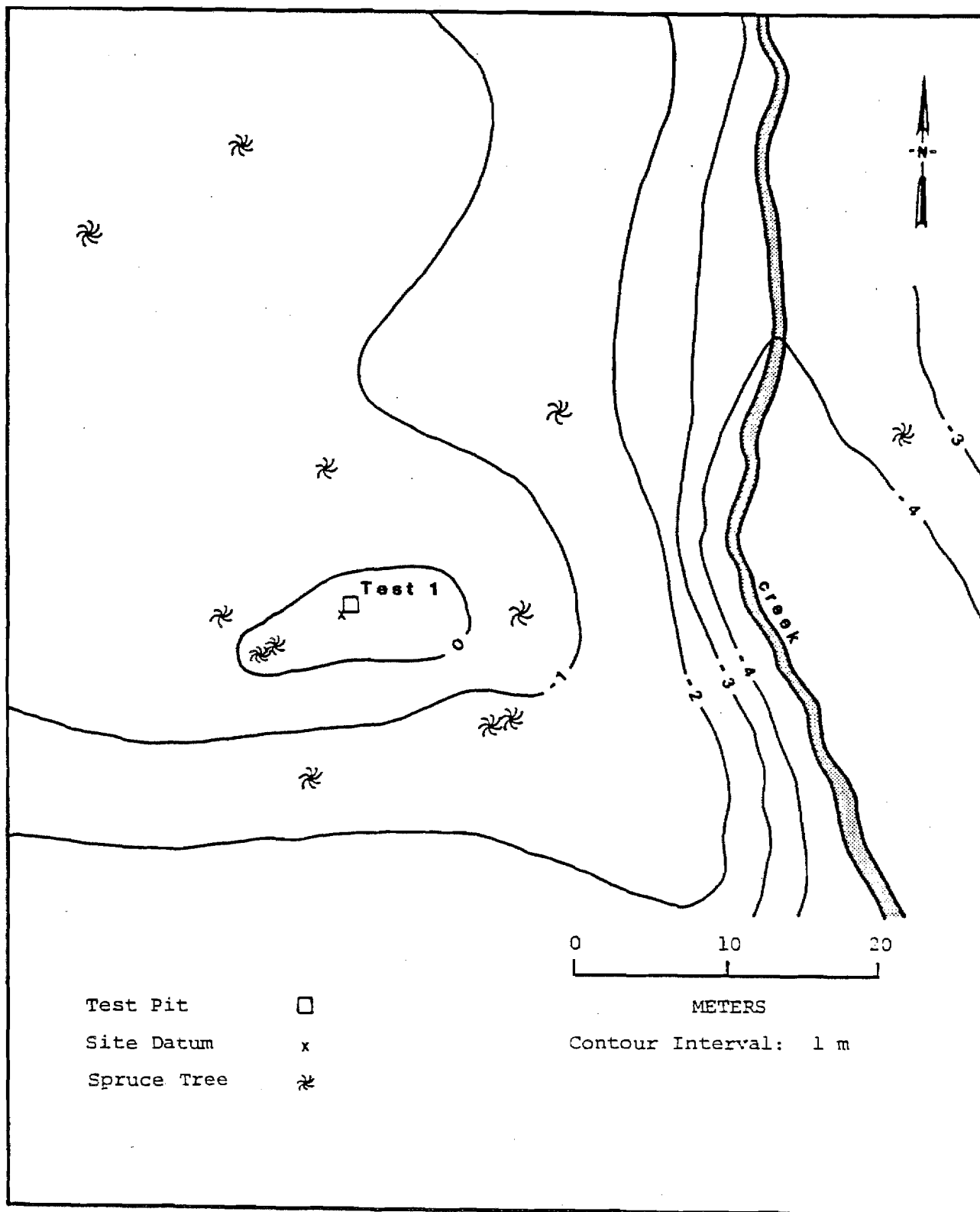


Figure D.192. Site Map, TLM 151

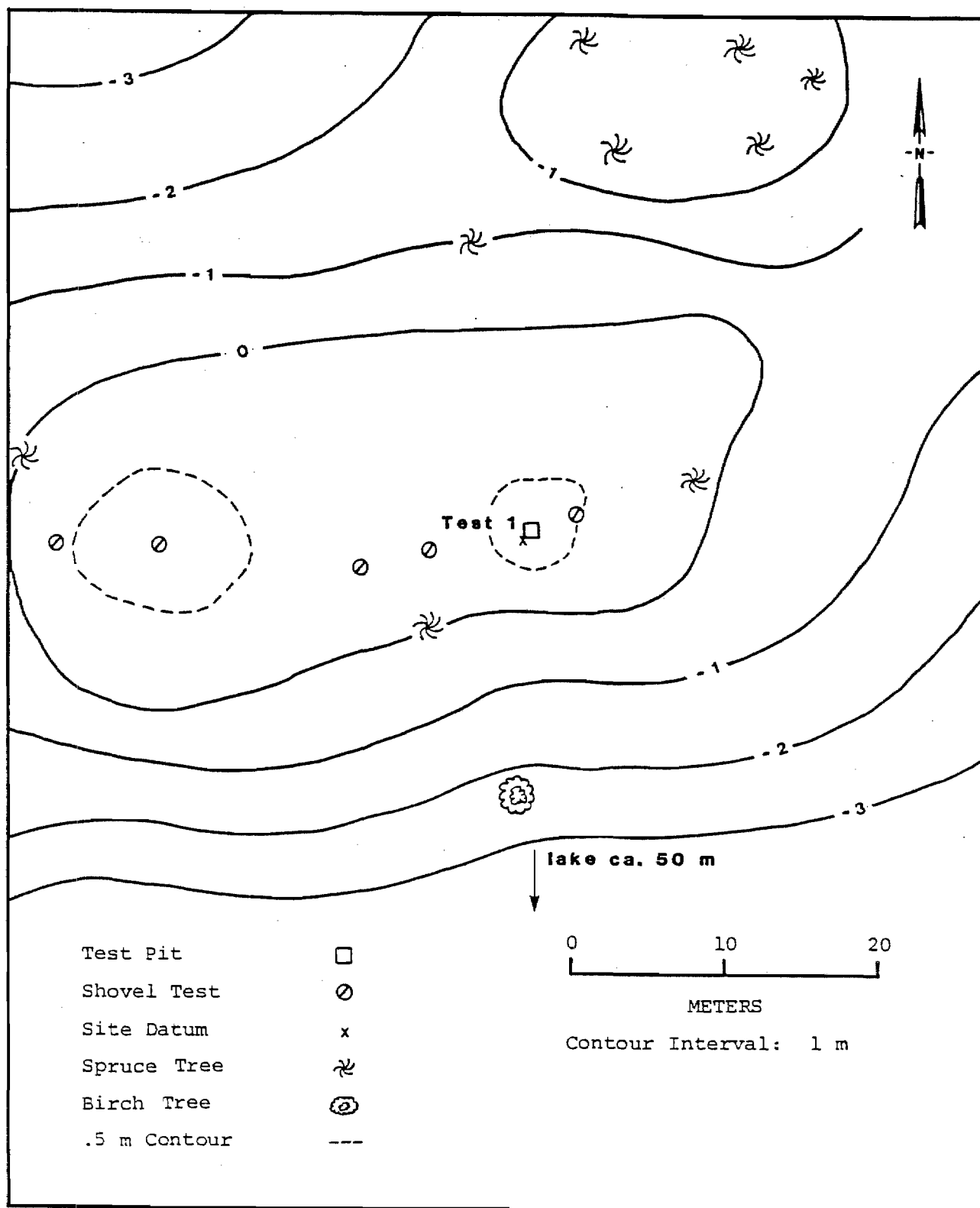


Figure D.193. Site Map, TLM 152

AHRS Number TLM 153; Accession Numbers UA83-85, UA84-115

Area: North of Deadman Creek Mouth
Site Map: Figure D.194
Site Location Map: Figure E.63
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is situated on a small bluff along the west bank of Deadman Creek north of the confluence of Deadman Creek with the Susitna River. The bluff is one of several glacial kames in an area dotted with kettle and kame topography. It is located on the top of a kame at an elevation of 799 m asl (altimeter: 2621 feet). The kame is approximately 90 x 35 m in size at the top and is oriented east-northeast to west-southwest. The site is located on the eastern side of the kame overlooking Deadman Creek. To the north and west there is a gradually rising lacustrine plain. Looking southward from the site a panoramic view of Deadman Creek and its valley is afforded. The soil in the site area is well drained and supports flora composed of lichen, dwarf birch, dwarf alder, dogwood, and some grasses. No spruce are growing on the kame top. The highland areas surrounding the site contain similar kinds of flora with some scattered spruce. The lowland areas are wet and contain more concentrated stands of spruce and dwarf shrubs.

Testing:

The site was initially identified by a surface flake exposed on a blowout area (Table D.248). A 40 x 40 cm test pit (test pit 1) was excavated adjacent to the blowout area and produced an additional flake. Five survey shovel tests were excavated on the top of the kame, one of which produced additional artifactual material. This shovel test was expanded into a 40 x 40 cm test pit (test pit 2) and produced 25 flakes. All artifacts from test pit 2 were recovered from either the contact between the Watana and Oshetna tephra or the Oshetna tephra. One

possible flake of basalt was located on the kame surface but not collected.

A grid shovel testing program was implemented to assist in determining the site extent and distribution of subsurface cultural material. Twenty-six grid shovel tests were excavated; but none produced cultural material. Three basalt flakes, one of which may have originated from the backdirt of test pit 1, and a quartzite flake were recovered from the surface. A possible cache pit was located ca. 40 m northeast of datum on a sharp promontory of the kame. A shovel test placed in the southwest corner of the ca. 1 m diameter depression revealed a fill level above an organic unit; however, no cultural material was located. Deflated areas between the possible cache and the lithic-bearing areas were also sterile. Observed site size based on the distribution of artifacts is 16 square meters (Table D.2).

Table D.248.

Artifact Summary, TLM 153

Provenience	Description
<u>Lithic Material</u>	
Surface:	4 Basalt flakes 1 Quartzite flake 1 Flake (uncollected)
Subsurface:	
Test Pit 1	1 Basalt flake
Test Pit 2	1 Argillite flake 3 Basalt flakes 21 Quartzite flakes

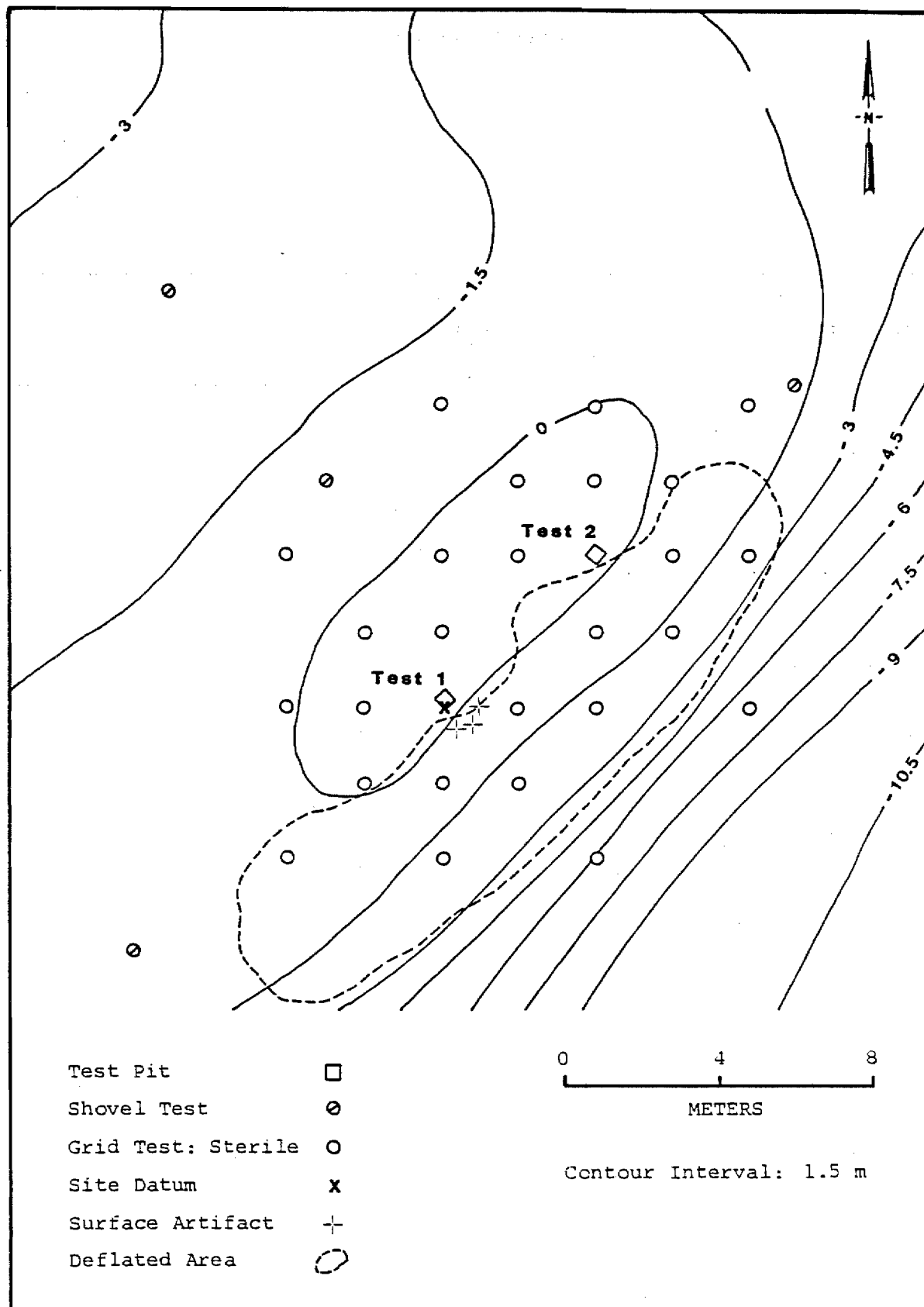


Figure D.194. Site Map, TLM 153

AHRS Number TLM 154; Accession Number UA82-94

Area: North of Jay Creek Mouth
Site Map: Figure D.195
Survey Locale 131: Figure E.208
USGS Map: Talkeetna Mts. D-2, Figure E.4
Site Location: Appendix F

Setting:

TLM 154 is located at an elevation of ca. 808 m asl (2650 feet), on a south-facing kame south of a lake, locally known as Laha Lake, and north of the mouth of Jay Creek. The kame forms a ridge lying to the south-southeast of the shore of a small (2 ha), unnamed, oval lake southeast of Laha Lake. The top of this ridge is ca. 10 m higher than the level of the lake, and is ca. 5 m higher than the elevation of the site. The ridge descends to the southwest, dividing into three separate finger ridges, each approximately 75 m long. The site is located along the broad flat crest of the middle finger ridge, southwest of the top of the kame, which is approximately 20 m wide (northwest-southeast), and slopes gradually in an undulating fashion. It is surrounded by boggy areas to the southeast, southwest, and west, which are 3-5 m lower than the elevation of the site. To the north beyond the kame top is the outlet stream to the small oval lake. This small, sinuous clear water creek runs eastward, eventually emptying into Jay Creek canyon, which lies further to the east. The ground around the creek and small lake is also low and boggy in contrast to numerous well-drained kames nearby. The regional kettle and kame topography surrounding the site has a local relief of from 5-20 m; kames are larger and higher west of the site, near Laha Lake. From the site, views to the east, west, and northwest are restricted by the irregular terrain. From the kame top, however, a panoramic view is available of the broad undulating kettle and kame topography on the terrace of the Susitna River valley to the south and east, as well as Laha Lake to the northwest. The Watana Hills can be seen further to the north, while Jay Creek canyon is visible to the east. The Susitna River canyon can be seen to the south. The region

around the site, and the site itself, is vegetated with a fairly continuous cover of dwarf birch, low heath plants, blueberry, and lichens. Spruce are scattered in lower terrain. Bog grasses are found in low, damp areas. On the kame top large areas of exposed gravel are present, but not on the site itself.

Testing:

An initial shovel test revealed 12 flakes of two different material types. With expansion into a 40 x 40 cm test pit (test pit 1), a total of 133 gray argillite and gray-white quartzite flakes were recovered. These flakes were found within a dark humic layer beneath the organic mat and in the underlying gray-white silt (Devil tephra). Six subsequent shovel tests were placed in the vicinity of test pit 1. In shovel test 2, a lanceolate point (UA82-94-4; Figure D.385b) was uncovered from an unknown stratigraphic position. In addition, three gray argillite flakes were found on the surface of a lichen mat, 40 m to the northwest of site datum (Table D.249). The gravel exposures on the ridge top and other areas relatively clear of shrubby vegetation were carefully examined for additional surface artifacts, but none were found. Estimated site size based on the distribution of artifacts is 400 square meters (Table D.2).

Table D.249.

Artifact Summary, TLM 154

Provenience		Description
<u>Lithic Material</u>		
Surface:	3	Argillite flakes
Subsurface:		
Test Pit 1	120	Argillite flakes
	13	Quartzite flakes
Test Pit 2	1	Argillite lanceolate point (UA82-94-4)

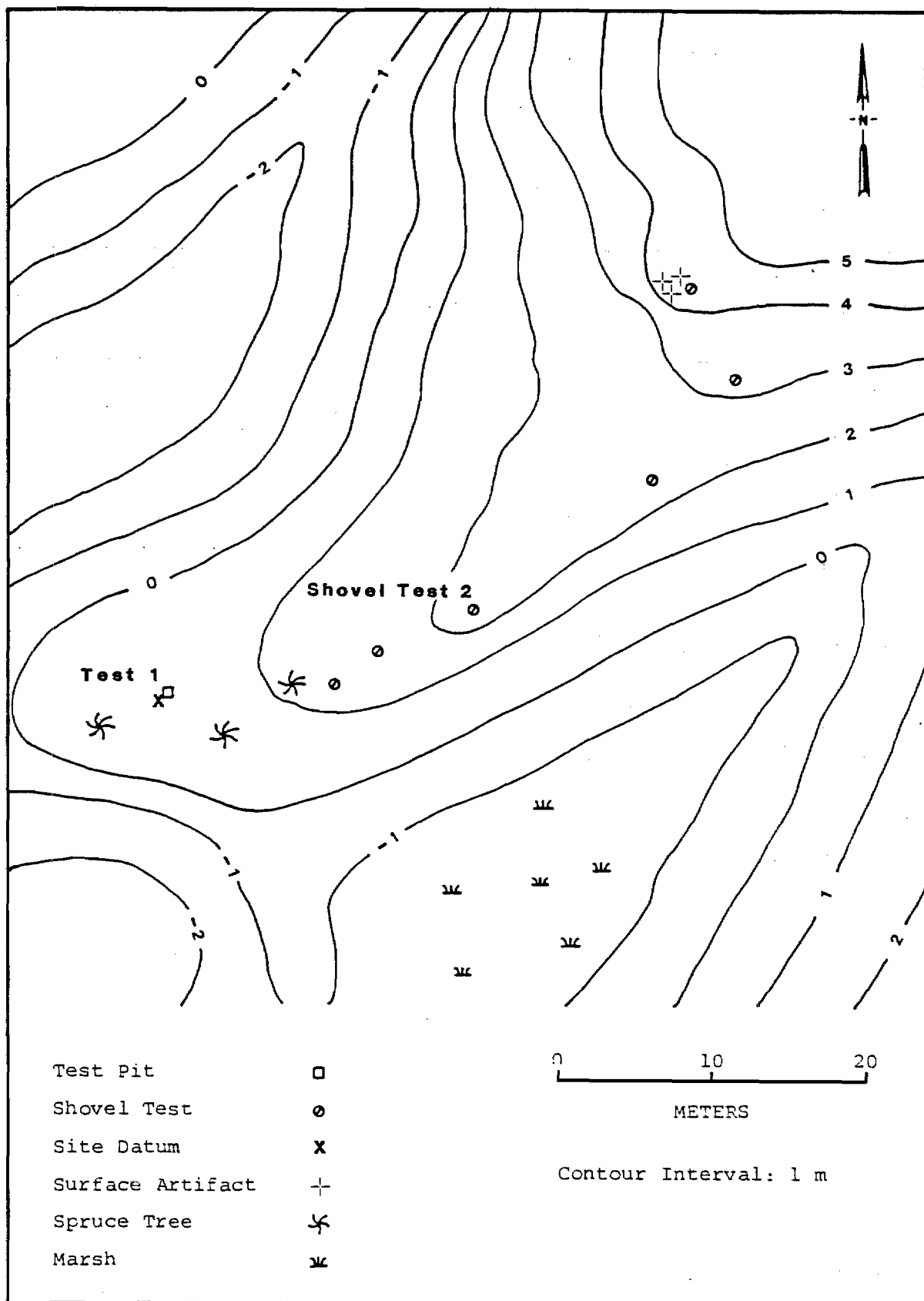


Figure D.195. Site Map, TLM 154

AHRS Number TLM 155; Accession Number UA83-86

Area: Northwest of the Confluence of a Northern
Tributary with Deadman Creek
Site Map: Figure D.196
Site Location Map: Figure E.64
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 155 is located northwest of the confluence of Deadman Creek with its first major northern tributary below Deadman Lake. The site is on a relatively flat terrace at an elevation of ca. 995 m asl (3200 feet) with a ridge to the west attaining ca. 1067 m asl. The terrace is oriented north-south on the east slope of the valley of a northern tributary of Deadman Creek. The site is located on the southern edge of the terrace and is west of the southward-flowing Deadman Creek tributary. A small stream dissects the ca. 600 x 200 m terrace north of TLM 155. Another site, TLM 168, is located north of TLM 155 on the same terrace. The valley floor is ca. 35 m below the terrace to the east of these sites. To the east below the site are a series of knolls bordering the tributary of Deadman Creek on which sites TLM 098, TLM 099, TLM 117, and HEA 180 are found. To the north, the tributary meanders through a valley flanked by irregularly spaced terraces. Vegetation on TLM 155 is limited to dry alpine tundra consisting of mosses, lichens, berries, and dwarf birch among exposed areas of shattered rock and drift. The surrounding terrain is similarly vegetated with high brush occurring adjacent to the confluence of a northern tributary with Deadman Creek south of TLM 155.

Testing:

Surface survey resulted in the recovery of two argillite flakes and one rhyolite flake from the exposed rocky surface of the site (Table D.250). No subsurface cultural material was found in test pit 1 adjacent to the

first discovered flake or in six shovel tests placed to the east, south, and west. The surface flake scatter extended for 16 m north-south. The subsurface tests showed little soil development with no tephras discernible. Estimated site size based on the distribution of artifacts is 16 square meters (Table D.2).

Table D.250.

Artifact Summary, TLM 155

Provenience	Description
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Lithic Material

Surface:	2	Argillite flakes
	1	Rhyolite flake

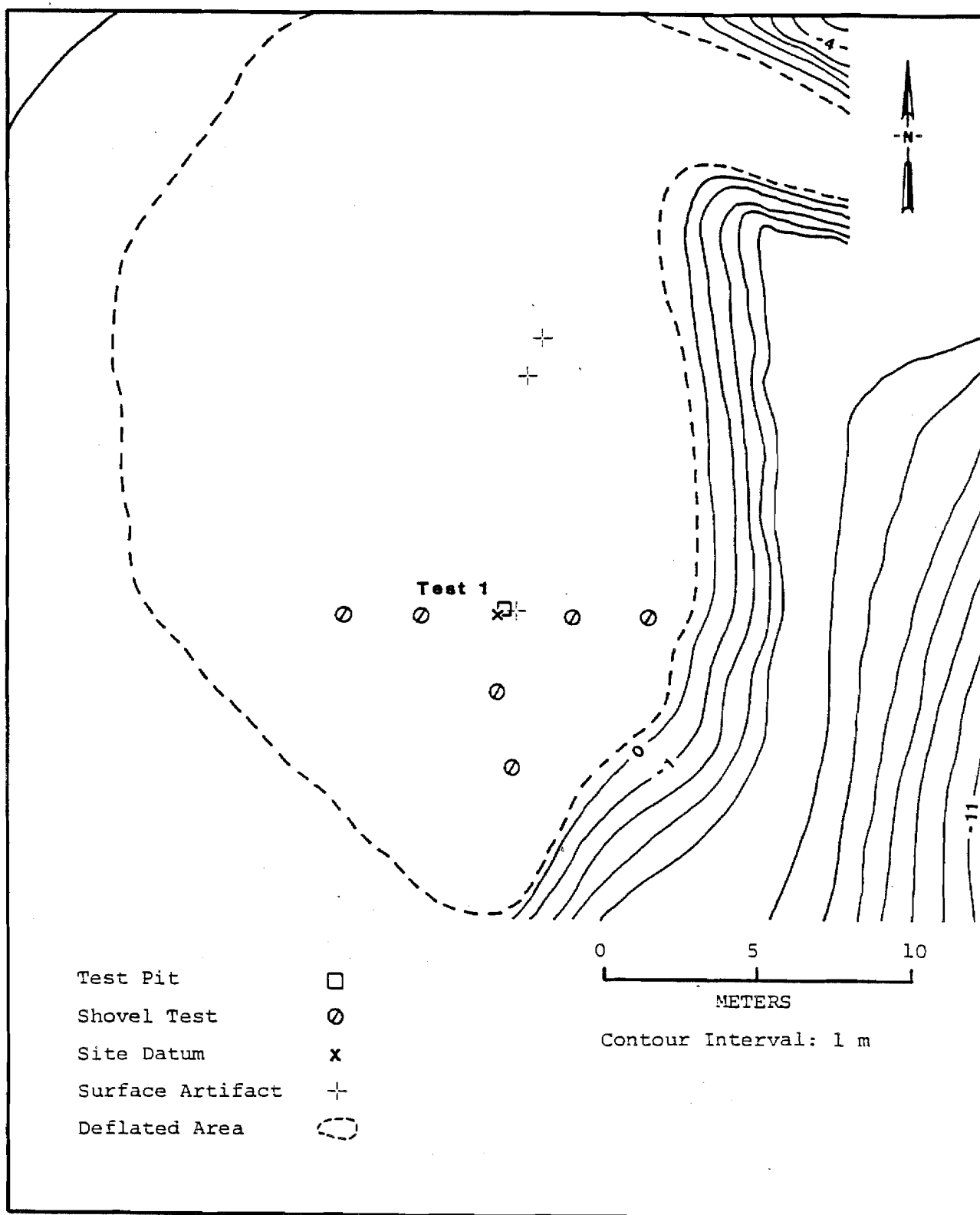


Figure D.196. Site Map, TLM 155

AHRS Number TLM 159; Accession Number UA83-88

Area: Northwest of the Confluence of Delusion Creek with
Watana Creek
Site Map: Figure D.197
Survey Locale 136: Figure E.217
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located on a discrete knoll approximately 732 m asl (2400 feet). The knoll is situated east of an unnamed creek, locally known as No Name Creek, which flows southward to the Susitna River. The unnamed creek lies east of Deadman Creek and west of Watana Creek. The knoll itself is oval in shape and contains a flat area at the top which is ca. 20 x 10 m in size. The top slopes off at about a 30-35 degree angle to a basal circumference of approximately 125 x 50 m. The long axis of the knoll is oriented in a northeast-southwest direction. The site appears to be confined to the top of the knoll. The site setting affords a panoramic view of the creek valley to the west, the mountain ranges abutting the southern edge of the Susitna River, and the ridges surrounding the creek valley in all cardinal points for approximately 5 km. Surface vegetation at the site is characteristic of a well-drained upland spruce hardwood ecosystem. Flora present at the site are: white spruce, dwarf birch, dwarf willow, lowbush cranberry, moss, dwarf Labrador tea, and some grasses. The area surrounding the site contains similar vegetation on to the tops of the knolls and high ridges. The lowland areas surrounding the site are composed of moist tundra vegetation and lowland spruce-hardwood forests.

Testing:

No artifactual material was recovered from the surface of the site. Five shovel tests were excavated in the site area and one of these produced artifacts. Shovel test 1 produced 36 flakes and then was

expanded into test pit 1. Test pit 1 produced one rock fragment and 116 flakes of numerous raw materials, as well as three tools. The tools are: a chert modified flake (UA83-88-3), a quartzite biface fragment (UA83-88-3; Figure D.385d), and a rhyolite flake core (UA83-88-5) (Table D.251). In addition to lithic artifacts, a large granite cobble, 20 x 22 cm, (uncollected) was found within the Oshetna tephra, resting on the glacial drift. Because of its position and the associated artifacts, the cobble was regarded as a possible feature. As such, test pit 1 was expanded in the northeast corner to isolate the suspected feature. Upon expansion, another large cobble (uncollected) was located in association with the original cobble along with 17 lithic artifacts and one pebble. To follow up the feature, test pit 1 and its associated extension was expanded into a 1 x 1 m test square. Approximately 185 flakes were collected from the contact between the Watana and Oshetna tephras and the Oshetna tephra in this final extension. In addition, one argillite biface (in two pieces) (UA83-88-24; Figure D.385e) and one chert blade (UA83-88-27; Figure D.385c) were recovered from these units. The stone feature was nondiagnostic but possibly cultural in origin. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.251.

Artifact Summary, TLM 159

Provenience	Description
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Lithic Material

Subsurface:

Test Pit 1 (1 x 1 m)	117	Argillite flakes
	4	Basalt flakes
	123	Chert flakes
	46	Quartzite flakes
	64	Rhyolite flakes
	1	Chert modified flake (UA83-88-3)
	1	Chert blade (UA83-88-27)
	2	Argillite biface fragments (UA83-88-24 articulating)
	1	Quartzite biface fragment (UA83-88-3)
	1	Rhyolite flake core (UA83-88-5)
	1	Granite pebble
	2	Cobbles (uncollected)

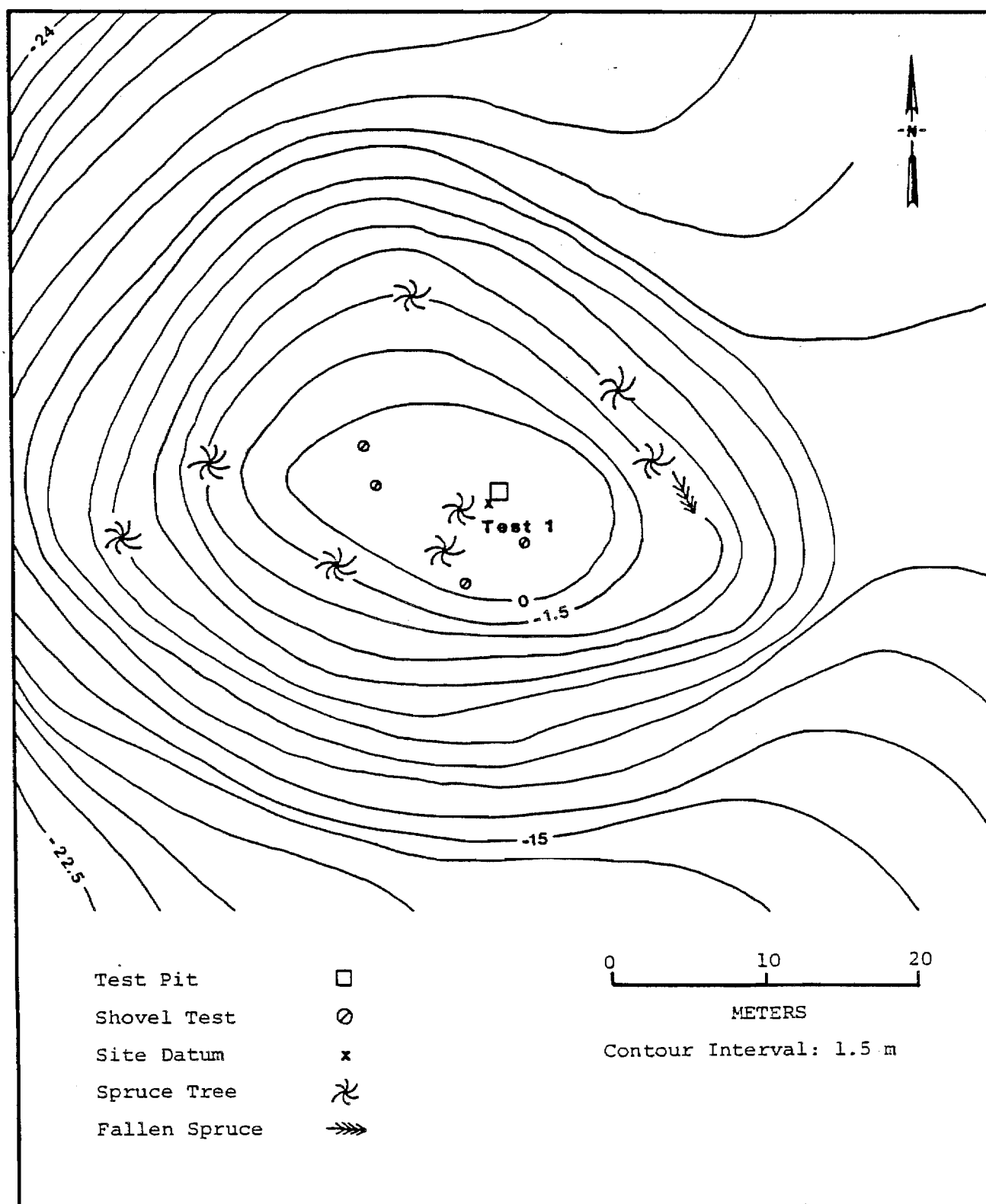


Figure D.197. Site Map, TLM 159

AHRS Number TLM 160; Accession Number UA83-89

Area: Northeast of Tsusena Creek Mouth
Site Map: Figure D.198
Survey Locale 151: Figure E.245
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on the west end of a discrete knoll, 80 (east-west) x 15 m (north-south), which rises to approximately 701 m asl (2300 feet), north of the Susitna River and east of Tsusena Creek. Neither the creek nor the Susitna River can be seen from the site because of the deeply incised canyon walls. The site is associated with a lake system, four lakes are within 200 m of the site. The largest lake is approximately 13 ha and the smallest is about 0.5 ha. None of the lakes appear to have a clear drainage path into the Tsusena Creek or the Susitna River. In addition to the surrounding lake system, the site affords a panoramic view of the region for 360 degrees. The vegetation for the site area is generally characterized as low shrub, consisting mostly of dwarf birch, Labrador tea, lichen, moss, blueberry, and a few small spruce. The center of the knoll has the densest patch of birch. The surrounding terrain, except along the lakeshore, is characterized as upland spruce-hardwood, with dwarf birch, mosses, and lichens predominating. The area along the lake can be characterized as lowland spruce forest with grasses and tussocks.

Testing:

No surface artifacts were found at the site. A total of six shovel tests were excavated at the site area, one of which was expanded into a 40 x 40 cm test pit (test pit 1) after a flake was discovered (Table D.252). The flake removed from this shovel test was collected without stratigraphic provenience. Two subsequently excavated flakes from test pit 1 were found within the Oshetna tephra level. All flakes were small and heavily weathered. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.252.

Artifact Summary, TLM 160

Provenience	Description
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Lithic Material

Subsurface:

Test Pit 1	2	Argillite flakes
	1	Basalt flake

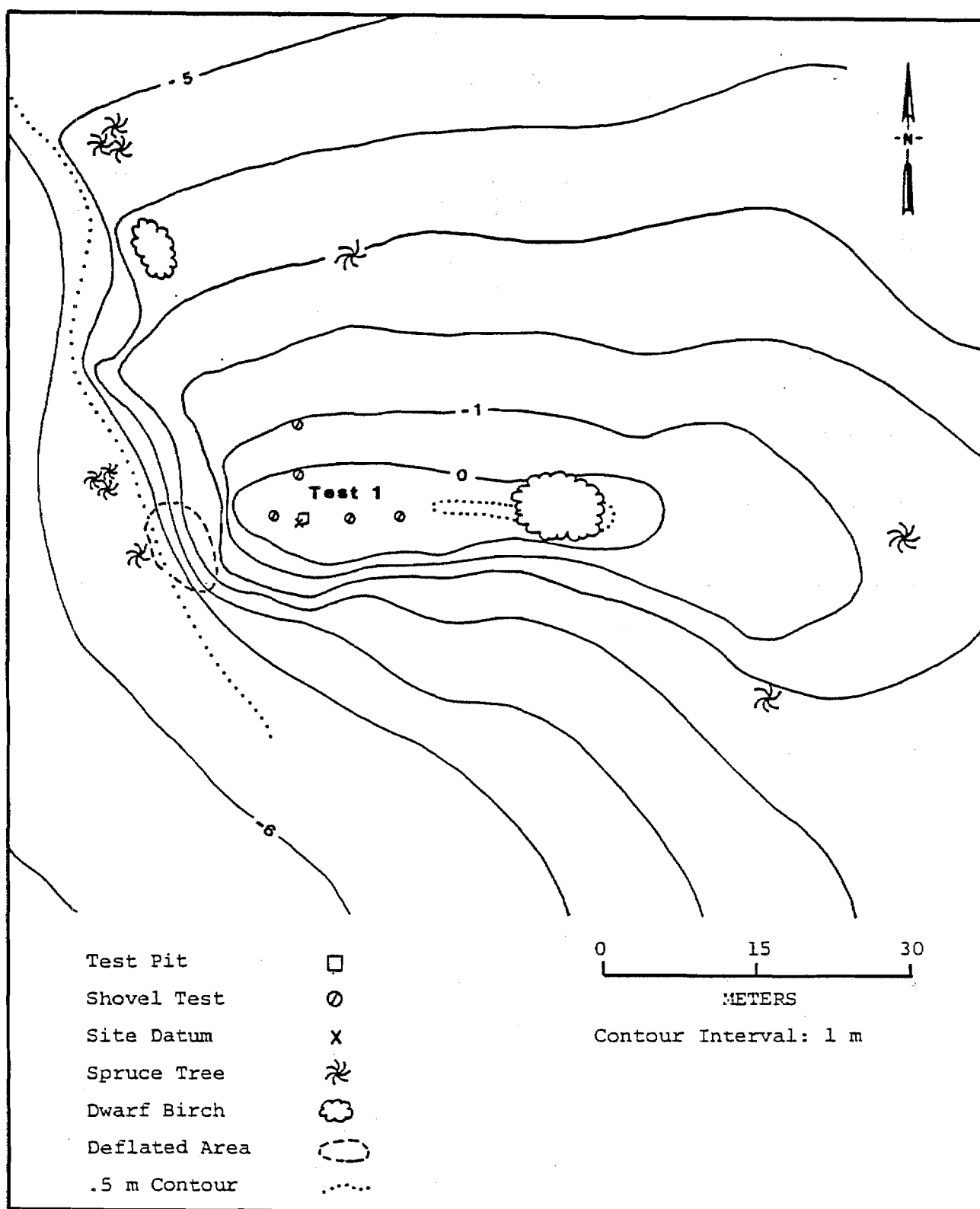


Figure D.198. Site Map, TLM 160

AHRS Number TLM 164; Accession Number UA83-90

Area: Northeast of Tsusena Creek Mouth
Site Map: Figure D.199
Survey Locale 151: Figure E.245
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on a long, narrow, sinuous ridge overlooking Tsusena Creek to the west. TLM 164 is east of the confluence of Tsusena Creek with the Susitna River, at an elevation of about 670 m asl (2200 feet). The ridge on which the site is situated is northeast-southwest trending and is approximately 80 x 3 m at the crest. The ridge slopes westward from its crest toward the creek at a very steep angle of 40 degrees but slopes less steeply eastward. The ridge is truncated on its upper and lower ends by gullies. These gullies have steep walls and drain the eastern slopes above Tsusena Creek. Access to the creek is difficult but possible by direct descent from the ridge crest. The site location commands a view up and down Tsusena Creek for about 2 km in either direction. The west bank of the creek, along with three terrace levels, is easily viewed from the site. To the east and south the terrain is characterized by kame and kettle topography, and the site affords a panoramic view of this setting. Vegetation on the site area, the ridge crest, and the slope facing Tsusena Creek consists of sphagnum moss, blueberry, Labrador tea, and lichen. The slope away from the creek, to the east, is covered with thick stands of dwarf birch with an understory similar to the creek side slope. The only extensive soil exposure on the ridge crest is a very well traveled game trail.

Testing:

A single flake was initially discovered in a shovel test on the crest of the ridge (Table D.253). This shovel test was expanded into a 40 x 40 cm test (test pit 1) and two additional flakes were recovered. All flakes were weathered argillite. These flakes were found in the contact zone defined by the Devil and Watana tephras. Five additional shovel tests were excavated into the site area to define the spatial limits of the site and all were sterile. No artifactual material was found on the surface of the site area. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.253.

Artifact Summary, TLM 164

Provenience

Description

Lithic Material

Subsurface:

Test pit 1

3 Argillite flakes

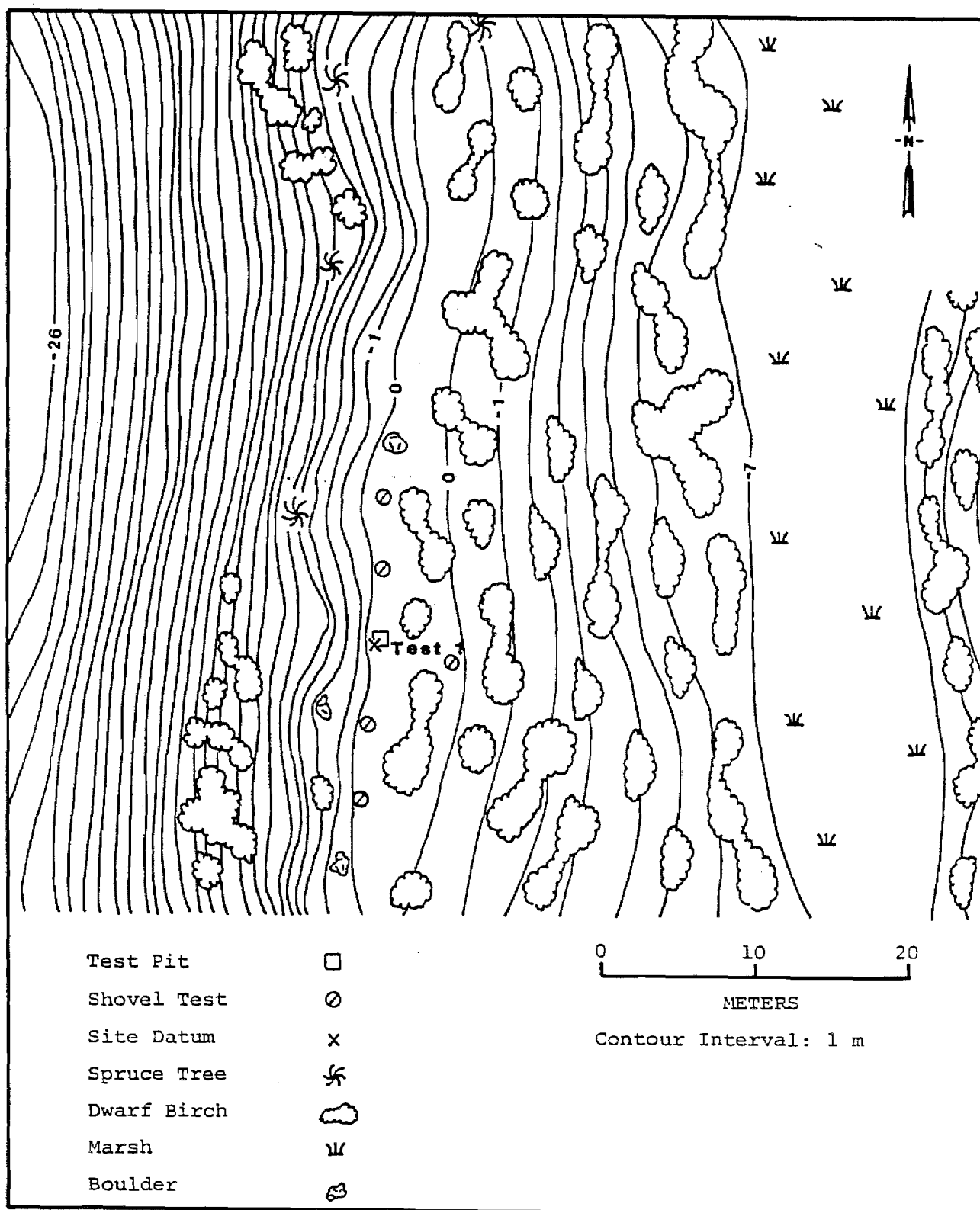


Figure D.199. Site Map, TLM 164

AHRS Number TLM 165; Accession Numbers UA83-91, UA84-110

Area: East-northeast of Tsusena Creek Mouth
Site Map: Figure D.200
Survey Locale 153: Figure E.249
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on a knoll at 714 m asl (altimeter: 2344 feet), and is situated east-northeast of the confluence of Tsusena Creek with the Susitna River. The knoll is oblong in shape with its long axis oriented east-west. The knoll slopes steeply southward towards the river. No view of the river is possible from the site, but there is a good view of the upper valley walls on both sides of the river. A panoramic view to the north from the west to the east is available from the knoll top. A gentle northward downhill slope allows observations of the surrounding terrain for over 10 km, but irregularities in the slope obstruct views of some areas. The vegetation for the site area is generally characterized as low shrub. Species include dwarf birch, Labrador tea, lowbush cranberry, moss, lichen, crowberry, blueberry, and black spruce. Vegetation in the surrounding area is composed of the same species as are present on the site, as well as white spruce and grasses. Areas within drainages tend to have denser stands of spruce and dwarf birch.

Testing:

The site was initially identified with the discovery of a single basalt flake found on the surface (Table D.254). A 40 x 40 cm test pit (test pit 1) and six shovel tests were excavated to assist in defining site size. No artifacts were recovered from subsurface testing. The single basalt flake was found lying on top of the vegetation mat. It is possible that the flake was disturbed by frost activity and/or animal activity.

A grid shovel testing program was undertaken at the site to assist in determining the distribution of the artifacts and site size. Thirty grid shovel tests were excavated, two of which contained artifacts. Shovel test (N98/E100) produced 244 basalt flakes and shatter. Shovel test (N100/E102) contained 452 basalt flakes and shatter, 1 basalt modified flake (UA84-100-8), and 1 basalt flake core fragment (UA84-100-9). The majority of the cultural material was recovered from the contact between the 02 horizon and the Devil tephra. Two of the basalt flakes were found above this contact: one on the surface and one in the 02 horizon. Observed site size based on the distribution of artifacts is 16 square meters (Table D.2).

Table D.254.

Artifact Summary, TLM 165

Provenience	Description
<u>Lithic Material</u>	
Surface:	2 Basalt flakes
Subsurface:	
Shovel test N98/E100	223 Basalt flakes 21 Basalt shatter fragments
Shovel test N100/E102	441 Basalt flakes 11 Basalt shatter fragments 1 Basalt modified flake (UA84-110-8) 1 Basalt flake core fragment (UA84-110-9)

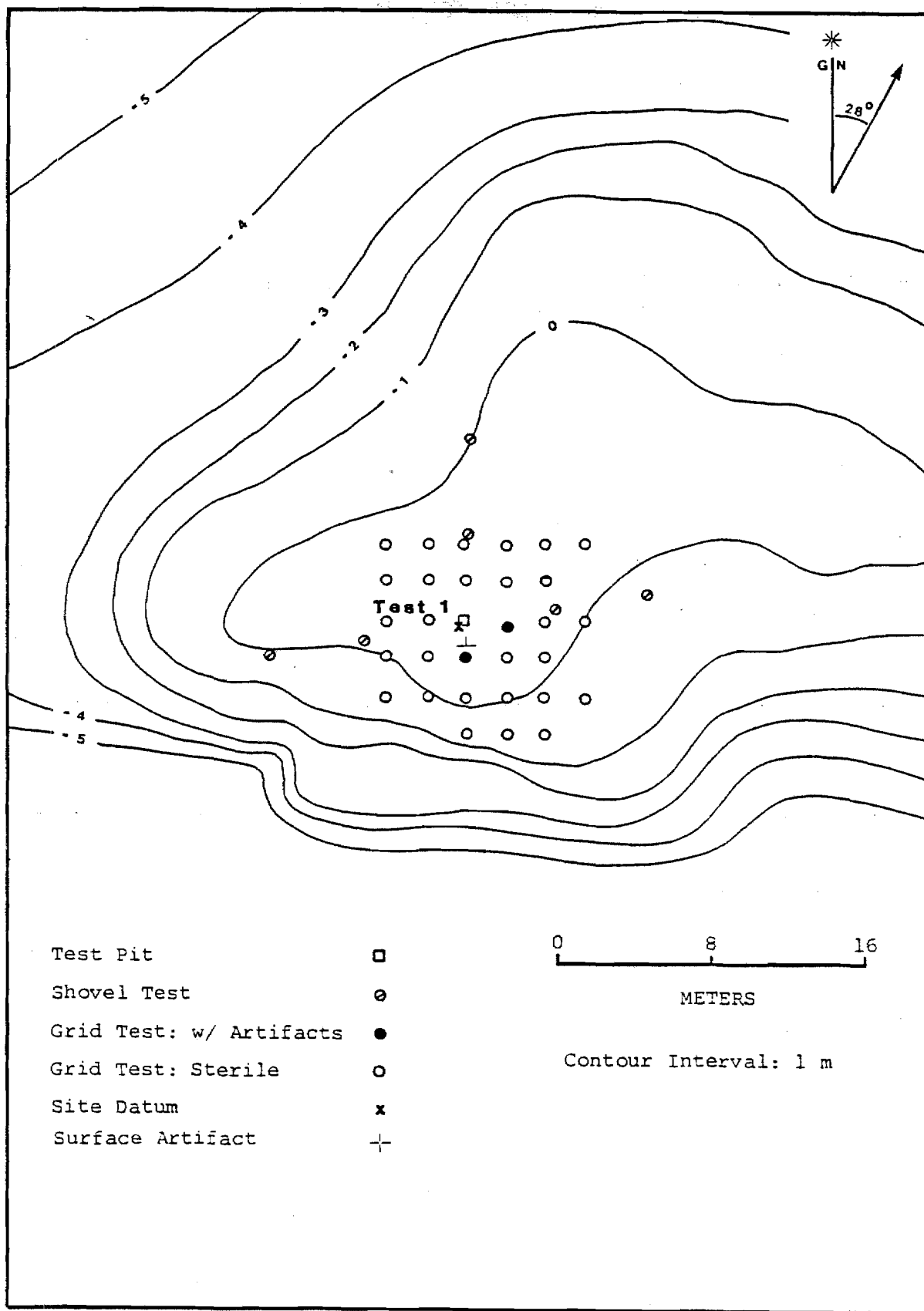


Figure D.200. Site Map, TLM 165

AHRS Number TLM 166; Accession Numbers UA83-92, UA84-106

Area: East-northeast of Tsusena Creek Mouth
Site Map: Figure D.201
Survey Locale 153: Figure E.249
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located east-northeast of the confluence of Tsusena Creek with the Susitna River, on top of one of the most prominent knolls in the area at an elevation of 710 m asl (altimeter: 2330 feet). The knoll is elongated in shape, approximately 25 (northwest-southeast) x 10 m (northeast-southwest). To the north and west the knoll grades into a sloping plain. Two lakes occur approximately 1.3 km north of the site. The larger of the two lakes is about 1.5 ha in size. To the south and to the southwest the terrain is composed of kettle lakes and kames. This rugged terrain culminates in a ridge overlooking the Susitna River, south of the site. There is excellent visibility to the valley wall of Tsusena Creek. The soil in the site area is well drained and supports an upland tundra ecosystem. Vegetation consists primarily of lichens, bearberry, dwarf Labrador tea, blueberry, lowbush cranberry, and dwarf birch. The area surrounding the site contains similar kinds of vegetation. Black spruce occur regularly in the low-lying areas but are infrequent at higher elevations.

Testing:

The site was located when a basalt modified flake (UA83-92-1) was recovered in a shovel test during survey testing (Table D.255). This test was expanded into a 40 x 40 cm test pit (test pit 1). Eight additional survey shovel tests were excavated, but none produced cultural remains.

A grid shovel testing program was undertaken to assist in determining the distribution of cultural remains and the areal extent of the site. Forty-seven grid shovel tests were excavated, five of which contained cultural material. Shovel test N106/E106 yielded a basalt preform (UA84-106-4; Figure D.385f), at the contact between the Devil and oxidized Watana tephra. The other four shovel tests yielded 11 argillite flakes (one from the Oshetna tephra and 10 from the oxidized Watana tephra), and two basalt flakes from the contact between the oxidized Watana and the oxidized drift. Observed site size based on the distribution of artifacts is 37 square meters (Table D.2).

Table D.255.

Artifact Summary, TLM 166

Provenience		Description
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Lithic Material

Subsurface:

Test pit 1	1	Basalt modified flake (UA83-92-1)
Shovel test N100/E104	1	Basalt flake
Shovel test N102/E102	1	Basalt flake
Shovel test N102/E98	1	Argillite flake
Shovel test N106/E106	1	Basalt preform fragment (UA84-106-4)
Shovel test N108/E106	10	Argillite flakes

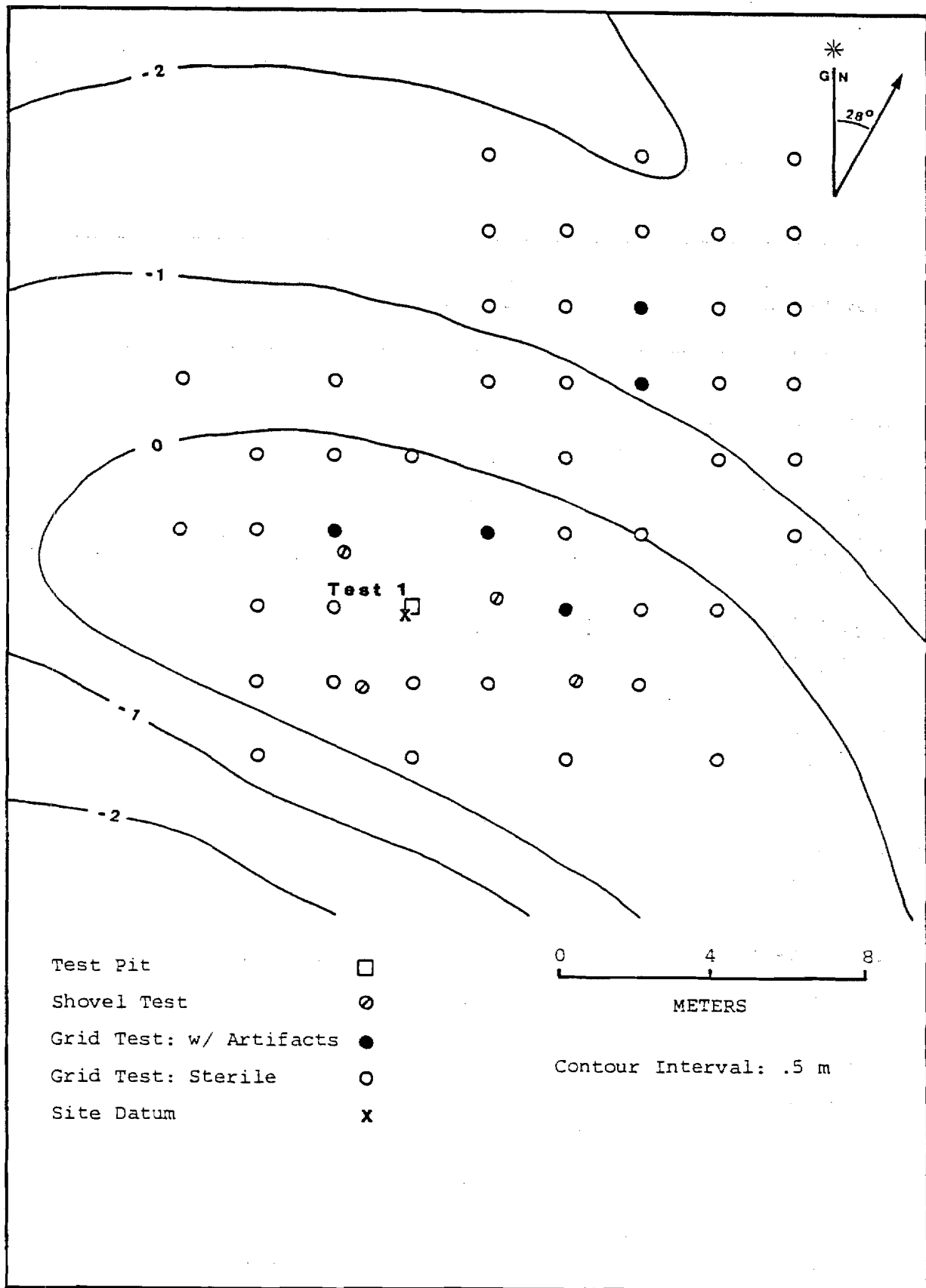


Figure D.201. Site Map, TLM 166

AHRS Number TLM 167; Accession Number UA83-93

Area: East-northeast of Tsusena Creek Mouth
Site Map: Figure D.202
Survey Locale 153: Figure E.248
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located above and to the north of the Susitna River, on the top of a small knoll east of the confluence of Tsusena Creek with the Susitna River. The site elevation is 693 m asl (altimeter: 2273 feet). The knoll on which the site lies is roughly circular in shape and measures ca. 5 x 7 m in diameter at the top. From the site location, the view to the south and east consists of a series of small kames and kettle lakes, however the Susitna River is not in view. To the north and west, the site overlooks low, open country. A dry kettle is within 150 m of the site. The vegetation on the site consists primarily of low shrub flora, including lichens and small amounts of Labrador tea, dwarf birch, lowbush cranberry, bearberry, wild rose, willow, and blueberry. The surrounding area has similar kinds of vegetation with the addition of dwarf willow and spruce. The dry kettle contains a thick growth of grasses. Bedrock exposures occur throughout the site area the surrounding terrain.

Testing:

The site was initially discovered when a quartzite modified flake (UA83-93-1) was recovered from a shovel test (Table D.256). This shovel test was then expanded into a 40 x 40 cm test pit (test pit 1), which proved to be sterile. An additional 12 shovel tests were excavated, but also proved sterile. No artifactual material was found on the surface of the site.

A grid shovel testing program was implemented to locate subsurface material and to assist in determining the site size and the distribution of cultural materials. Thirteen grid shovel tests were excavated; however, none contained cultural remains. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.256.

Artifact Summary, TLM 167

Provenience		Description
<u>Lithic Material</u>		
Subsurface:		
Shovel test 1	1	Quartzite modified flake (UA83-93-1)

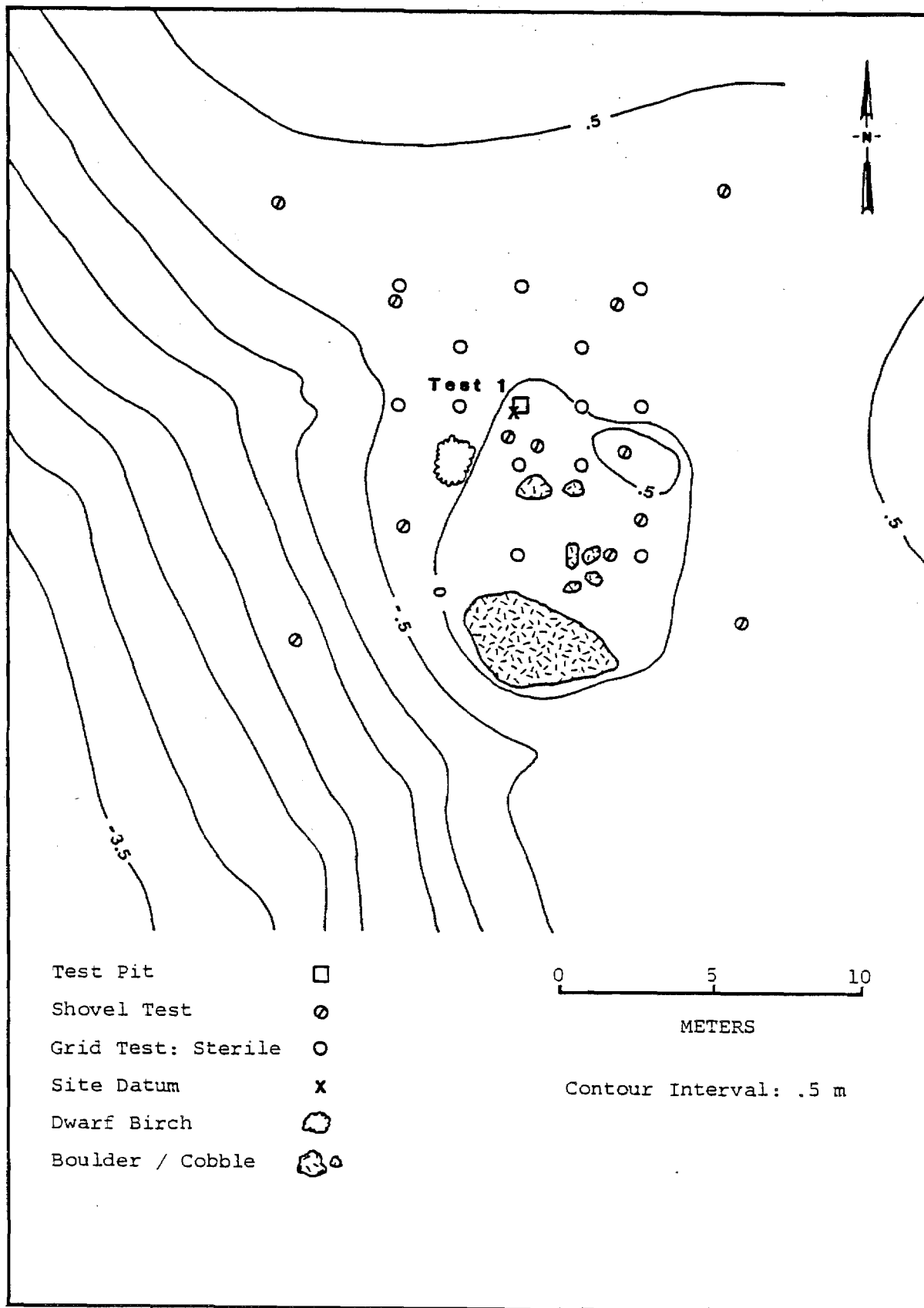


Figure D.202. Site Map, TLM 167

AHRS Number TLM 168; Accession Number UA83-94

Area: West-southwest of Deadman Lake Outlet
Site Map: Figure D.203
Site Location Map: Figure E.64
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 168 is located at ca. 945 m asl (3100 feet) on an eastern slope overlooking the confluence of Deadman Creek with a northern tributary, west-southwest of the outlet of Deadman Lake. The slope is part of a terrace on the west side of the valley through which Deadman Creek flows southwestward. The valley floor is ca. 35 m below the site. An unnamed stream, the first tributary of Deadman Creek after it leaves Deadman Lake, flows southward to the east of the site. The terrace on which the site is located trends north-south for ca. 600 m and is 200 m wide. The site is located at the northern end of the terrace near another site, TLM 155, which is located to the south on the same terrace. West of the TLM 168, the slope rises sharply to hills more than 1524 m asl (5000 feet). To the east are a series of terraces overlooking the northern tributary of Deadman Creek. Deadman Lake and the southernmost ridge of Deadman Mountain are in view across the valley of the tributary. Sites TLM 098, TLM 099, TLM 117, and HEA 180 are in view to the east on both sides of the tributary. To the north, the tributary follows a meandering course flanked by irregularly spaced terraces. Vegetation on the site is limited to intermittent patches of mosses, lichens, lowbush cranberry, blueberry, and dwarf willow on a pavement of shattered rock. Dry alpine tundra and exposed rock characterize the surrounding region with dense brush along the margins of Deadman Creek and its tributary south of the site.

Testing:

A single banded gray chert modified flake (UA83-94-1) was found on the surface (Table D.257). Subsurface testing at test pit 1 and in eight shovel tests provided no additional cultural material. No tephras were apparent. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.257.

Artifact Summary, TLM 168

Provenience	Description
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Lithic Material

Surface:	1 Chert modified flake (UA83-94-1)
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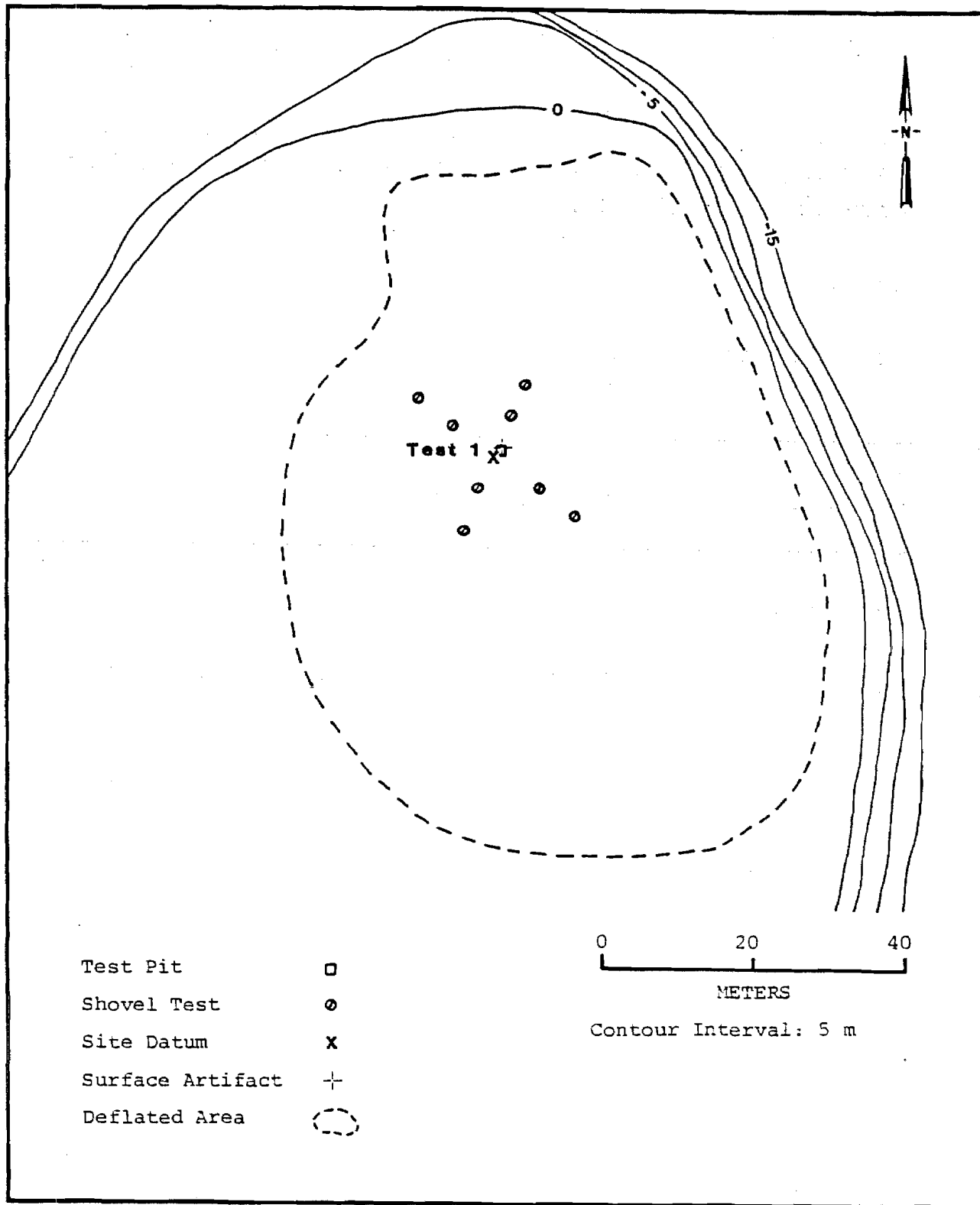


Figure D.203. Site Map, TLM 168

AHRS Number TLM 169; Accession Numbers UA83-95, UA84-83

Area: Northeast Watana Creek Mouth
Site Map: Figure D.204
Survey Locale 144b: Figure E.233
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 169 is located on a ridge northeast of the confluence of Watana Creek with the Susitna River and east of Watana Creek. The ridge is oriented north-northeast by south-southwest with the site situated on the top of a knoll in the middle of a sinuous curve. This is the highest point of the ridge from which it descends to a plain ca. 400 m to the east. To the west the ridge slopes downward for ca. 700 m before terminating at the edge of the Watana Creek valley. The south side of the ridge slopes downward at 30 degrees to a 25 m deep "V"-shaped valley. On the opposite side of the valley, the plain is approximately 10 m below the level of the site which is at an elevation of 652 m asl (altimeter: 2140 feet). To the north, the terrain slopes gently toward the Watana Creek valley. The surrounding terrain is a gently sloping plain covered with low bushes of dwarf birch and a soil cover of moss, lichens, and berry plants. Spruce trees are evenly distributed in the region, limiting the view from the site to the neighboring 50 m area despite the site's prominence on the ridge line. Vegetation on the site itself is more open, consisting of moss, lichens, and berry plants with birch and spruce trees on the site periphery.

Testing:

The site was discovered when a gray chert biface (UA83-95-1; Figure D.385g) was encountered in a shovel test. No other artifacts were found at the site during survey testing despite the placement of eight additional shovel tests and one 40 x 40 cm test pit (test pit 1). The

stratigraphic position of the biface was determined to be a charcoal-rich unit lying between the Watana and Oshetna tephras.

In an effort to determine the distribution of cultural material and the spatial extent of TLM 169, grid shovel testing was undertaken. Fifty-two grid shovel tests were placed on the site, six of which yielded cultural materials. Systematic testing involved the excavation of one 1 x 1 m test square, N93/E103, in the vicinity of positive grid shovel tests. See Figure D.204 for the location of the shovel tests and test squares. Systematic testing was undertaken to obtain a preliminary determination of the contents and stratigraphic position of the component(s) encountered during survey level testing.

Discussion:

Of the six grid shovel tests yielding artifacts, five contained 14 lithic artifacts and two yielded four calcined bone fragments each. All material was found in a paleosol (unit 4) or Oshetna tephra (unit 5) (Tables D.260, D.261). Faunal remains were restricted to the shovel tests in the center of the site, while flakes were most abundant at the southeastern end of the site. Test square N93/E103, placed between these artifact-bearing areas, contained two components each consisting of lithic artifacts, with no faunal material encountered. Fifty-five artifacts were recovered from N93/E103. Table D.259 summarizes the cultural material found at the site, and Table D.261 lists these materials by stratigraphic position.

Six soil/sediment units were defined for the site, based on distinct color and/or texture of sediments in shovel tests and the test square. Figure D.205 depicts this stratigraphic sequence, and soil/sediment units are described in Table D.258. The uppermost unit, unit 1 consists of a surface organic layer containing roots and organic debris. Below this unit lies a series of three tephra deposits: the Devil (unit 2), Watana (unit 3), and Oshetna (unit 5). A charcoal-flecked, weathered sandy silt (unit 4) lies between the Watana and Oshetna tephras, and is interpreted to be a paleosol that developed after deposition of the

Oshetna tephra (unit 5). Beneath these tephra units is a reddish yellow sandy glacial deposit (unit 6), which determined the limits of excavation.

Artifacts were encountered in two stratigraphically separate components. The upper component lies at the contact between the Devil (unit 2) and Watana tephras (unit 3). It consists of 36 highly weathered argillite flakes, all of which are unmodified byproducts of lithic reduction. This component is represented only in the southern half of the test square.

The lower component occurs in the paleosol (unit 4) and Oshetna tephra (unit 5), and at the contacts of these units with the Watana tephra (unit 3) and glacial drift (unit 6). Several flakes were positioned vertically within the Oshetna tephra (unit 5), indicating some vertical displacement of artifacts within the component. This component is more extensive at the site, being present in all artifact-bearing exposures. In addition to the biface (UA83-95-1) found during initial survey, this component is represented by a gray chert biface fragment (UA84-83-4), 32 unmodified flakes of chert, argillite, basalt, and chalcedony (in descending order of abundance), and eight pieces of unidentifiable calcined bone. The lithic material appears to be derived from biface manufacture.

Abundant charcoal is present in the paleosol (unit 4), and two samples were obtained from the test square for radiocarbon dating. One sample, UA84-83-18, was submitted for radiocarbon dating and yielded a date of 3410 ± 80 years: 1460 B.C. (Beta-10794). This sample consisted of carbonized organics and charcoal that was associated with this paleosol from the contact between the Watana and the Oshetna tephras.

Evaluation:

The two components represented at TLM 169 are limited both in diversity of materials and in areal extent, indicating two relatively short-term occupational episodes. The upper component, consisting of 36 argillite flakes, is extremely limited in size and artifactual diversity. Little can be said regarding the nature of the occupation except that it was possibly a small lithic reduction station. Activities represented in the lower component include manufacture of tools and possibly the processing and consumption of game based on bone remains found. Spatial segregation of activities appears well documented based on the evidence from the shovel test expansion program, but the limited systematic testing conducted at TLM 169 precludes detailed spatial analysis of this component. Observed site size based on the distribution of artifacts is 45 square meters (Table D.2).

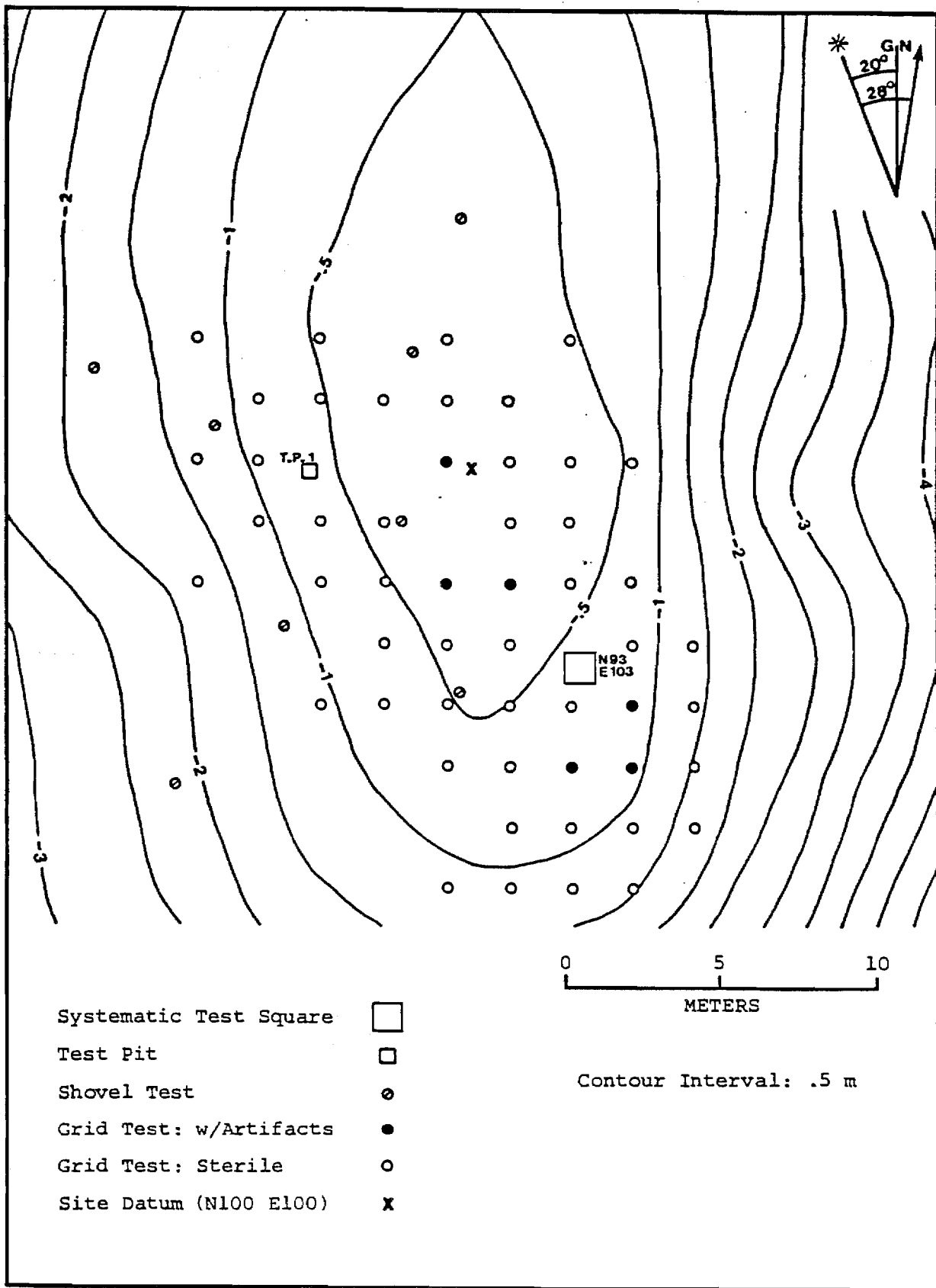


Figure D.204. Site Map, TLM 169

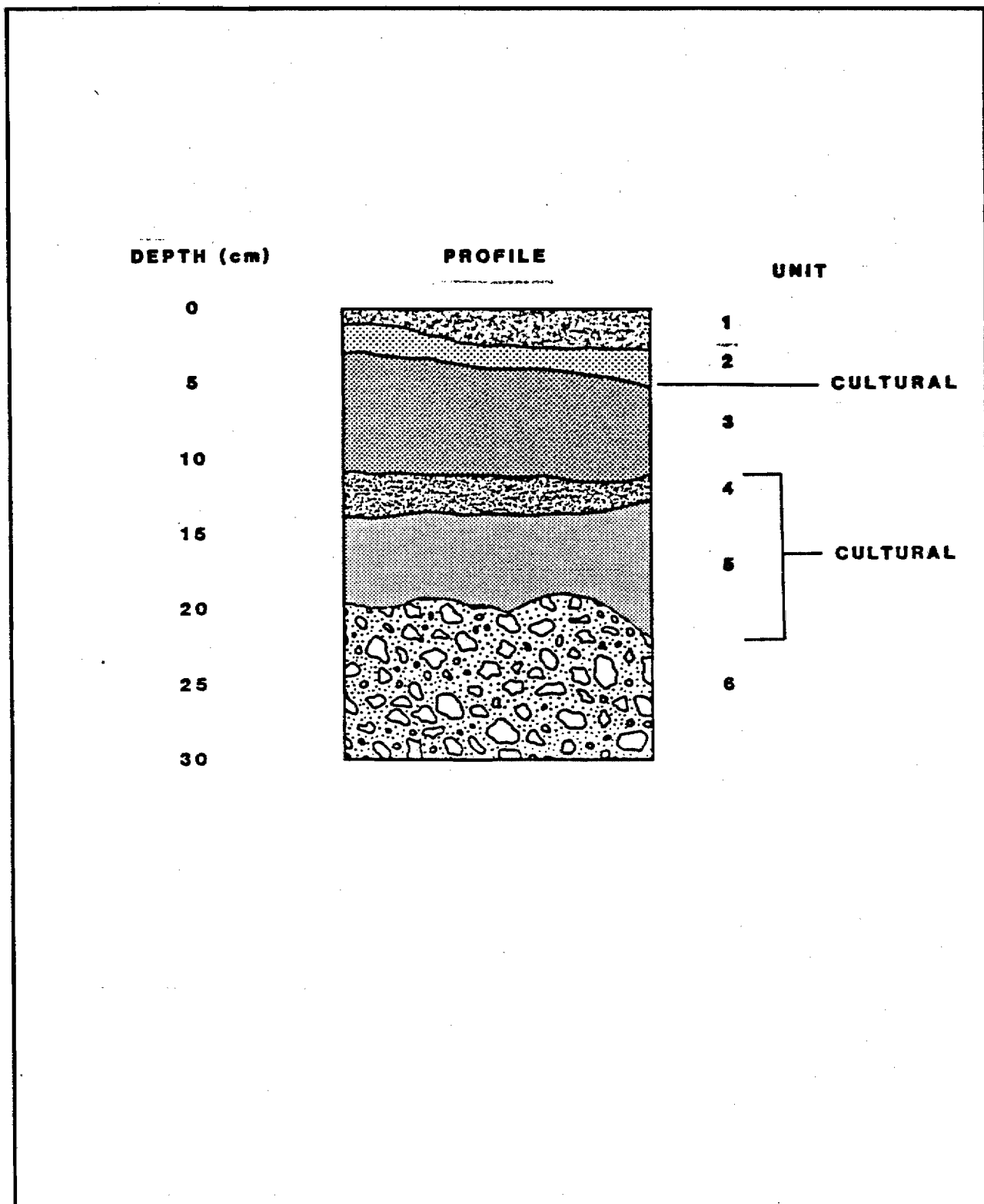


Figure D.205. Composite Profile, TLM 169

Table D.258.

Soil/Sediment Description for Composite Profile, TLM 169

Unit	Description
1	Surface organic mat consisting of roots, decomposing organics and humics with a small amount of silt. This unit varies from 1-5 cm thick. Contact with unit 2 continuous, abrupt and wavy.
2	Extremely fine, well-sorted silt; pinkish gray to light gray (10YR 7/2). Devil tephra. Varies from less than 1-4 cm thick with a mode of 2 cm. Continuous. Abrupt contacts although contact is slightly more diffuse with unit 3 due to staining of unit 2. Artifacts are found at the contact between units 2 and 3.
3	Well-sorted unit of fine to very fine silt, slightly oxidized and mottled; light brownish yellow (2.5Y 6/4) to strong brown (7.5YR 5/6). Watana tephra. Some roots present. Contact abrupt and wavy. Thickness varies from 5-15 cm with a mode of 10 cm.
4	Sandy silt unit with moderate to abundant charcoal flecks and chunks; dark brown (10YR 3/3). Paleosol. Varies from less than 1-3 cm thick, usually thickness of 1-2 cm. Contacts generally abrupt and wavy; some instances of diffuse contact and mixing with unit 5. Cultural.

Table D.258. (Continued)

Unit	Description
5	Moderately well sorted sandy silt; grayish brown (2.5Y 5/2) to gray (10/YR 5/1). Oshetna tephra. Organics present in areas of mixing with unit 4, which contain artifacts. Discontinuous and varies between 0 and 3 cm thick, generally 1 cm. Contacts diffuse and wavy.
6	Heavily oxidized and weathered poorly sorted sand, pebbles, and cobbles; dark yellowish brown (10YR 46). Glacial drift. Excavation terminated 10 cm below contact of units 5 and 6. Contact with unit 5 is diffuse with some artifacts at this contact area.

Table D.259.

Artifact Summary, TLM 169

Tools

2	Biface and biface fragments
	2 Chert (UA83-95-1; UA84-83-4)

Lithic Material

38	Argillite flakes
1	Basalt fragment
1	Chalcedony flake
28	Chert flakes

68

Faunal Material

8	Bone fragments
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Table D.260.

Faunal Material by Stratigraphic Unit, TLM 169

Unit	Description
4 Paleosol	8 Unidentifiable bone fragments, calcined, mammal

Table D.261.

Artifact Summary by Stratigraphic Unit, TLM 169

Unit	Description
2/3 Contact between Devil and Watana tephras	36 Argillite flakes
3/4 Contact between Watana tephra and paleosol	1 Chert flake
4 Paleosol	1 Argillite flake 7 Chert flakes 1 Chert biface (UA83-95-1)
5 Oshetna tephra	1 Argillite flake 1 Chalcedony flake 20 Chert flakes 1 Chert biface fragment (UA84-83-4)
5/6 Contact between the Oshetna tephra and drift	1 Basalt fragment

AHRS Number TLM 170; Accession Number UA83-96

Area: North-northeast of Deadman Creek Mouth
Site Map: Figure D.206
Survey Locale 150: Figure E.243
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 170 is located on a small knoll west of Deadman Creek and upstream from its mouth. The site is located at an elevation of ca. 731 m asl (2400 feet) on a knoll forming the southern end of a ca. 3 m wide kame. The kame forms a ridge approximately 200 m long with a generally north-south orientation. From the site, the ridge slopes down to the south, west, and east at an angle of over 25 degrees. Below the steep slope to the west is a small pond of less than 1 ha in area. To the east and south is an unobstructed view of Deadman Creek and the high plateau to the east of Deadman Creek. The view to the north encompasses the ridge on which the site is located and a distant view of Tsusena Butte. Site TLM 181 is visible due north of the site. Beyond TLM 181 is TLM 191, but the view of TLM 191 is blocked by the ridge on which TLM 181 rests. The ridge line on which TLM 170 is located is the first high ground to the west of Deadman Creek. The ridge with TLM 170 has several large granitic boulders, probably glacial erratics, and has only a thin veneer of soil mantling the glacial drift. Vegetation consists of dwarf birch, dwarf willow, blueberry, lichens, and mosses. One small spruce is located on top of the ridge at the site. Several more spruce are found south of the site near the base of the ridge and along Deadman Creek.

Testing:

The site consists of an erosional surface of approximately 5 (east-west) x 4 m (north-south) on a 30-degree slope at the southeastern terminus of the ridge (Figure D.206). Fragments of two flake cores (UA83-96-7, 25; Figure D.386a,b) and 25 flakes of several raw material types were found on the surface (Table D.262). A test pit (test pit 1) and ten shovel tests failed to show any subsurface cultural material. Estimated site size based on the distribution of artifacts is 20 square meters (Table D.2).

Table D.262.

Artifact Summary, TLM 170

Provenience	Description
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Lithic Material

Surface:	14	Argillite flakes
	4	Basalt flakes
	1	Chert flake
	1	Quartzite flake
	5	Rhyolite flakes
	1	Argillite flake core fragment (UA83-96-7)
	1	Rhyolite flake core fragment (UA83-96-25)

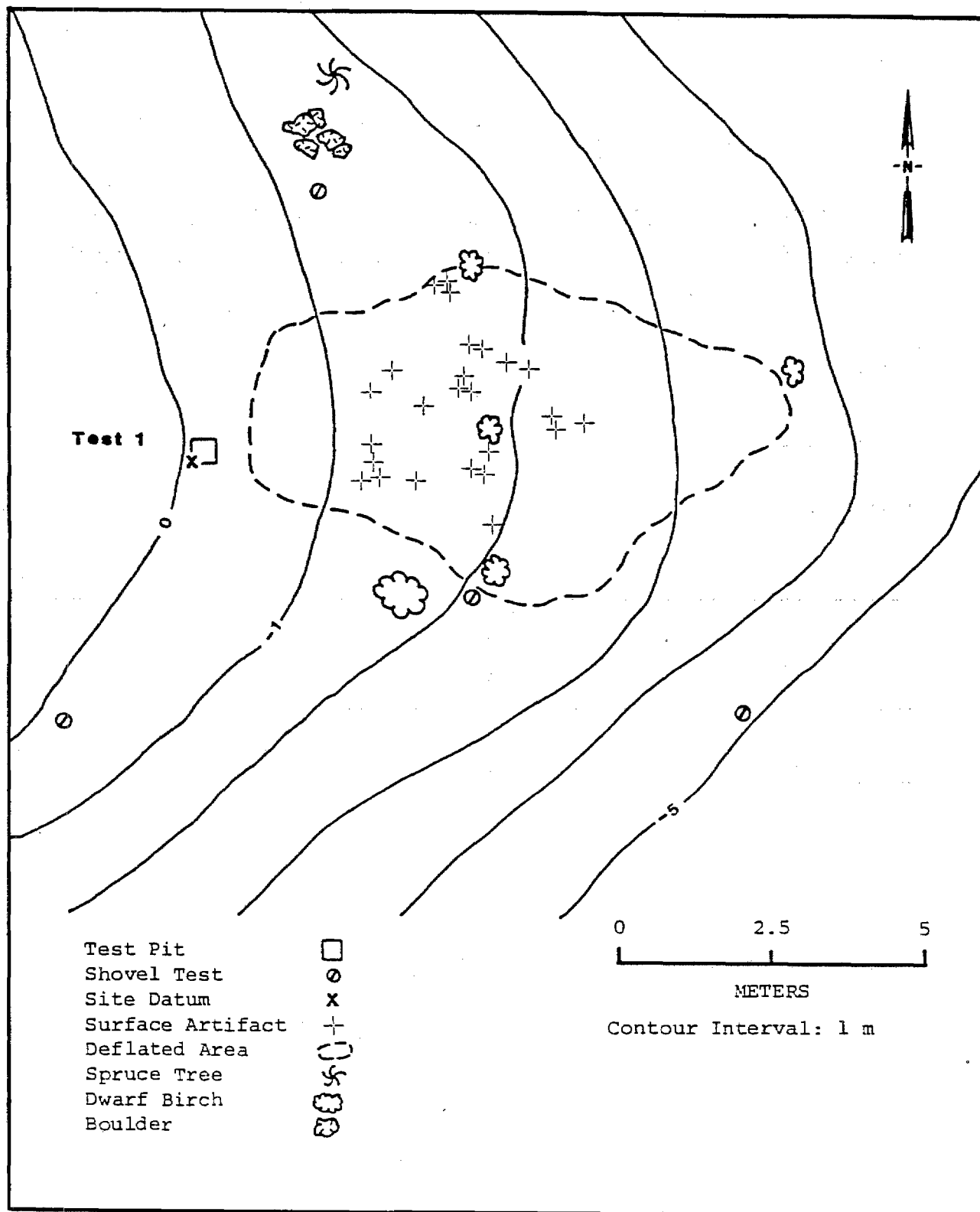


Figure D.206. Site Map, TLM 170

AHRS Number TLM 171; Accession Numbers UA83-97, UA84-88

Area: West-northwest of Watana Creek Mouth
Site Map: Figure D.207
Survey Locale 134: Figure E.214
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 171 is located in the saddle of a northwest-southeast trending kame north of the Susitna River and northwest of the mouth of a tributary known locally as No Name Creek. The site lies at an elevation of 658 m asl (altimeter: 2160 feet) on the ca. 10 m wide kame. The sides of the kame slope down to the surrounding terrain, 15-30 m lower in elevation. The kame rises ca. 30 m in elevation for approximately 100 m northwest of the site. The eastern terminus of the kame is marked by a knoll which is 1.5 m higher than the level of the site and lies ca. 15 m to the east. Visibility from the site is limited by its location in a saddle of the kame and the occurrence of dense stands of black spruce in the area. A pond, approximately 1 ha in extent, located northeast of the site area is not visible from the saddle, but can be seen from the higher knoll to the east. The pond is surrounded by swampy ground. The saddle of the kame is one of a series of northwest-southeast trending kames that slope down toward the pond from the higher terrain to the west. The surface of the site area is heavily vegetated with black spruce supported by a dense ground cover of dwarf birch, alder, dwarf willow, Labrador tea, blueberry, lowbush cranberry, wild rose, dwarf dogwood, lichen, low heath, grasses, and sphagnum moss. The surrounding vegetation is composed of dense black spruce stands in the low-lying areas between kames and has a similar plant regime to the site area.

Testing:

TLM 171 was initially found when the proximal end of a chalcedony microblade fragment (UA83-97-1) was recovered in a shovel test.

Expansion of the shovel test into a 40 x 40 cm test pit (test pit 1) resulted in the discovery of a chert flake in situ on top of the Devil tephra and a possible hearth feature in the east profile. Ten additional shovel tests placed around test pit 1 during survey testing were sterile.

The goals of systematic testing at TLM 171 were designed to determine site extent, stratigraphic position, and content of the occupation reported during survey level testing. In addressing the question of site extent, a grid shovel testing expansion program was implemented. From the site datum at N100/E100, 16 grid shovel tests were excavated. No evidence of cultural material was found in any of these shovel tests. Based on subsurface testing at TLM 171, the site appeared to be limited to the immediate area of test pit 1, and therefore a single 1 x 1 m test square (N99/E100) was placed with its south wall abutting test pit 1.

Discussion:

Survey and systematic testing resulted in an artifact assemblage of 15 lithic specimens, one of which is classified as a microblade fragment. A single component has been identified at TLM 171, and two radiocarbon samples were taken. The artifact summary from all phases of testing is listed in Table D.264. The distribution of lithic material by stratigraphic unit is presented in Table D.265.

The three classes of lithic raw material identified in the artifact assemblage include chalcedony, chert, and obsidian. Chert is the most abundant type represented by nine flakes. Chalcedony is represented by four flakes and one microblade fragment. Only one obsidian flake was found.

Five soil/sediment stratigraphic units are identified at TLM 171 (Figure D.208; Table D.263). A general stratigraphic section consists of culturally sterile unoxidized (unit 5b) and oxidized (unit 5a) glacial drift overlain by a sequence of three tephras. A paleosol is found overlying and sometimes mixed with the discontinuous Oshetna tephra

(unit 4b). A dark reddish brown matrix (unit 4a) overlies the paleosol only in the eastern half of the north wall. This discontinuous unit may represent a possible fire-reddened or burned matrix. In test pit 1, this unit is associated with possible thermally altered rock and bounded by thin layers of charcoal. These units are overlain by unoxidized and oxidized Watana (3b, 3a) and Devil tephra (unit 2). The Devil tephra contains an anomaly which appears in the eastern half of the north wall profile. This anomaly appears as a thin paleosol stringer which dips into the Devil tephra. It does not appear in the plan view of the excavation and is only present in the wall profile. Because of cryoturbation, this stringer is probably the result of folding and does not represent a cultural phenomenon. Above the volcanic sediments is a humic, carbonaceous organic silt layer (unit 1b) that represents the 02 horizon of the contemporary root mat which caps the sequence. The lichen mat contains plant debris, roots, and rootlets from Labrador tea, blueberry, lowbush cranberry, grasses, low heath, moss, and lichen.

Three of the five soil/sediment units have associated and displaced cultural material; however, only one cultural occupation is identified. The majority of the lithic material is found at the contact between the organic silt and Devil tephra (unit 1b/2) and within the Devil tephra (unit 2). This material includes 2 chalcedony and 3 chert flakes from the contact unit and 1 obsidian, 2 chalcedony, and 3 chert flakes from the Devil tephra. One flake was found in the oxidized Watana tephra (unit 3a) and two flakes were found in the unoxidized Watana tephra (unit 3b). The chalcedony microblade fragment (UA83-97-1; Figure D.386c), recovered from an initial shovel test, is of uncertain stratigraphic provenience.

Inference of a single component at TLM 171 is supported by the similarity of lithic raw material, the low frequency of lithic material, and the presence of similar flake types. The lithic debitage found at this site consists of primarily small flakes less than 1 cm in length. Cryoturbation and bioturbation are evident throughout the test square and may have caused the movement and displacement of lithic material that is found in the Devil and Watana tephras.

Evaluation:

TLM 171 is situated in the saddle of a kame that is surrounded by kettle and kame topography. Visibility from the site is limited by its location in the saddle of the kame and the occurrence of dense stands of black spruce in the immediate area. A small pond to the northeast is visible from a higher knoll 15 m east of the saddle which provides an excellent vantage point for viewing game.

Results of all phases of testing indicate that the site is limited to the area immediately adjacent to the initial test pit. The homogeneous nature of the lithic assemblage suggests that a single prehistoric episode of tool manufacture occurred at TLM 171. The stratigraphic position of a microblade fragment may indicate Late Denali tool manufacture. The immediate site area represents a good lookout position for hunting game, yet no other subsistence activity is evident from the site data. Observed site size based on the distribution of artifacts is 9 square meters (Table D.2).

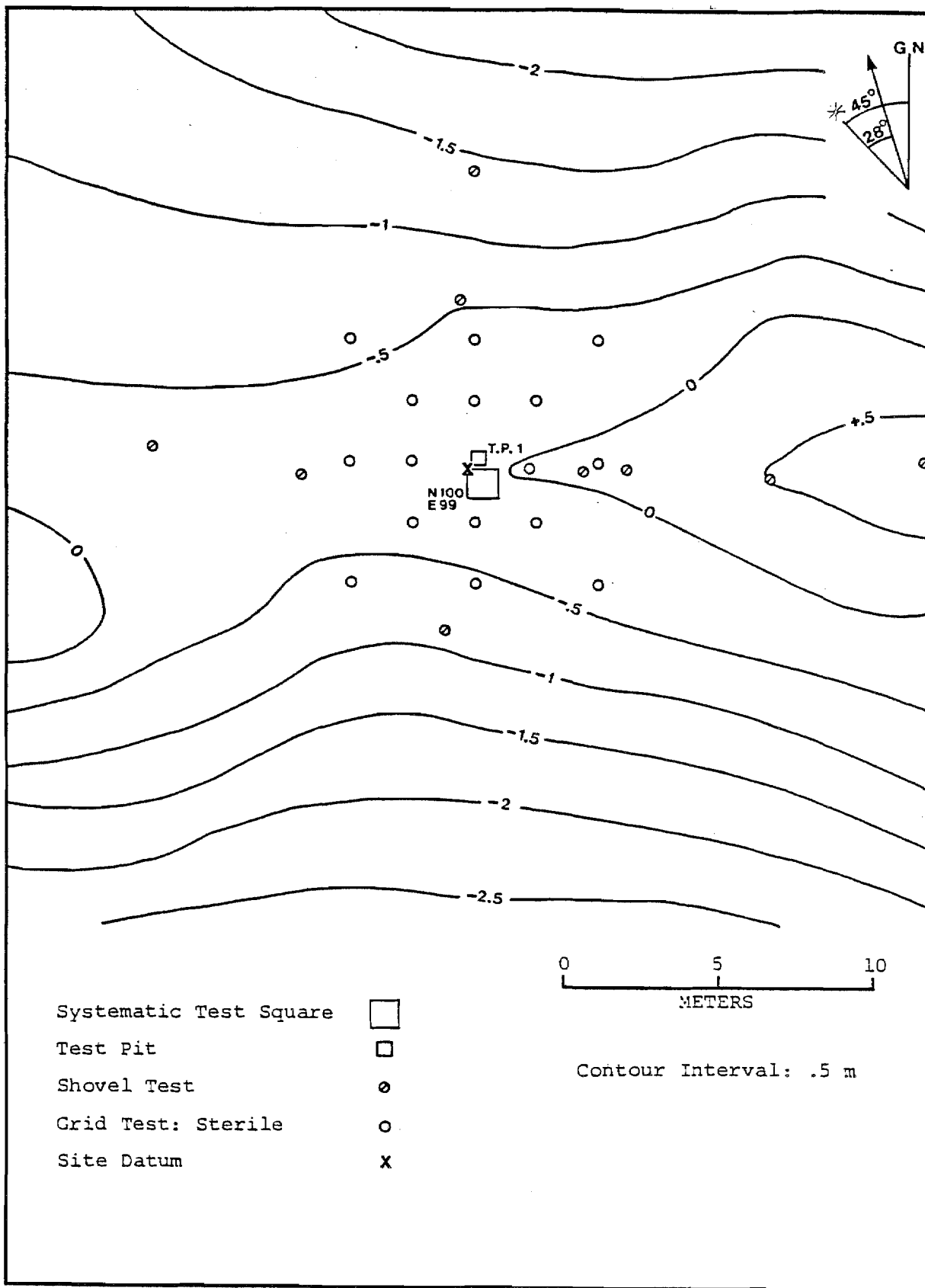


Figure D.207. Site Map, TLM 171

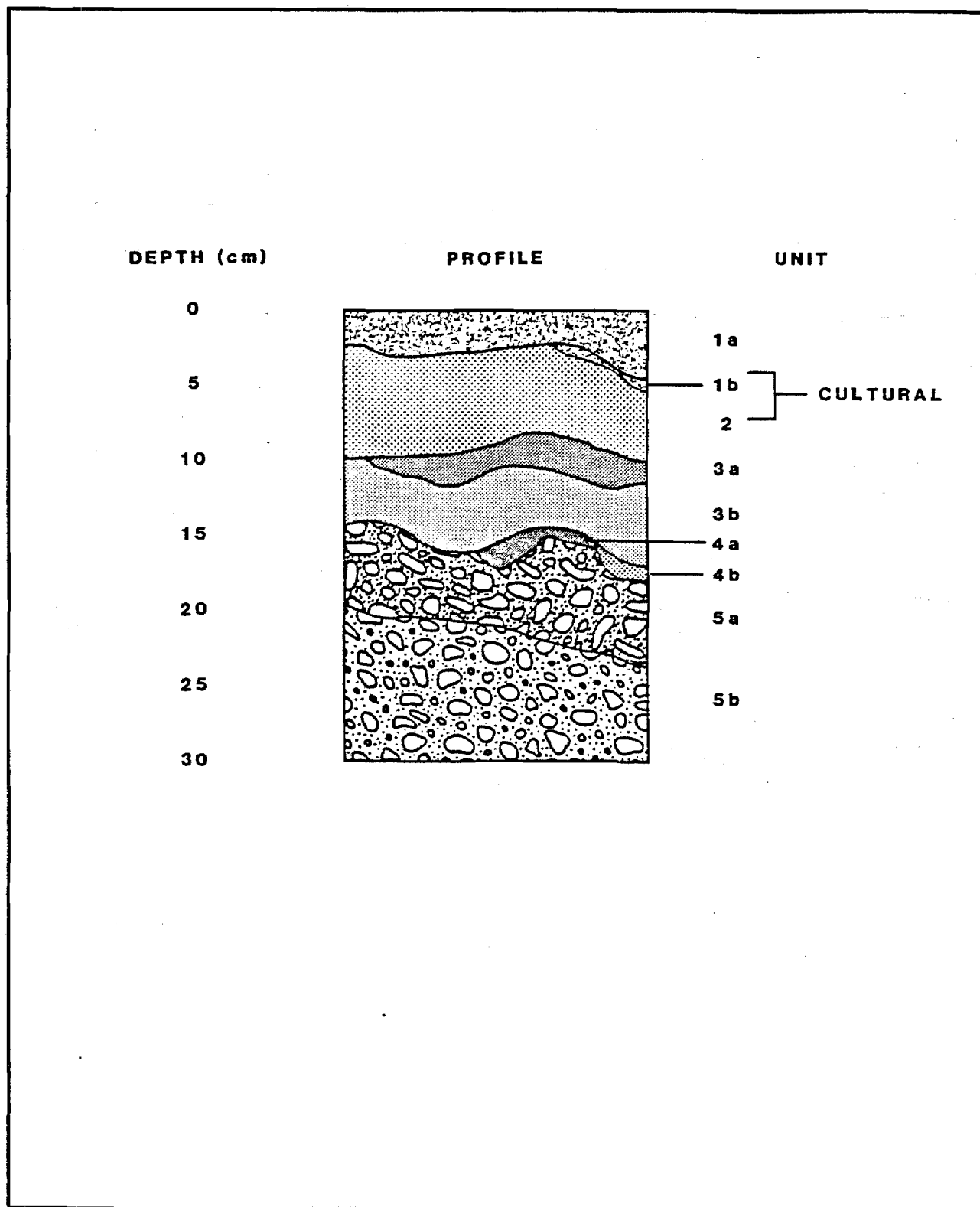


Figure D.208. Composite Profile, TLM 171

Table D.263.

Soil/Sediment Description for Composite Profile, TLM 171

Unit	Description
1a	<p>Surface organic layer; rather thin fibrous root mat with living and partially decayed plant material from heath, moss, lichens, sparse Labrador tea, blueberry, grass. This unit varies in thickness from 1-7 cm, but is usually 2 cm. The lower boundary is clear and smooth. Continuous except in the vicinity of test pit.</p>
1b	<p>Very fine silt particles with partially decomposed plant fragments and finely divided organic material; black (5YR 2.5/1). Generally 1 cm thick. Lower boundary is fairly distinct. Discontinuous. O2 horizon with small charcoal flecks present. Cultural material occurs at lower contact with unit 2.</p>
2	<p>Fine grained silt size particles; pinkish gray (7.5YR 7/2) to (7.5YR 6/2). Ranges in thickness from 1-10 cm, generally 4-5 cm. Abrupt, wavy contact with unit 3a. Tephra (Devil); eluvial A horizon. Continuous. Dries quickly to a fine powder. Leaching of organic material at the upper extent is evident. Root penetration. Cultural material occurs within unit.</p>

Table D.263. (Continued)

Unit	Description
3a	<p>Fine to medium silt size particles, granular structure, friable, gritty texture; strong brown (7.5YR 4/6). Varies in thickness from 1-6 cm, generally 3 cm. Clear to diffuse and wavy to irregular lower boundary. Tephra (Watana); illuvial B2 horizon. Discontinuous, but present throughout test square. Oxidized, particularly at the upper contact. Roots common. Displaced cultural material occurs within unit.</p>
3b	<p>Very fine silt size particles; yellowish brown (10YR 5/6). Varies in thickness from 1-13 cm, generally 5 cm. Abrupt, clear, and smooth boundary with underlying unit. Tephra (Watana). Discontinuous. Rootlet penetration. Displaced cultural material occurs within unit.</p>
4a	<p>Fine silt size particles mixed with finely divided organics and sand inclusions; dark reddish brown (5YR 3/4). Ranges in thickness from 1-4 cm, generally 2 cm. Clear to sinuous lower boundary. Discontinuous, occurring only in the western half of the north wall. Possible burned matrix mixed with organics.</p>

Table D.263. (Continued)

Unit	Description
4b	Fine silt to sand size particles mixed with organics; brown (10YR 5/3) to dark grayish brown (2.5YR 4/2). Varies in thickness from 1-4 cm, generally 3 cm. Clear to diffuse lower boundary. Tephra (Oshetna); buried eluvial A horizon. Discontinuous. Presence of discontinuous paleosol at upper extent of unit. Small flecks of charcoal present.
5a	Sand and silt with pebbles, and cobbles; usually dark yellowish brown (10YR 4/6) although variable in color depending on degree of weathering. Gradational lower boundary. Glacial drift. Poorly sorted. Oxidized.
5b	Sand and silt with pebbles, and cobbles; dark grayish brown (2.5Y 4/2) to very dark grayish brown (2.5Y 3/2). Glacial drift. Poorly sorted or very poorly sorted; cobbles usually 7-18 cm in diameter. Frost features present. Excavation into unit marked limit of excavation.

Table D.264.

Artifact Summary, TLM 171

Tools

1	Microblade
	1 Chalcedony (UA83-97-1)

Lithic Material

4	Chalcedony flakes
9	Chert flakes
1	Obsidian flake

14

Table D.265.

Artifact Summary by Stratigraphic Unit, TLM 171

Unit	Description	
1b/2	2	Chalcedony flakes
Contact between the organic silt and the Devil tephra	3	Chert flakes
2	2	Chalcedony flakes
Devil tephra	3	Chert flakes
	1	Obsidian flake
3a	1	Chert flake
Oxidized Watana tephra		
3b	2	Chert flakes
Unoxidized Watana tephra		
Unknown	1	Chalcedony microblade (UA83-97-1)

AHRS Number TLM 172; Accession Number UA83-98

Area: Northeast of Tsusena Creek Mouth
Site Map: Figure D.209
Survey Locale 152: Figure E.247
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is situated on a level bench along the west slope of a ridge, east of Tsusena Creek and north of the Susitna River. The site is located at an elevation of 683 m asl (altimeter: 2240 feet); higher knolls on the ridge occur to the north-northwest and south-southeast. The region around the site is marked by kettle lakes and kames with drainages trending to the west and northwest toward Tsusena Creek. West of the site the ridge drops ca. 10 m at a slope of greater than 25 degrees to a drainage running to the northwest. This drainage separates the ridge with the site bench from a lower, parallel ridge to the west. Numerous small lakes and ponds occur to the north and northeast. The closest lake is ca. 2 ha in size and situated out of view ca. 500 m to the northeast. Approximately 250 m south of the site the parallel ridges drop into an area of marshes and low knolls. Approximately 1 km south of the site is a drainage separating the region of the site from a large ridge ca. 729 m asl (2391 feet) bordering the Susitna River. Site TLM 018 is visible near the ridge crest. TLM 172 is marked by a 1.5 m high granite boulder surrounded by moss, lichen, Labrador tea, and dwarf birch. Vegetation in the surrounding area consists of thinly distributed black spruce and bushes of dwarf birch. Northeast of the site, the wet tundra has few trees and a low shrub cover. South of the site, dense stands of spruce and birch occur in the drainage and extend from this drainage half-way up the north slope of the high ridge overlooking the Susitna River. Moss, lichen, and berries dominate the upper half of this ridge. The primary view from the site is over the ridges to the south and west.

Testing:

The site contains subsurface cultural material from test pit 1 consisting of a light brown argillite, unifacially retouched flake (UA83-98-1), and five argillite flakes (Table D.266). The cultural material was recovered from the charcoal-bearing level at the contact between the Oshetna and Watana tephras. No features were found. All three tephra were present and a carbon layer was occasionally present between the Watana and Oshetna tephras. Nine shovel tests within 10 m of test pit 1 were sterile. A grid shovel testing program was implemented to assist in determining the site size and the distribution of cultural remains. Fifteen grid shovel tests were placed around test pit 1, but none of these produce cultural remains. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.266.

Artifact Summary, TLM 172

Provenience	Description
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Lithic Material

Subsurface:

Test pit 1	5 Argillite flakes
	1 Argillite modified flake (UA83-98-1)

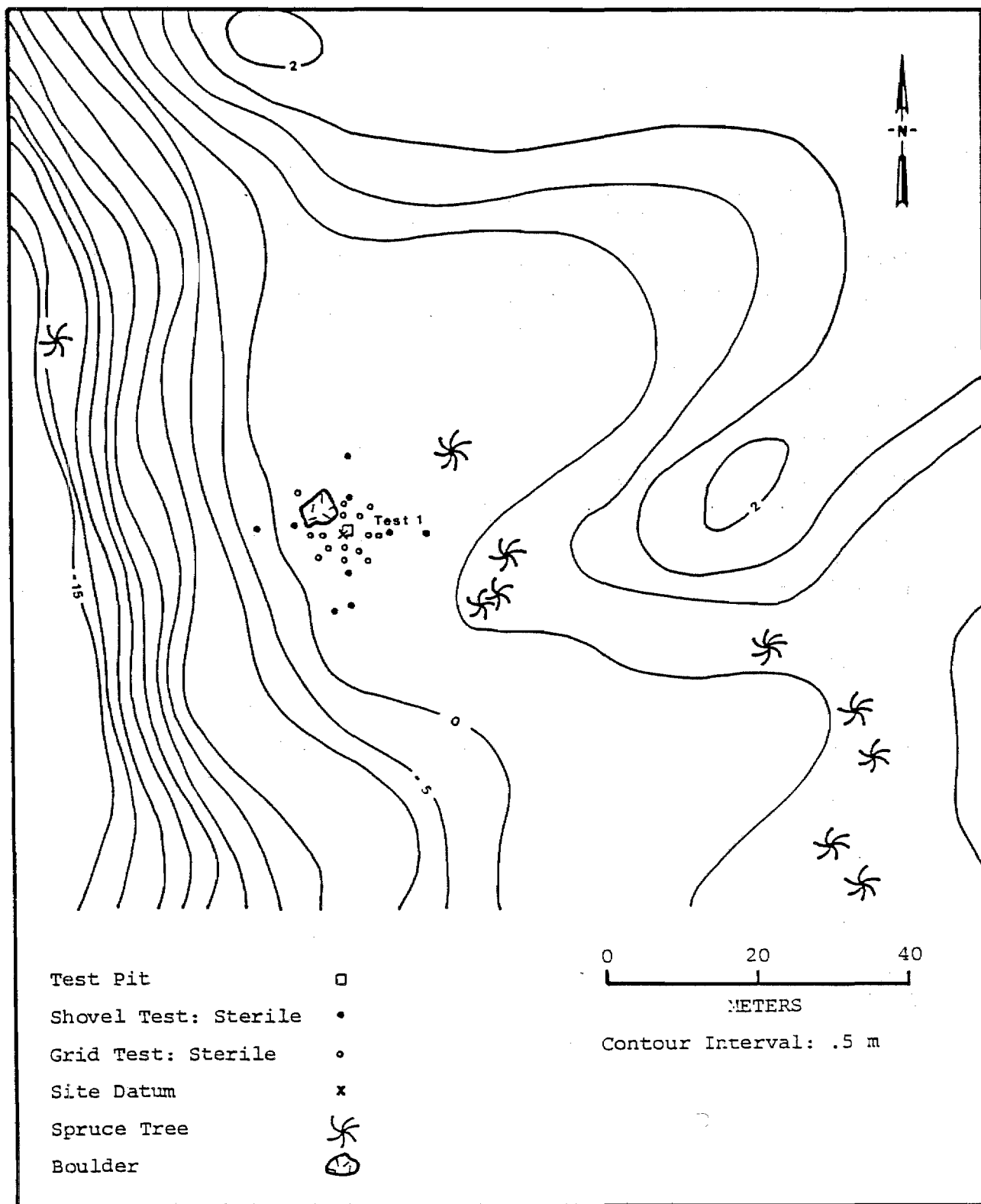


Figure D.209. Site Map, TLM 172

Area: East-southeast of Goose Creek Mouth
Site Map: Locus A, Figure D.210
Locus B, Figure D.211
Locus C, Figure D.212
Survey Locale 159: Figure E.255
USGS Map: Talkeetna Mts. C-1, Figure E.8
Site Location: Appendix F

Setting:

TLM 173 consists of three loci (A, B, and C) that are in association with the western portion of a terrace, east-southeast of the mouth of Goose Creek and southeast of a sharp bend in the Susitna River. The terrace, which is approximately 1.5 km long and oriented northeast-southwest, is the highest of three terraces above the Susitna River in this area, and roughly parallels the river. The terrace is dissected by small streams and drainages, resulting in the formation of isolated knolls, particularly at the western end of the terrace and in the vicinity of the site. Loci A and B are associated with two knolls, ca. 60 m apart, that form discrete promontories. Locus C is ca. 25 m southeast of locus B, and is in association with a low rise no more than 50 cm higher in elevation than the immediate surrounding terrain. All loci are at an elevation of 643 m asl (altimeter: 2111 feet). North of the site within the sharp bend of the Susitna River is a prominent ridge of ca. 670 m asl (2198 feet) on which sites TLM 026 and TLM 042 are found. South of TLM 173, the terrain ascends gradually for ca. 500 m and then abruptly rises up to a plateau at ca. 762 m asl (2500 feet).

The location of loci A and B provides an excellent view of the terrain to the north including the lower terraces, Susitna River, and the ridge on the north side of the river. While the Susitna River is also visible from locus C, visibility northward is somewhat obscured by current vegetation. TLM 251, located on a prominent knoll ca. 200 m southeast of the site, is visible from some areas of the site. The surface of the

three loci has a generally continuous vegetation mat of lichen, moss, low berry bushes, dwarf birch, and scattered spruce trees. The intervening areas between the three loci are vegetated with spruce and high brush of dwarf birch, which obscures views from one locus to another.

Testing:

The site was located during survey testing when a single basalt flake was found in a shovel test situated on the northern portion of the westernmost knoll of the site (locus A). Expansion of the initial shovel test (test pit 1) and nine subsurface tests failed to uncover additional cultural material. The basalt flake was recorded as being from below the Watana tephra unit.

Subsequent to the initial recording of TLM 173, two flakes, both of which were modified (UA84-135-1, 2), were found on the surface of a knoll (locus B) 60 m east of the knoll with the initial positive test. A small circular surface depression, ca. 1 m in diameter, was also located. On the basis of the similarity and proximity of the terrain features, both of the knolls were included under the TLM 173 site number, and given the separate designations of locus A and locus B, respectively.

A surface depression 1.3 (north-south) x 1.5 m (east-west) and 20 cm lower than the ground surface was located ca. 25 m southeast of locus B. The depression was not very distinctive and since the origin of the feature was uncertain, it was tested. Two rhyolite flakes were found in a shovel test placed in the center of the depression, and a cut-and-fill relationship was recognized in a shovel test placed on the edge of the depression. This area was given the designation of locus C.

Grid shovel testing was initiated in each of the loci in order to make preliminary determinations regarding the spatial extent of each locus, and the relative density of artifactual material between and within loci. Two shovel tests, excavated on the edge of the surface

depressions, were expanded into 40 x 40 cm test pits, test pit 3 (at locus B) and test pit 2 (at locus C) in order to assess the possible cultural association of these features. One test square (N105/E160) was excavated in locus B as part of the systematic testing program. On the basis of grid expansion shovel testing, it was apparent that locus B contained the highest artifact density and a well-defined stratigraphic sequence. A test square placed in this area appeared to have the greatest potential for accumulating data regarding site stratigraphy and the stratigraphic position of artifactual material.

One hundred one shovel tests were excavated during grid shovel testing in all of the loci. Despite the excavation of 17 shovel tests at locus A, no additional material was located in this area of the site. Fifty-seven shovel tests were excavated in locus B, four of which were positive. The location of the positive tests in conjunction with the surface artifacts indicate a scatter of material across the knoll area. Twenty-seven shovel tests, expanding from the surface depression feature were excavated in locus C. Two of the shovel tests were positive, one contained a rhyolite flake similar to the flakes from the depression feature and the other contained the greenstone hammerstone (UA84-135-26; Figure D.386f)

Discussion:

Forty-one lithics and 55 bone fragments were recovered from TLM 173. With the exception of 1 basalt flake, 3 rhyolite flakes, and 1 hammerstone (UA84-135-26), all of the artifacts were collected from locus B. Tables D.269, D.270, and D.271 provide summaries of artifacts for each locus in the TLM 173 site inventory. A listing of these artifacts by stratigraphic unit is found in Tables D.273, D.274, and D.275.

The four artifacts that show evidence of secondary modification include a modified basalt flake from locus A, one modified flake (UA83-99-1) and a biface fragment (UA84-135-2; Figure D.386e) collected from locus B, and the hammerstone from locus C. The modified flakes are made of

basalt (UA83-99-1; UA84-135-1) with unifacial retouch on the margins. The argillite biface fragment has numerous hinge fractures on its dorsal face and a series of flake scars on the ventral face at the proximal end. The rock identified as a hammerstone is of an elongate pebble of greenstone material with possible battering and polish.

Nineteen soil/sediment units were defined at the site. Eleven of these units have been distinguished based on the exposures in test pit 1, test pit 3, and test square N106/E160. The generalized stratigraphic sequence as illustrated in Figure D.213 is generally applicable to the stratigraphy in loci A and B, although it is based on the exposed profiles of test square, N100/E160. The stratigraphy in locus C, which contains only eight soil/sediment units, does not conform to the sequence observed on the knoll and will be discussed separately. The soil/sediment units defined in locus C are shown in Figure D.214, and described on Table D.267. Unit descriptions for loci A and B are on Figure D.213 and Table D.268.

Because the knolls that are associated with loci A and B owe their present separation to drainage systems which dissect the terrace, similarity in the stratigraphic sequence between these two terrain features would be expected. Stratigraphy on the terrace represents a series of fluvial depositional events overlain by volcanic tephra. In general, a thin surface organic mat (unit 1a) overlies a layer of finely sorted organic material with fine silt and numerous roots (unit 1b). Mixed with and underlying unit 1b is a thin discontinuous layer of Devil tephra (unit 2). The Watana tephra is the next unit (unit 3) in the sequence. This tephra unit was well defined throughout the areas of loci A and B, and is variable in color as a result of iron accumulation in the upper extent of the unit (unit 3a). A paleosol (unit 4) occurs at the contact between the Watana tephra with an underlying lens of grayish brown sand (unit 5) that probably represents a buried eluvial horizon. The paleosol consists of a thin lens of black matrix with charcoal that bifurcated in areas. Of particular interest was a lens of sand (unit 6) that occurs in the area between the bifurcation. The sand lens suggests an interim of eolian deposition during the time that the

unit 4 surface was exposed. Both the paleosol and the underlying grayish brown sand lacked continuity, and when present varied from being well to poorly defined. Units 7, 8, 9, and 10 are related to fluvial sediments. Briefly, these sediments include a massive fine to medium grain sand unit (unit 7) with evidence of iron accumulation at its upper extent (unit 7), a thin silt lens (0.5-1 cm thick) (unit 8), a coarse sand with pebbles (unit 9), and another fine to medium grain sand unit (unit 10). Excavation of the test square terminated in unit 10 at a depth of ca. 0.8-1.0 m below the surface.

One additional unit was defined at locus B which is applicable specifically to the surface depression feature in that locus. Unit 11 was identified in test pit 3 and is characterized by mottled tephra and sand. This unit represents a fill level of the surface depression and probably originates from the backdirt of the original excavation. In the north wall of test pit 3, the Devil and Watana tephra units as well as the paleosol and grayish brown sand unit are truncated, indicating that the depression was excavated after the deposition of the Devil tephra.

Eight soil/sediment units were defined in the profiles of test pit 2 at locus C. Two of these units are directly correlated to the surface depression feature, and are represented by two silty units with gravels (units 2 and 8). Unit 2 is positioned stratigraphically between the surface organic layer (unit 1) and a buried organic horizon (unit 3), and is most likely backdirt associated with the original excavation of the feature. Outside the feature, and beneath the buried organic layer (unit 3), is a fine grain silt (unit 4), underlain by first a silty sand (unit 5) and then sand (unit 6). Small pockets of clay (unit 7) were observed within both units 4 and 5. Units 3, 4, and 5 are truncated by the feature with the depression extending down into unit 6.

The general stratigraphic sequence for locus C as discussed above was also observed in shovel tests. Tephra units, if present, were often too disturbed to be reliably identified. The sediments associated with locus C are fluvial in origin, being associated with either terrace

formation or slope wash. The absence of the volcanic sediments observed in loci A and B may be the result of erosion or displacement as a result of drainage and transport of sediments from the upland area. Based on the stratigraphic position of artifacts recovered from the test square, N106/E160, in locus B and the surface depression feature in locus C, two components can be defined at TLM 173. While a cut-and-fill relationship was evident in the profiles of test pit 3, which intersected the surface depression in locus B, the absence of artifactual or structural material makes it difficult to make definitive statements regarding its possible cultural association. This feature is therefore not being included in a component description of the site.

An upper component is represented at TLM 173 by the surface depression feature in locus C. The surface depression was unremarkable, and was not recognized as being cultural until it was shovel tested. One shovel test placed in the center of the depression revealed two rhyolite flakes. Another shovel test on the edge of the depression was expanded (test pit 2), and a distinct pit outline along with backdirt and fill matrix was identified. The profile from test pit 2 indicates that the pit was originally excavated to a depth of at least 30 cm lower than the surrounding present ground surface. There is 10 cm of backfill within the pit.

A single rhyolite flake was located in a shovel test, N79/E173, during grid shovel testing. The shovel test was 1.5 m northeast of the edge of the depression, and, while the stratigraphic position of the flake was unknown, it is probably associated with the two rhyolite flakes from within the depression.

The absence of either the volcanic sediments defined in loci A or B, or datable material renders the relative chronological placement of the component at locus C to other artifactual material at the site, or in the project area, indeterminable. That the depression feature is relatively recent is indicated by the fibrous nature of the buried organic layer (unit 3).

The lower component is associated with a paleosol (unit 4) and a grayish brown silty sand (unit 5) beneath the Watana tephra (unit 3).

Artifactual material includes a chert blade fragment (UA84-135-4; Figure D.386d), chert flakes, and calcined bone fragments. All 24 of the chert flakes and 24 of the 55 calcined bone fragments recovered during excavation of the test square, N106/E160, at locus B were recorded from stratigraphic contexts associated with the lower component. A number of the chert flakes are thermally altered as indicated by potlid fractures. The single basalt flake from test pit 1, locus A, recorded as being from below the Watana tephra unit, may also be associated with this component.

Evaluation:

TLM 173 consists of two discrete knolls on remnants of an old terrace of the Susitna River and a surface depression feature in a low area to the southeast of these knolls. Each loci had artifactual material. While preliminary testing at the site was limited, results demonstrate that the site represents multiple occupational episodes. The site includes subsurface lithic and faunal material, surface lithics, and two depression features. The three loci are spatially discrete as indicated by the results of grid shovel testing.

One basalt flake found beneath the Watana tephra constitutes the only artifact in the inventory of locus A. Locus B had the highest artifact frequency. Subsurface material was found in association with a paleosol and grayish brown sand beneath the Watana tephra. One modified flake and one argillite biface were found on the surface in this locus, which also has a small (ca. 1 m in diameter), circular surface depression. While no artifacts or structural material were found in association with the depression, a test pit (test pit 3) placed on the edge of the depression revealed a clear cut-and-fill relationship. Locus C consists of a similar depression feature. Two rhyolite flakes were found in a shovel test within the depression, and a cut-and-fill relationship was defined in a test pit (test pit 2) on the edge of the depression.

The subsurface material at locus B included a chert blade fragment. The blade fragment in association with lithic debitage of the same material may indicate that the lower component at TLM 173 is related to blade production. A more recent use of the site is represented by the surface depression features, particularly the feature at locus C. The relationship of the surface artifacts to the subsurface material or depression features has not been established.

Observed size for locus A based on the distribution of artifacts is 4 square meters. Observed size for locus B based on the distribution of artifacts is 28 square meters. Observed size for locus C based on the distribution of artifacts is 16 square meters (Table D.2).

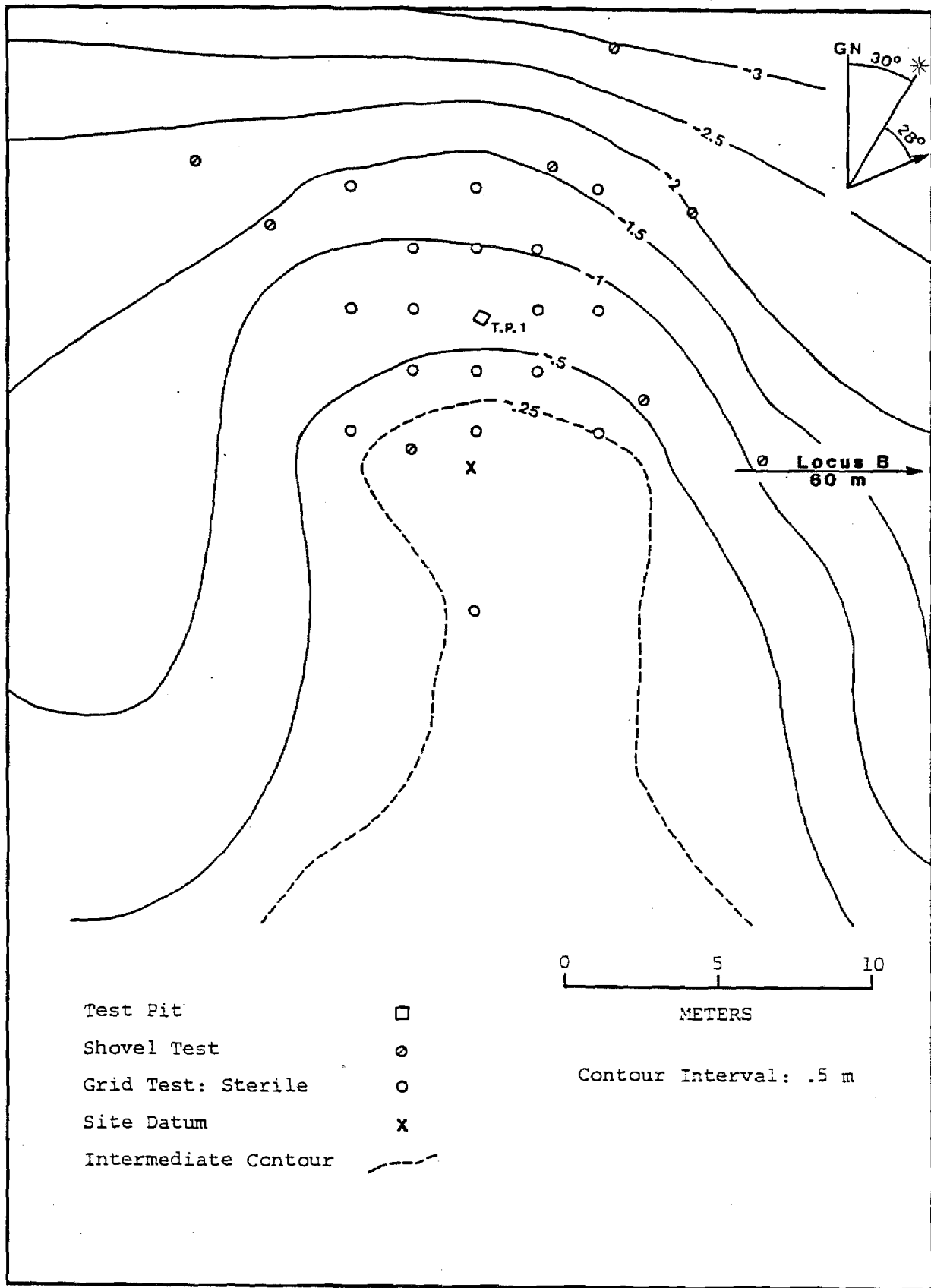


Figure D.210. Site Map, TLM 173 Locus A

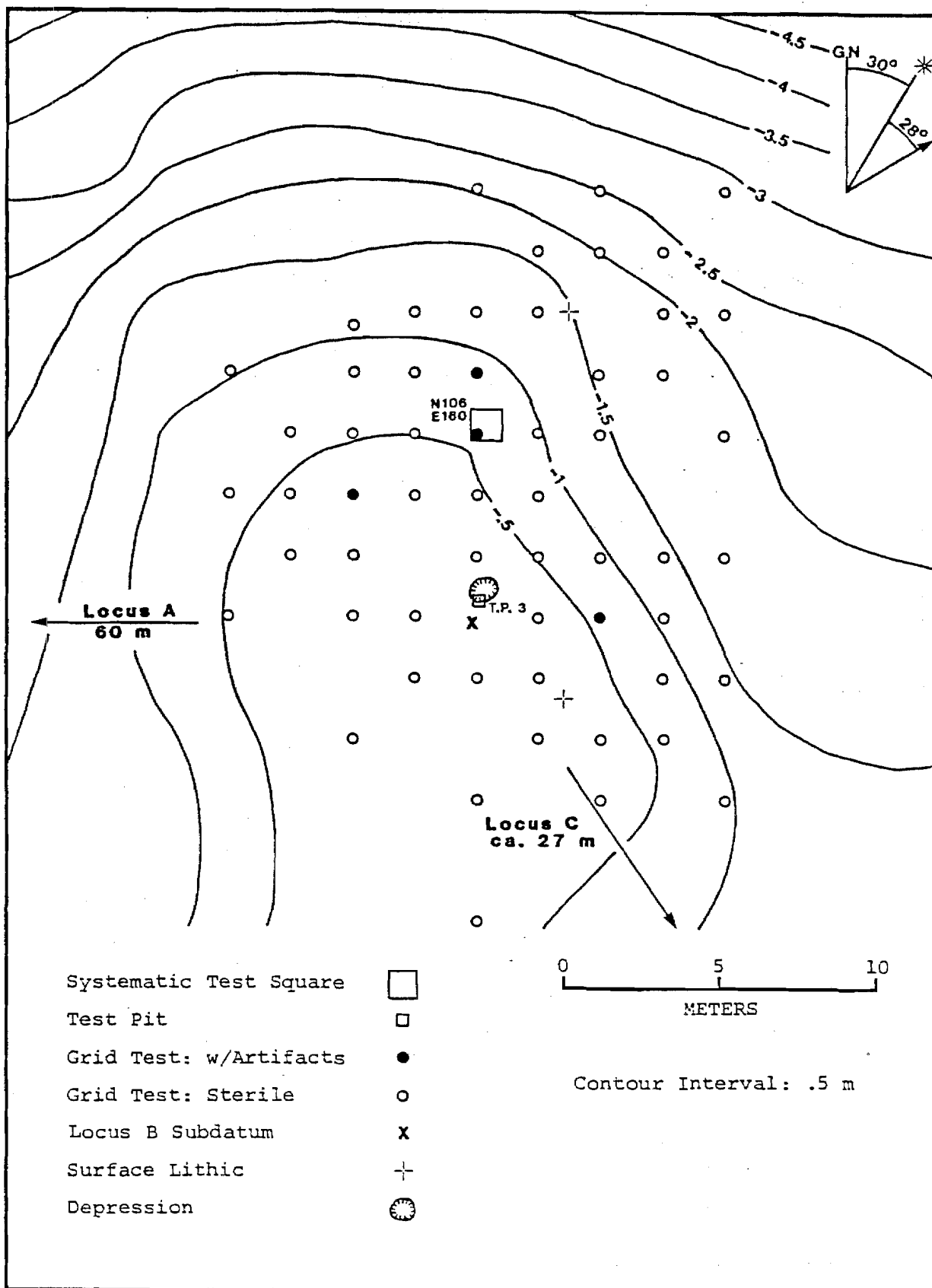


Figure D.211. Site Map, TLM 173 Locus B

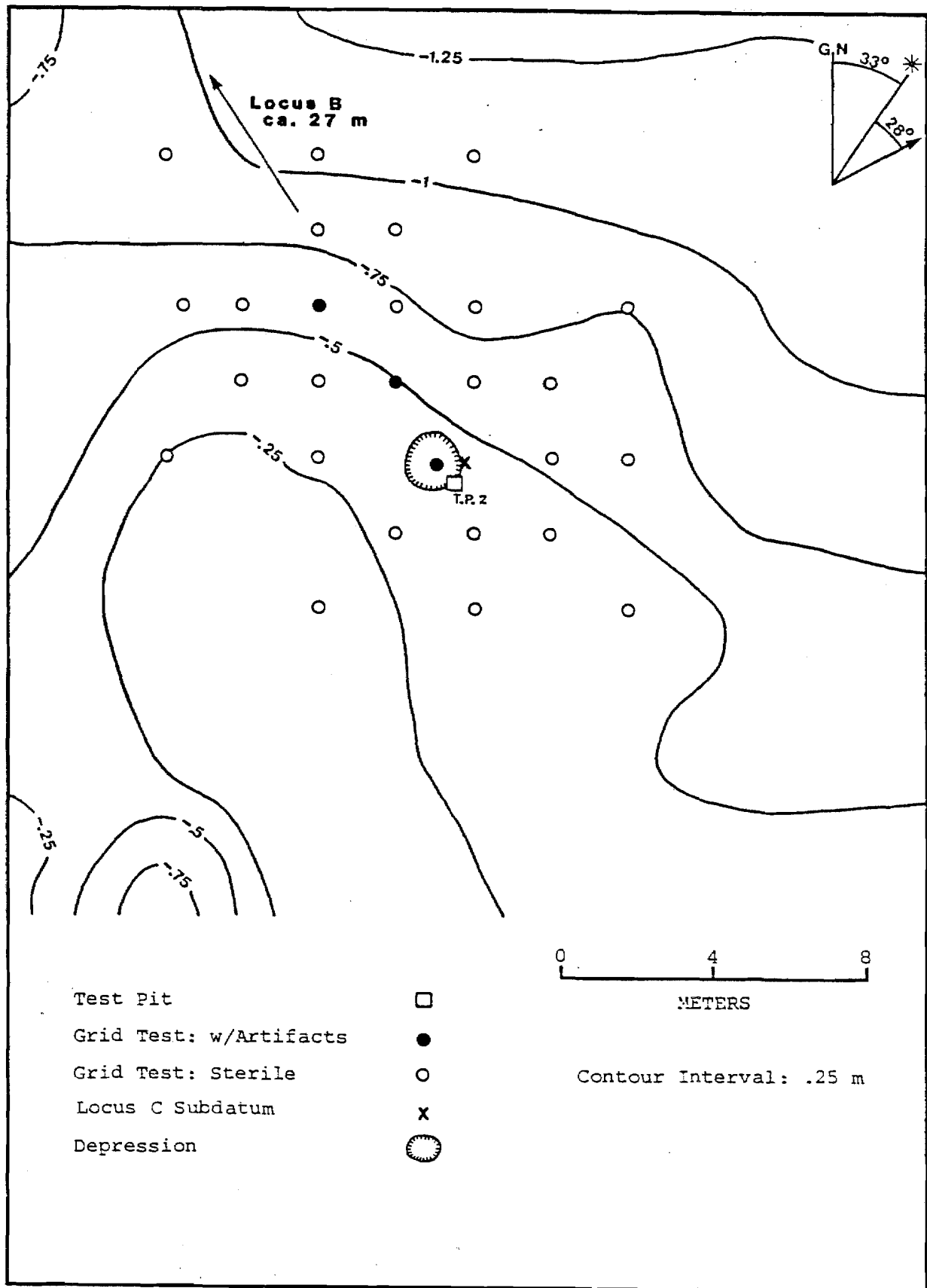


Figure D.212. Site Map, TLM 173 Locus C

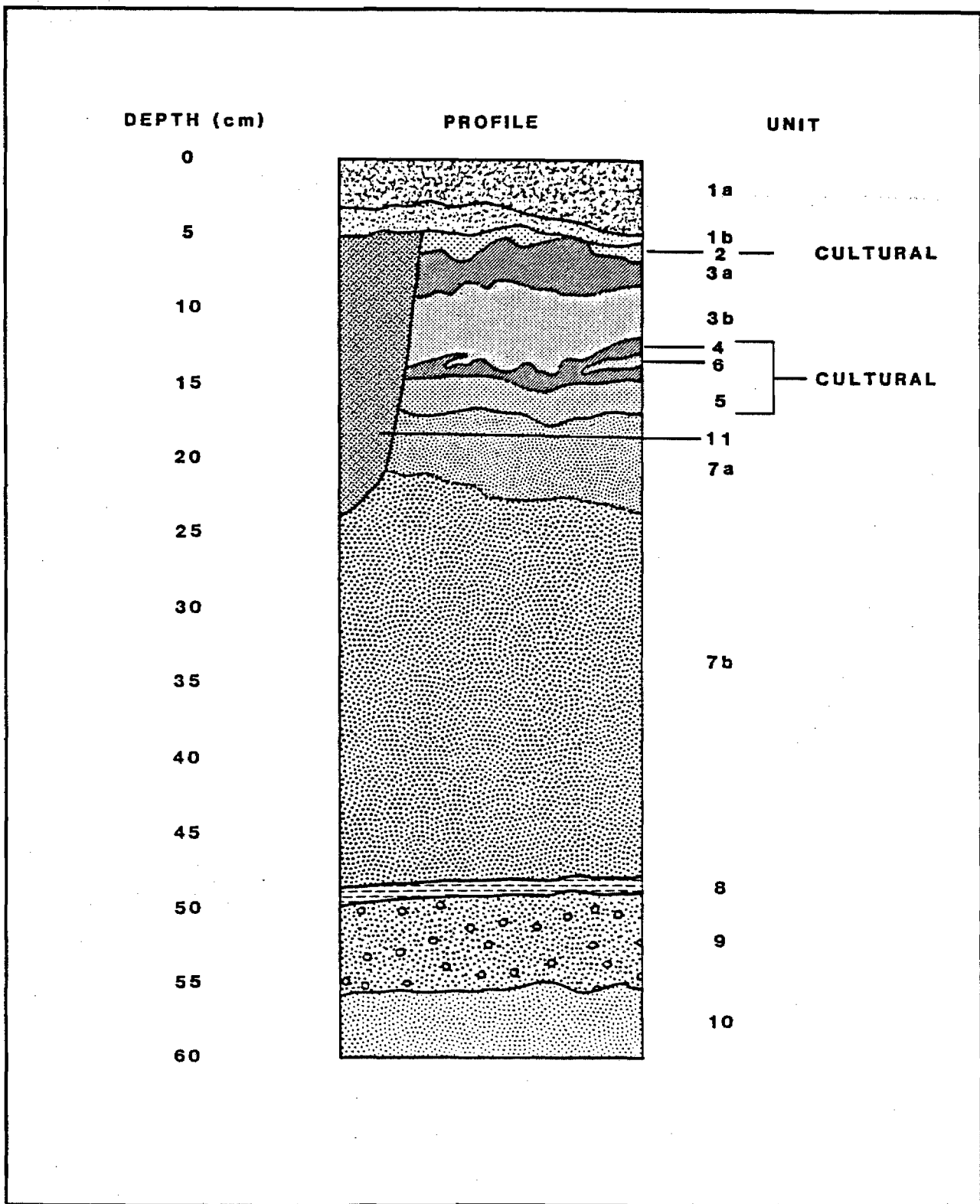


Figure D.213. Composite Profile, TLM 173 Loci A and B

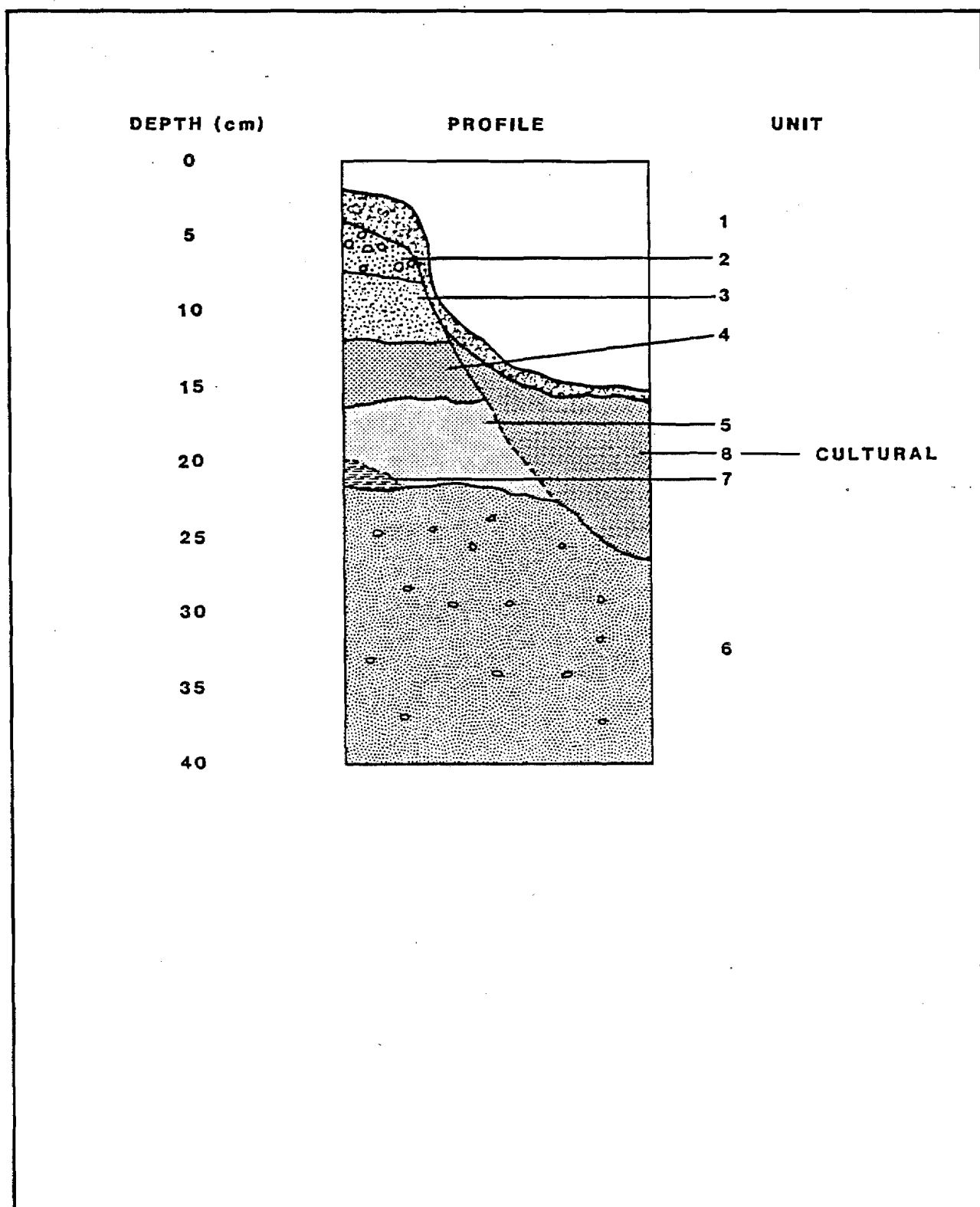


Figure D.214. Composite Profile, TLM 173 Locus C

Table D.267.

Soil/Sediment Description for Composite Profile, TLM 173 Loci A and B

Unit	Description
1a	Surface organic layer consisting of roots and organic material from dwarf birch, low berry bushes, Labrador tea, lichen, and moss. 01 horizon. Continuous surface cover that varies in thickness from 2-8 cm.
1b	Fine silt mixed with finely sorted organic material and roots; black (5YR 2.5/1). Varies in thickness from 0.5-3 cm. Contact with underlying unit is clear and smooth to wavy. 02 horizon. Continuous unit.
2	Fine silt size particles; dark grayish brown (10YR 4/2). Varies in thickness from 0.5-3 cm. Contact with the underlying unit is clear and wavy. Devil tephra; eluvial A horizon. While the unit lacks continuity, breaks are less than 10 cm in horizontal plan. Unit is partially mixed with unit 1a, making it difficult to isolate the 1b/2 contact in horizontal plan during excavation. Calcined bone fragments may originate from unit 3/4 & 5 contact.
3a	Fine silt size particles; dark reddish brown (5YR 3/4). Varies in thickness from 0.5-4 cm. Contact with unit 3b is clear although wavy and irregular. Upper zone of Watana tephra; illuvial B horizon. Generally continuous across profiles.

Table D.267. (Continued)

Unit	Description
3b	Fine-grained silt size particles; brownish yellow to dark yellowish brown (10YR 6/6 to 10YR 4/6). Usually varies in thickness from 2-8 cm, but in some places ranges up to 12 cm. Contact with the underlying unit is abrupt. Lower zone of Watana tephra. With the exception of occasional breaks, unit is continuous.
4	Fine-grained silt size particles with small charcoal flecks and pieces; very dark grayish brown (10YR 3/2). Very thin lens no more than 1.5 cm thick. In the test square profiles contacts are clear although the unit could not be isolated as a separate unit during excavation. Paleosol. Bifurcates in some areas. Lithic artifacts and calcined bone fragments.
5	Silt to sand size particles grayish brown (10YR 5/2). 2-3 cm thick with clear lower contact. Buried eluvial horizon. Generally continuous unit. Distinguished from unit 7 on the basis of color. Exhibits limited mixing with the paleosol (unit 4). Lithic artifacts.
6	Fine to medium grain sand; dark yellowish brown (10YR 4/6). Very thin lens that occurs in areas between bifurcation in the paleosol (unit 4). Eolian sand.

Table D.267. (Continued)

Unit	Description
7a	Fine to medium grain sand; yellowish red (5YR 4/6). Varies from 4-8 cm. Contact with underlying unit is gradational and based on color. Fluvial sand; buried illuvial horizon.
7b	Fine to medium grain sand; yellowish brown (10YR 5/4). Massive unit up to 35 cm in thickness. Contacts are clear and smooth. Fluvial sand.
8	Silt; dark grayish brown (10YR 4/2). Thin lens 0.5-1 cm. Contacts are clear and smooth. Fluvial sand.
9	Medium to coarse sand with pebbles; dark grayish brown (10YR 4/2). Varies from 8-10 cm thick with clear and smooth contacts. Fluvial sand.
10	Fine to medium grain sand; grayish brown (10YR 5/2). Continuous unit. Excavation into this unit determined limit of excavation for test square.
11	Fill level for surface depression feature. Includes mixed tephra and sand. Contacts are abrupt indicating a cut-and-fill relationship following the contour of the surface depression.

Table D.268.

Soil/Sediment Description for Composite Profile, TLM 173 Locus C

Unit	Description
1	Organic mat. Roots and organic material mixed with finely sorted organic material. Thickness varies from 1-3 cm. Clear and smooth lower boundary.
2	Mixed silt, sand, and gravels. Thickness varies from 3-4 cm. Clear to abrupt and smooth boundaries. Backfill from surface depression.
3	Fibrous organic mat with finely sorted organic material. Varies in thickness from 2-5 cm. Lower contact is clear to sharp. Buried O horizon. Unit is truncated by the surface depression.
4	Fine grain silt; brown. Varies in thickness from 4-15 cm. Lower contact is clear to diffuse. Fluvial silt. Unit is truncated by surface depression.
5	Fine grain silt mixed with sand; brown to gray. Contact with underlying unit is clear. Fluvial sediment. Unit is truncated by surface depression.
6	Fine to medium grain sand; brown to gray. Contains some small gravels. Lowest sediment unit excavated. Unit underlies the edge of surface depression.

Table D.268. (Continued)

Unit	Description
7	Very fine grain silt to clay. Occurs in small pockets in both units 4 and 5. Compressed and plastic when wet.
8	Fine grain silt mixed with sand; brown to gray. Represents a fill unit for the depression feature. Similar in texture to unit 5. Can be distinguished from unit 5 by depression boundary.

Table D.269.

Artifact Summary, TLM 173 Locus A

Tools

- | | |
|---|----------------------|
| 1 | Modified flake |
| | 1 Basalt (UA83-99-1) |

Table D.270

Artifact Summary, TLM 173 Locus B

Tools

- | | |
|---|--------------------------|
| 1 | Modified flakes |
| | 1 Basalt (UA84-135-1) |
| 1 | Biface fragment |
| | 1 Argillite (UA84-135-2) |
| 1 | Blade fragment |
| | 1 Chert (UA84-135-4) |

3

Table D.270. (Continued)

Lithic Material

1	Basalt flakes
32	Chert flakes

33

Faunal Material

55	Calcined bone fragments
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Table D.271.

Artifact Summary, TLM 173 Locus C

Tools

1	Hammerstone (UA84-135-26)
---	---------------------------

Lithic Material

3	Rhyolite flakes
---	-----------------

Table D.272

Faunal Material by Stratigraphic Unit, TLM 173 Locus B

Unit	Description
2 Devil tephra	31 Unidentifiable bone fragments, calcined, medium-large mammal
3/4 and 5 Contact between Watana tephra and paleosol and within grayish-brown sand	1 Probable rib fragment, calcined, medium-large mammal 23 Long bone and unidentifiable bone fragments, calcined, medium-large mammal

Table D.273.

Artifact Summary by Stratigraphic Unit, TLM 173 Locus A

Unit	Description
Subsurface unknown	1 Basalt modified flake (UA83-99-1)

Table D.274

Artifact Summary by Stratigraphic Unit, TLM 173 Locus B

Unit	Description
Surface	1 Basalt modified flake (UA84-135-1)
	1 Argillite biface fragment (UA84-135-2)
3a/4 and 5 Contact between Watana tephra B horizon and paleosol & grayish brown sand	11 Chert flakes
4 and 5 Paleosol and grayish brown sand	11 Chert flakes

Table D.274. (Continued)

Unit		Description
4 and 5/7	2	Chert flakes
Contact between paleosol & grayish brown sand and yellowish brown sand		
4, 4/5, 5, 5/7, 7	8	Chert flakes
Paleosol to yellowish brown sand	1	Chert blade fragment (UA84-135-4)
Subsurface	1	Basalt flake
unknown	1	Chert flake

Table D.275.

Artifact Summary by Stratigraphic Unit, TLM 173 Locus C

Unit		Description
Subsurface	3	Rhyolite flakes
unknown	1	Hammerstone (UA84-135-26)

AHRS Number TLM 174; Accession Numbers UA83-100, UA84-126

Area: Northeast of Watana Creek Mouth
Site Map: Figure D.215
Survey Locale 144a: Figure E.232
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

The site is located at 629 m asl (altimeter: 2065 feet) on a circular knoll northeast of the confluence of Watana Creek with Susitna River. The knoll is one of a series of knolls and ridges of a similar elevation occurring in the immediate site area. The terrain varies from low, poorly drained areas on gently sloping drainage bottoms, to lichen-covered knolls, isolated ridges, and kettle ponds. The knoll on which TLM 174 is located is a glacial kame, approximately 50 m in diameter at the base and 15 m in diameter at the crest. The site is situated on the northern portion of the knoll just off of a higher central area, and is about 5 m above the surrounding terrain with the knoll gradually sloping into poorly drained areas to the north, south, and east. To the west the knoll tapers slightly upward into a low, broad ridge. The view from the site is panoramic, only occasionally obstructed by a moderately dense mixed white spruce and birch forest. Approximately 250 m to the northwest is a small pond, less than 1 ha, clearly visible and accessible. The upper portion of a valley associated with a tributary of Watana Creek is visible to the north, and the Susitna River canyon walls and plateau to the south can be seen across the valley. TLM 126, ca. 650 m southeast of TLM 174 and at a similar elevation, is also visible. Vegetation on the knoll consists of a continuous heath ground cover and includes lichen, moss, low bush berries, Labrador tea, dwarf birch, and occasional spruce. Vegetation is denser on the slopes, along drainages, and in lower intervening areas.

Testing:

TLM 174 was initially located when a chalcedony flake and a chalcedony biface fragment were located in a shovel test during survey testing. The shovel test was expanded into a 40 x 40 cm test pit (test pit 1), and an argillite flake was found at the contact between the Watana tephra unit and what was described as a reworked Oshetna tephra unit. Eight shovel tests were excavated on the knoll, but produced no additional artifactual material.

In an effort to better delineate the distribution of cultural material and the spatial extent of the site, grid shovel testing was initiated. Sixteen grid shovel tests were placed around test pit 1, which was the only area of the site known to contain artifacts. All of the grid shovel tests were sterile. One test square, N99/E101, was excavated during systematic testing. It was placed directly south of the test pit in a location that appeared to have the greatest potential for recovering artifacts in well-defined stratigraphic contexts. Refer to Figure D.215 for the placement of the shovel tests, the test pit, and the test square.

Discussion:

Twenty-one flakes were recovered during systematic testing and, with the exception of one chert flake, all of these were of argillite. The chalcedony biface fragment (UA83-100-1) recovered during survey testing represents the only lithic with secondary modification. A summary of artifacts included in the TLM 174 inventory is listed on Table D.277, and distribution of artifacts by stratigraphic appears unit on Table D.278.

Seven soil/sediment units were defined at the site based on the test square profiles. The stratigraphic sequence at TLM 174 conforms to the general stratigraphic section of numerous sites in the project area. The sediments have been interpreted as being primarily volcanic in origin and have been given the designations of Oshetna (unit 6), Watana

(unit 4), and Devil (unit 3). Figure D.216 illustrates the general stratigraphic section, and characteristics of individual units are described in Table D.276. At TLM 174 the Devil and Watana tephra units are generally continuous, with the Watana tephra representing the most massive sediment. The Watana tephra includes an extensive zone of oxidation at its upper extent (unit 4a). The Oshetna tephra lacked continuity and contained sand and abundant pea gravels. Pockets of gravels and isolated gravels within the Watana tephra indicate postdepositional disturbance probably as a result of cryoturbation. The abundance of pea gravels within the Oshetna tephra may reflect secondary deposition of the unit.

A paleosol (unit 5) occurs at the contact between the Watana (unit 4) and Oshetna (unit 6) tephras. While the paleosol was discontinuous, where it was defined in the profiles of the test square, it was distinctive and characterized by black silty matrix with finely divided organic material. Minimal amounts of charcoal were observed in association with this unit with the charcoal occurring only as small isolated pieces.

The surface of the site has a continuous vegetation mat (unit 1). Variation in the thickness of the mat is dependent on the type of surface vegetation and the presence or absence of game trails. The organic mat is underlain by a thin, but generally continuous, humic-rich O2 horizon (unit 2). The basal unit of excavation was a gravelly unit (unit 7) with silt, sand, pebbles, and cobbles. The sediment is glacial in origin and is weathered at its upper extent. Observation of the stratigraphy of the grid shovel tests indicated that the stratigraphic sequence was generally consistent within the eight square meter area tested. One exception was the occurrence of the paleosol and Oshetna tephra, which varied considerably between shovel tests.

A single component can be defined at the site based on the stratigraphic position of artifacts recovered during systematic testing in conjunction with the homogeneity of most of the lithic material. Fifteen of the 21 flakes recovered during systematic testing were in direct association

with the paleosol (unit 4/5, 5), placing the component within the interim of time between the depositions of the Watana and Oshetna tephras. All of these flakes were small and of weathered argillite. The chalcedony biface fragment (UA83-100-1), chalcedony flake, and argillite flake recovered from the original shovel test and test pit during survey testing were probably from the same stratigraphic position as the majority of lithics recovered during systematic testing.

Artifacts recovered during systematic testing were also found in a number of other stratigraphic contexts (units 3, 3/4, 4, 6), probably as a result of cryoturbation. Such disturbance was evident both during excavation and in profiles of the test square suggesting the possibility of vertical displacement of artifacts from their original context.

Evaluation:

TLM 174, along with TLM 126 is representative of sites located on kames in the ice-stagnation terrain between Watana Creek and a lake locally known as Duck Embryo Lake. These kames are distinguished from surrounding topography by slightly higher elevations than others in the region. Preliminary testing at TLM 174 indicates that a single component is present. The component is associated with a paleosol (unit 5) located between the Watana (unit 4) and Oshetna (unit 6) tephra units, and is of limited areal extent. Artifacts from the site consist primarily of weathered argillite flakes, but also include single flakes of chalcedony and chert. A chalcedony biface fragment (UA83-100-1) is the only specimen in the assemblage which exhibits secondary modification. Although limited systematic testing precludes a detailed interpretation of the site, the low-artifact density and lack of diversity in the assemblage suggests a short-term occupation related to lithic reduction activities. Observed site size based on the distribution of artifacts is 9 square meters (Table D.2).

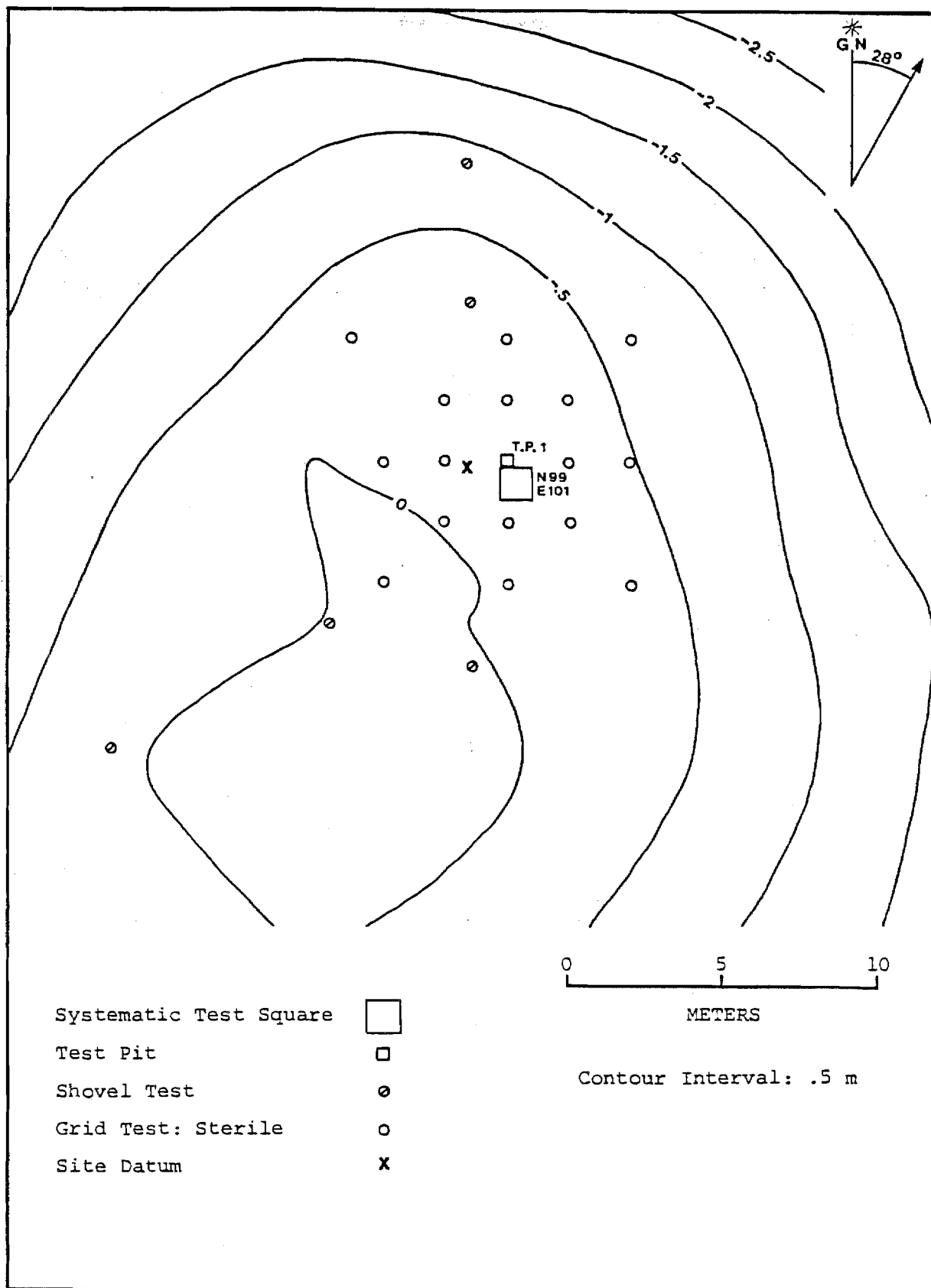


Figure D.215. Site Map, TLM 174

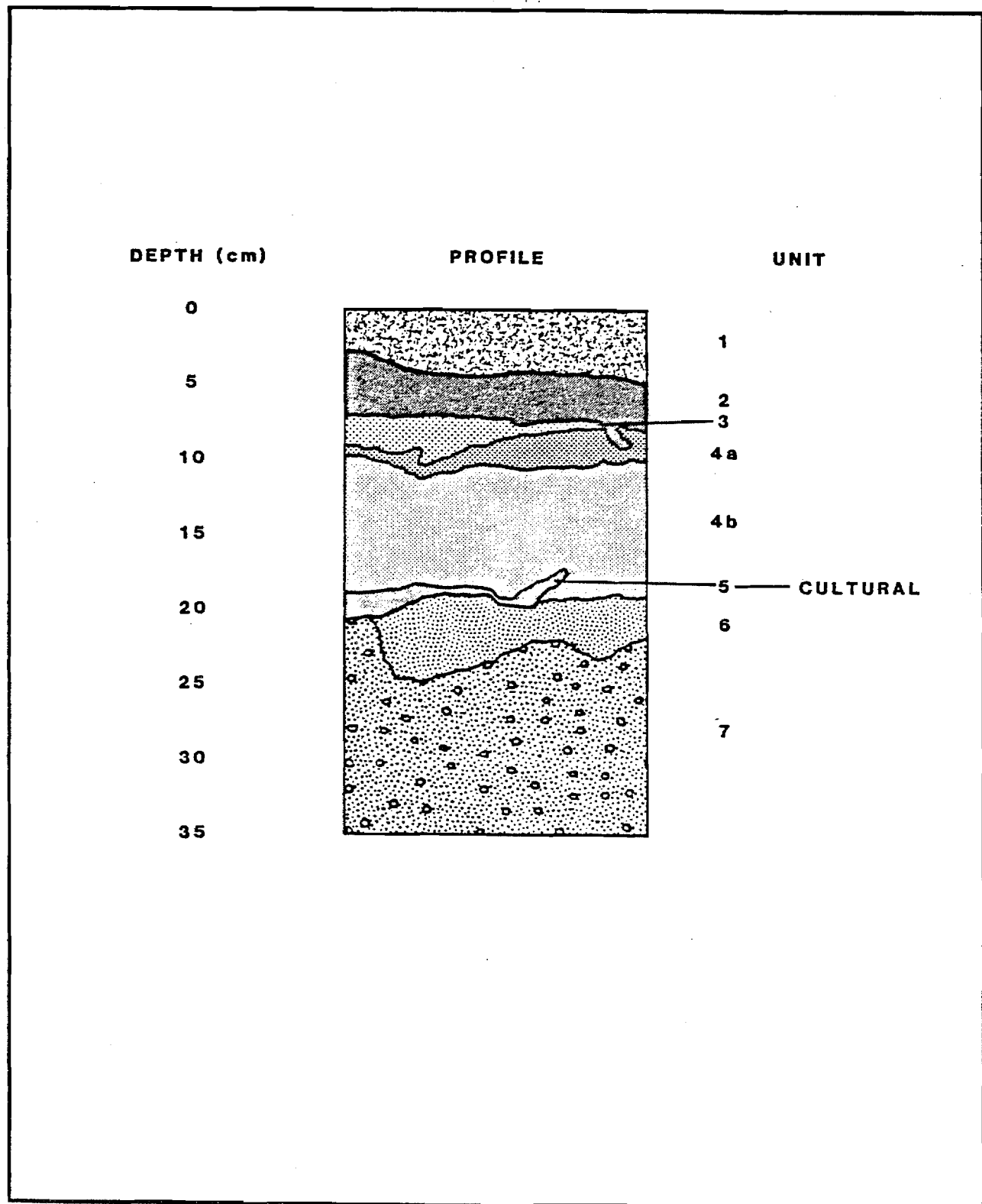


Figure D.216. Composite Profile, TLM 174

Table D.276.

Soil/Sediment Description for Composite Profile, TLM 174

Unit	Description
1	Surface organic layer: fibrous root mat with living and partially decayed plant material of lichens, moss, Labrador tea, and dwarf birch. Varies in thickness from 5-15 cm with thickness dependent on location of game trail. Lower boundary is smooth and clear. 01 horizon.
2	Fine silty sand with finely sorted organic material and rootlets; black (5YR 2.5/1). Varies in thickness from 2-9 cm. Lower contact clear and wavy; 02 horizon. Essentially continuous. Very little charcoal observed.
3	Very fine silt size particles; pinkish gray (7.5YR 6/2). Varies in thickness from 1-8 cm. Lower contact clear and wavy with pockets extending down into underlying unit. Tephra (Devil); eluvial A horizon. Generally continuous and consolidated. Upper boundary easily defined as roots follow the unit 2/3 contact. Gravel observed within unit. One flake found within this unit to contact with underlying unit probably derived from unit 5.

Table D.276. (Continued)

Unit	Description
4a	Very fine silt size particles with occasional gravels; varies from very dusky red (2.5YR 2.5/2) to dark reddish brown (5YR 3/4). Varies in thickness from 2-6 cm. Lower contact very irregular. Upper zone of tephra (Watana); illuvial B horizon. Generally continuous and distinction between units 4a and 4b based on zone of iron accumulation. Gravels indicate disturbance probably related to cryoturbation.
4b	Very fine silt size particles with both isolated gravels and pockets of gravels; varies from dark reddish brown (5YR 3/4) to yellowish brown (10YR 5/4). Varies in thickness from 4-16 cm. Lower contact with either unit 5, 6, or 7 clear to sharp although irregular. Tephra (Watana); B horizon. Continuous and represents the most massive unit. Pockets of gravels appear to be derived from unit of glacial material indicating disturbance. One flake found within this unit probably derived from unit 5.
5	Very fine silt and sand size particles with small plant fragments and occasional charcoal flecks; black (7.5YR 2/2). Varies in thickness from 1-6 cm. Lower contact with unit 6 clear to sharp in test square profiles. Paleosol. Lacks continuity and commonly mixed with unit 6. Cultural.

Table D.276. (Continued)

Unit	Description
6	<p>Very fine silt size particles, mixed with numerous pea gravels and sand; dark grayish brown (2.5Y 4/2). Varies in thickness from 1-7 cm. Lower contact clear and wavy. Tephra (Oshetna) mixed with sand and small gravels. Discontinuous; commonly mixed with unit 5. The upper contact extremely irregular and characterized by dips of up to 10 cm. Three flakes found within this unit probably derived from unit 5.</p>
7	<p>Silt and coarse grain sand mixed with small angular pebbles. Upper extent dark brown (7.5YR 3/2) and grades into a dark brown (10YR 3/3). Coarse sand matrix; glacial material. Excavation into this unit determined limit of excavation for test square and shovel tests. Upper extent probably represents a weathered horizon. Contained a small number of cobbles of 8-20 cm along maximum dimension.</p>

Table D.277.

Artifact Summary, TLM 174

Tools

1	Biface fragment
	1 Chalcedony (UA83-100-1)

Lithic Material

20	Argillite flakes
1	Chalcedony flake
1	Chert flake
1	Flake less than 1/8" mesh (Argillite)

23

Table D.278.

Artifact Summary by Stratigraphic Unit, TLM 174

Unit	Description
3, 3/4 Within Devil tephra to contact with Watana tephra	1 Argillite flake
4 Watana tephra	1 Argillite flake
4, 4/5 Watana tephra to paleosol contact	1 Argillite flake
4/5 Contact between Watana tephra and paleosol	9 Argillite flakes 1 Flake less than 1/8" mesh (Argillite)
5 Paleosol	6 Argillite flakes

Table D.278. (Continued)

Unit	Description
6 Oshetna tephra with silt, sand and gravels	2 Argillite flakes 1 Chert flake
Subsurface Unknown lower (survey testing)	1 Chalcedony biface fragment (UA83-100-1) 1 Chalcedony flake

AHRS Number TLM 175; Accession Numbers UA83-101, UA84-61

Area: Northeast of Watana Creek Mouth
Site Map: Figure D.217
Survey Locale 27: Figure E.103
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 175 is located at 628 m asl (altimeter: 2061 feet) on a discrete knoll overlooking the northwestern end of a lake, locally known as Duck Embryo Lake or Sally Lake, and its outlet. The knoll is roughly circular and rises about 8 m above the lake and outlet stream. Knolls of similar size are present to the west and northwest of the site. The view to the east is somewhat obscured by the knoll on which TLM 048 is located, which is approximately 25 m higher than TLM 175. Views to the southeast and south are unobscured for about 1 km, across the ca. 30 ha lake and low-rolling terrain beyond it. The prominent knoll on which TLM 039 is located can be seen to the southeast across the lake. TLM 217 is visible on a ridge north of the site. Site vegetation consists of low shrubs, scattered spruce, and a thin moss and lichen mat across the relatively flat top of the site knoll. Surrounding vegetation is composed of birch and willow shrubs and a black spruce forest. Scattered birch and poplar occur on better-drained slope surfaces, knolls and low ridges, and along breaks in slope.

Testing:

A shovel test placed on the north central part of the knoll during survey testing uncovered an argillite lanceolate point (UA83-101-1; Figure D.386g). A 40 x 40 cm test pit (test pit 1) was superimposed over the shovel test and a single chert flake was recovered from the contact between the Devil and Watana tephra units. The exact stratigraphic position of the point is unclear, although it was observed

to have come from the upper units. Four additional shovel tests to the north, south, east, and west of the test pit were negative.

Testing at TLM 175 also included grid shovel testing and systematic testing. The grid shovel testing program consisted of 25 shovel tests. Systematic testing at the site consisted of the excavation of three 1 x 1 m test squares (N96/E100, N96/E101, and N97/E100) located in the immediate vicinity of test pit 1. The test squares were placed in a checkerboard pattern in an area that appeared to be stable, i.e., on the relatively level crest of the knoll rather than on the slopes. Square placement also provided a 3-meter continuous profile along the E101 grid line from N95 to N98. See Figure D.217 for the location of the shovel tests and test squares. Systematic testing along with grid shovel testing was initiated in order to obtain a preliminary determination of the areal extent of the site, the relative density of artifactual material, and the number and stratigraphic position of the component(s) represented, in particular that component associated with the point.

Discussion:

Of the twenty-five grid shovel tests three contained artifactual material. The inventory from grid shovel testing consisted of 14 flakes, 11 of which were recovered from one shovel test. The majority of material was from the organic silt and its contact with the Devil tephra.

All three of the test squares excavated during systematic testing contained artifactual material, although the overall density of material was low. Material recovered during systematic testing includes an argillite flake core (UA84-61-52; Figure D.386i), a quartzite biface (UA84-61-42; Figure D.386h), 44 flakes, and 22 thermally altered rocks. The centrally located test square, N96/E101, contained the highest density of material including the biface, 30 flakes, and 7 thermally altered rocks (Table D.280). The distribution of material collected from the site is listed by stratigraphic level in Table D.281.

Stratigraphy at the site includes approximately 20-25 cm of soil/sediment overlying glacial material. Seven units were defined in the test square profiles based upon distinct color and/or variation in texture between units. The units represent a sedimentary sequence consisting primarily of volcanic tephra deposition over glacial material, as well as subsequent geochemical processes related to soil development. Figure D.218 illustrates a generalized stratigraphic section and Table D.279 provides a description of various unit characteristics. All seven of the units were defined in each of the excavated test squares.

The uppermost unit, unit 1a, consisted of a surface organic layer with an intertwined root mat, underlain by finely sorted organic material, unit 1b. Directly beneath the organic layer are a series of three tephra units. The designations for these tephra units are Devil (unit 2), Watana (unit 3), and Oshetna (unit 4). The uppermost boundary of the Devil tephra lacked continuity and was irregular and wavy. The middle tephra in the sequence (Watana tephra) is the most massive unit and has well-defined boundaries. The lowermost tephra (Oshetna) was poorly defined, occurring sporadically as an unmixed unit.

Between the Watana and Oshetna tephras, a layer of charcoal-stained matrix with charcoal flecks and pieces was identified (unit 4). This unit could only be isolated as a discrete unit in a few areas, and generally was mixed with the Oshetna tephra unit (unit 5). This paleosol probably represents a surface that developed after the deposition of the Oshetna tephra.

The Oshetna tephra is underlain by a fine silty matrix with coarse sand and pebbles (unit 6). The matrix is strong brown in color and may represent a weathered horizon. The basal unit of excavation was a coarse sandy matrix with pebbles and cobbles (unit 7). The unit is interpreted as being glacial in origin. Excavation into this unit determined limit of excavation. Artifactual material was located within three stratigraphic units (1b, 2, and 3), and at the contacts between these units. In addition, artifacts were located on the contact between

the Watana tephra (unit 3) and a mixed paleosol and Oshetna tephra unit (units 4 and 5).

Five broad classes of lithic raw material were identified in the TLM 175 assemblage: argillite, basalt, chert, quartzite, and rhyolite.

Argillite was the predominant material comprising 58% of the flakes, the point, and flake core. Basalt was the second most frequent material type with all of the basalt flakes recovered from a single shovel test.

Twenty-two lithic specimens not related to tool manufacture were recovered from two of the three test squares (N95/E100 and N96/E101). The rocks were granitic in composition and range in diameter from 3-13 cm. These rocks exhibit angular breakage and came from within tephra units. No pattern or configuration was observed in the placement of these rocks and the rocks were located in a number of stratigraphic positions: units 1b/2, 2/3, and 3/4 and 5. In addition to the angular rocks, three rounded pebbles were located within the Watana tephra unit (unit 3). While all of the angular rocks were classified as thermally altered they may not all necessarily owe their present form or location to cultural activities.

The biface (UA84-61-42) and the flake core (UA84-61-52) are the only lithics with secondary modification recovered during systematic testing. The biface is of a dark quartzite material and has continuous bifacial retouch along two margins. Flake scars do not extend across the face of the tool, and the general morphology of the tool cannot be attributed to bifacial reduction. The flake core is of a banded green and white argillite. The core appears to be exhausted and exhibits a number of flake scars, some of which terminate in step and hinge fractures.

Two distinct components can be defined at the site. All forty-four of the flakes recovered during systematic testing were in association with the following stratigraphic contexts: the finely sorted organic layer (unit 1b), the contact between the organic layer and the Devil tephra (unit 1/2), and within the Devil tephra (unit 2). Since unit 2 represents an episode of tephra deposition, it is probable that the

artifacts found within this unit were vertically displaced. With the exception of one flake from the Watana tephra, all of the lithics recovered during shovel expansion testing were located in the above mentioned stratigraphic contexts. The upper component can be placed tentatively sometime after the deposition of the Devil tephra. A biface and three thermally altered rocks were found on the paleosol and Oshetna tephra surface (unit 4/5) in one of the test squares, N96/E101. This material provides the only evidence for a lower component.

Lithic material from the middle stratigraphic unit of Watana tephra (unit 2) and its upper contact with the Devil tephra (unit 2/3) included an argillite flake core, 14 thermally altered rocks, and 3 pebbles. The core was initially exposed at the contact between the Devil and Watana tephras. The core was positioned vertically within the Watana tephra matrix with the lower extent situated toward the base of the Watana tephra unit. While a middle component may be represented at the site, data are not sufficient to establish which of the rocks may be culturally associated or to define the original placement of the argillite core.

Evaluation:

TLM 175 is one of three sites located on discrete knolls surrounding Duck Embryo Lake. The knolls provide advantageous topographic settings with close proximity to a major water source. Testing at TLM 175 provides evidence for occupation of the knoll overlooking the lake outlet during at least two intervals of time: between the ash falls associated with the Oshetna and Watana tephras, and again after the deposition of the Devil tephra.

The assemblage associated with the upper component includes flakes and thermally altered rocks. Although the overall low density of material suggests that tool manufacture and/or refurbishing were limited, the presence of flakes of four material types indicates a potential for more than a single occupation. The precise vertical provenience of the argillite point (UA83-101-1) recovered during survey testing remains

unknown, although when it was collected from a shovel test it was observed to have come from the upper stratigraphic levels suggesting that it may be associated with the upper component. The stratigraphic position of the artifactual material indicates that this component may be assigned to the Athapaskan tradition. The lowermost component is associated with the surface that developed after the Oshetna tephra fall. The paucity of material (one biface and two thermally altered rocks) indicates that site use was not extensive during the early period. Observed site size based on the distribution of artifacts is 34 square meters (Table D.2).

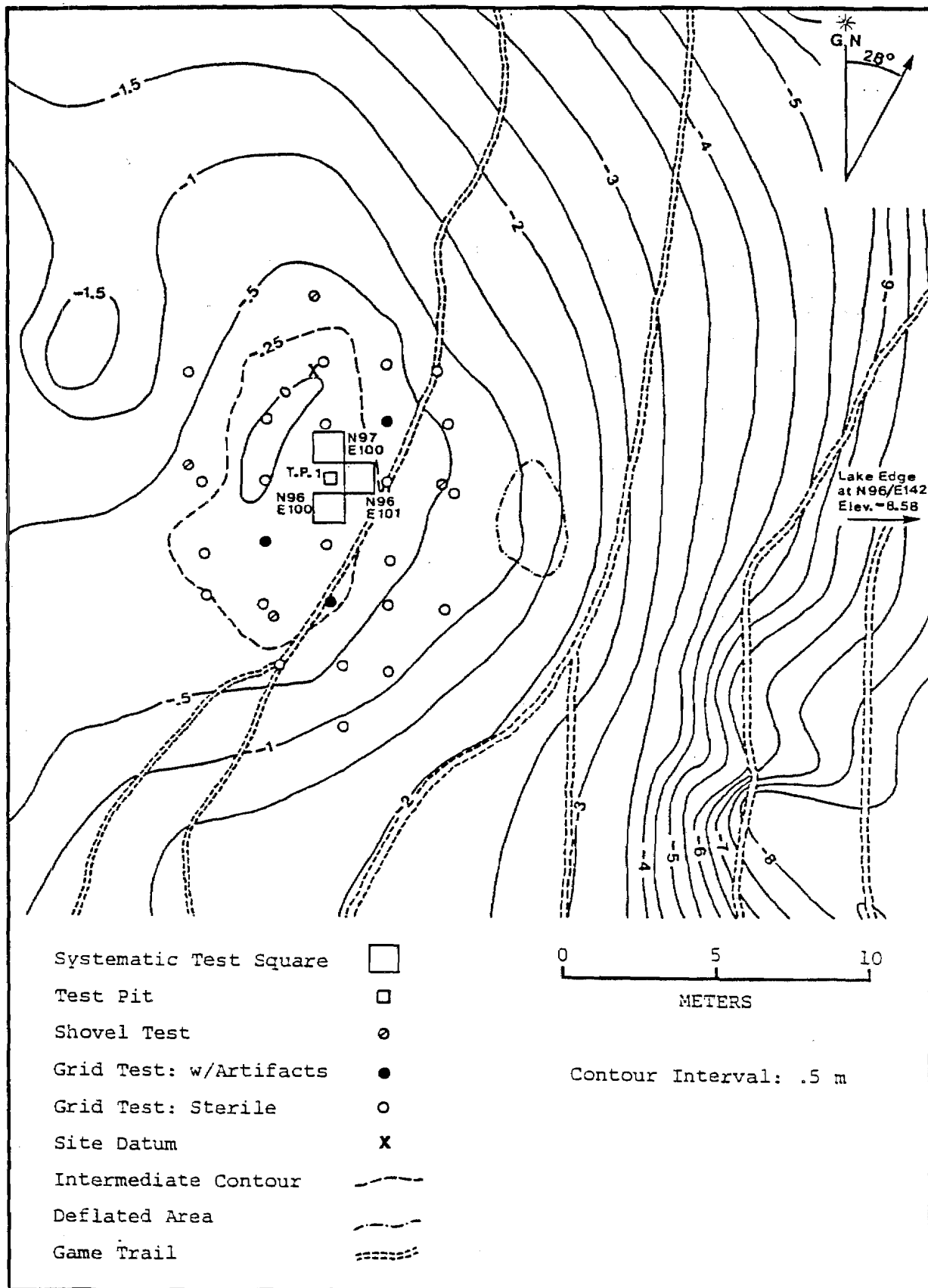


Figure D.217. Site Map, TLM 175

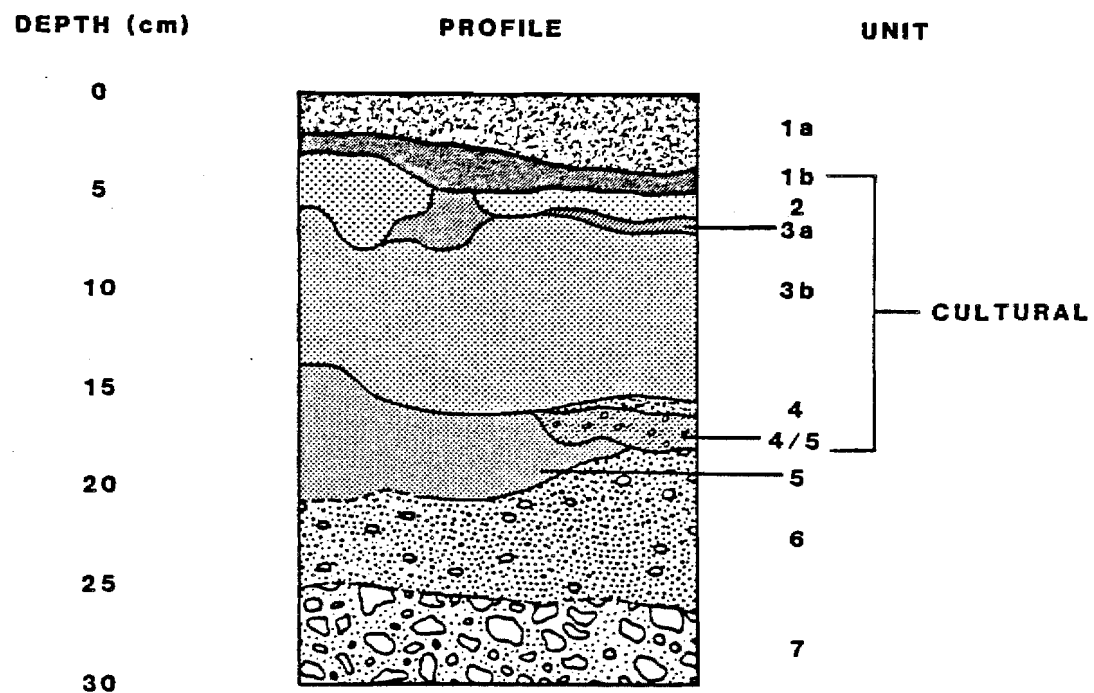


Figure D.218. Composite Profile, TLM 175

Table D.279.

Soil/Sediment Description for Composite Profile, TLM 175

Unit	Description
1a	Surface organic layer consisting of roots and organic material from lichen, dwarf birch, and other low bush plants. Varies in thickness from 1-7 cm but is generally 2-4 cm thick. Lower boundary clear and wavy. Non-mineral O1 horizon.
1b	Fine silt size particles with finely divided organic material and numerous roots and fibrous rootlets; dark reddish brown (5YR 2.5/2). Varies in thickness from less than 1 cm to a maximum of 6 cm although usually 1-2 cm thick. Lower boundary is generally clear and wavy. In places contact with unit 2 is difficult to define due to leaching of organic material into the underlying unit. O2, or humus, horizon. Cultural.
2	Fine silt size particles; dark gray (10YR 4/1) to a reddish gray (5YR 5/2). Varies greatly in thickness, ranging from 1-9 cm, generally 1-3 cm. Abrupt to clear, and wavy to broken lower contact with unit 3. Tephra (Devil); eluvial A horizon. Discontinuous although present in all three of the test squares. Variation in color may be due to leaching of organic material. Occasional small charcoal flecks observed. Disturbance evident from roots and rootlets. Cultural.

Table D.279. (Continued)

Unit	Description
3a	Very fine particles, some granular structure, friable; dark reddish brown (2.5YR 2.5/4). Very thin lens, usually less than 1 cm thick, but ranging up to 3 cm in some places. Lower boundary clear. Tephra (Watana); illuvial B horizon. Discontinuous.
3b	Very fine silt size particles; yellowish brown (10YR 5/6). Varies from 3-15 cm in thickness, usually 4-7 cm. Sharp and smooth lower contact with unit 4 and 5. Boundary clear to diffuse when lower contact is with unit 6. Tephra (Watana). Generally continuous although mixing with underlying units occurs. Root penetration. Rounded pebbles. Cultural.
4	Very fine silt size particles; dark gray (5YR 4/3). Occurs as lens less than 1 cm. Paleosol. Discontinuous lens. Possibly an isolated discrete unit in the south wall profile of N96/E101 and west wall of N97/E100. Contains charcoal flecks and small pieces.
4 and 5	Fine silt size to sand size particles with occasional gravels; grayish brown (10YR 5/2). Varies from 1-6 cm in thickness. Clear to diffuse lower boundary. Mixed unit; paleosol compressed with tephra (Oshetna). Generally continuous. Contains charcoal flecks. Presence of gravels suggests mixing with underlying unit. Cultural.

Table D.279. (Continued)

Unit	Description
5	Very fine silt size particles with occasional coarse sand particles; gray (10YR 5/3). Varies from 1-3 cm in thickness. Boundaries are clear and wavy. Tephra (Oshetna). Present in each of the test squares but occurs in small isolated pockets. Dries to a fine powder.
6	Very fine silt size particles with sand and pebbles; strong brown (7.5YR 4/6). Varies in thickness from 2-8 cm. Gradational lower boundary. Poorly sorted. Continuous unit across all profiles.
7	Coarse sand with pebbles, and cobbles; olive brown (2.4Y 4/4). Glacial drift. Majority of cobbles were subangular, usually 10-15 cm along longest axis reaching a maximum of 23 cm. Glacial material. Excavation into this unit determined limit of excavation.

Table D.280.

Artifact Summary, TLM 175

Tools

1	Biface 1 Quartzite (UA84-61-42)
1	Lanceolate point 1 Argillite (UA83-101-1)
1	Flake core 1 Argillite (UA84-61-52)

3

Lithic
Material

34	Argillite flakes
11	Basalt flakes
3	Chert flakes
11	Rhyolite flakes
22	Thermally altered rocks
3	Rounded pebbles

84

Table D.281.

Artifact Summary by Stratigraphic Unit, TLM 175

Unit	Description
1b	12 Argillite flakes
Within finely	7 Basalt flakes
sorted organic	1 Rhyolite flake
horizon	
1b/2	7 Argillite flakes
Contact between	3 Basalt flakes
organic horizon	2 Chert flakes
and Devil tephra	4 Rhyolite flakes
	5 Thermally altered rocks
1b/3	1 Argillite flake
Contact between	
the organic horizon	
and Watana tephra	
2	14 Argillite flakes
Within Devil tephra	6 Rhyolite flakes
2/3	1 Chert flake
Contact between	8 Thermally altered rocks
Devil tephra	
and Watana tephra	

Table D.281. (Continued)

Unit	Description
3 Within Watana tephra (B horizon)	1 Argillite flake core (UA84-61-52) 1 Basalt flake 6 Thermally altered rocks 3 Rounded pebbles
3/4 & 5 Contact between Watana tephra and Mixed Paleosol & Oshetna tephra unit	1 Quartzite biface (UA84-61-42) 3 Thermally altered rocks
Subsurface unknown	1 Argillite lanceolate point (UA84-101-1)

AHRS Number TLM 176; Accession Number UA83-102

Area: West-northwest of Confluence of Clark Creek and
Tsusena Creek
Site Map: Figure D.219
Survey Locale: Proposed Borrow F, Figure E.278
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

TLM 176 is located at an elevation of 734 m asl (altimeter: 2407 feet) north of Clark Creek and west of Tsusena Creek. The site is on a knoll which is one of a series occurring in a west-east trending ridge system north of Clark Creek. The ridge system slopes downward to the confluence of Clark Creek with Tsusena Creek to the east-southeast. To the south the site knoll descends 4 m to a terrace overlooking Clark Creek, which is approximately 20 m below the terrace. To the east is the ca. 1.3 km wide Tsusena Creek valley and beyond that is the west slope of Tsusena Butte. The site is located on the central portion of the knoll, which is approximately 27 (east-west) x 20 m (north-south). The knoll is covered with mosses, lichens, dwarf dogwood, crowberry, blueberry, Labrador tea, dwarf birch, and scattered spruce trees. The areas surrounding the knoll have similar vegetation, although lower areas have a thicker moss cover. There is a large boulder field, approximately 35 (east-west) x 20 m (north-south), located in a ravine ca. 25 m north of the site.

Testing:

Two large basalt flakes were recovered from an uncertain subsurface provenience in a survey shovel test (Table D.282). No additional artifacts were recovered from the test pit expansion (test pit 1), nor in the eight survey shovel tests. 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, but all were sterile. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.282.

Artifact Summary, TLM 176

Provenience	Description
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Lithic Material

Subsurface:

Test pit 1	2 Basalt flakes
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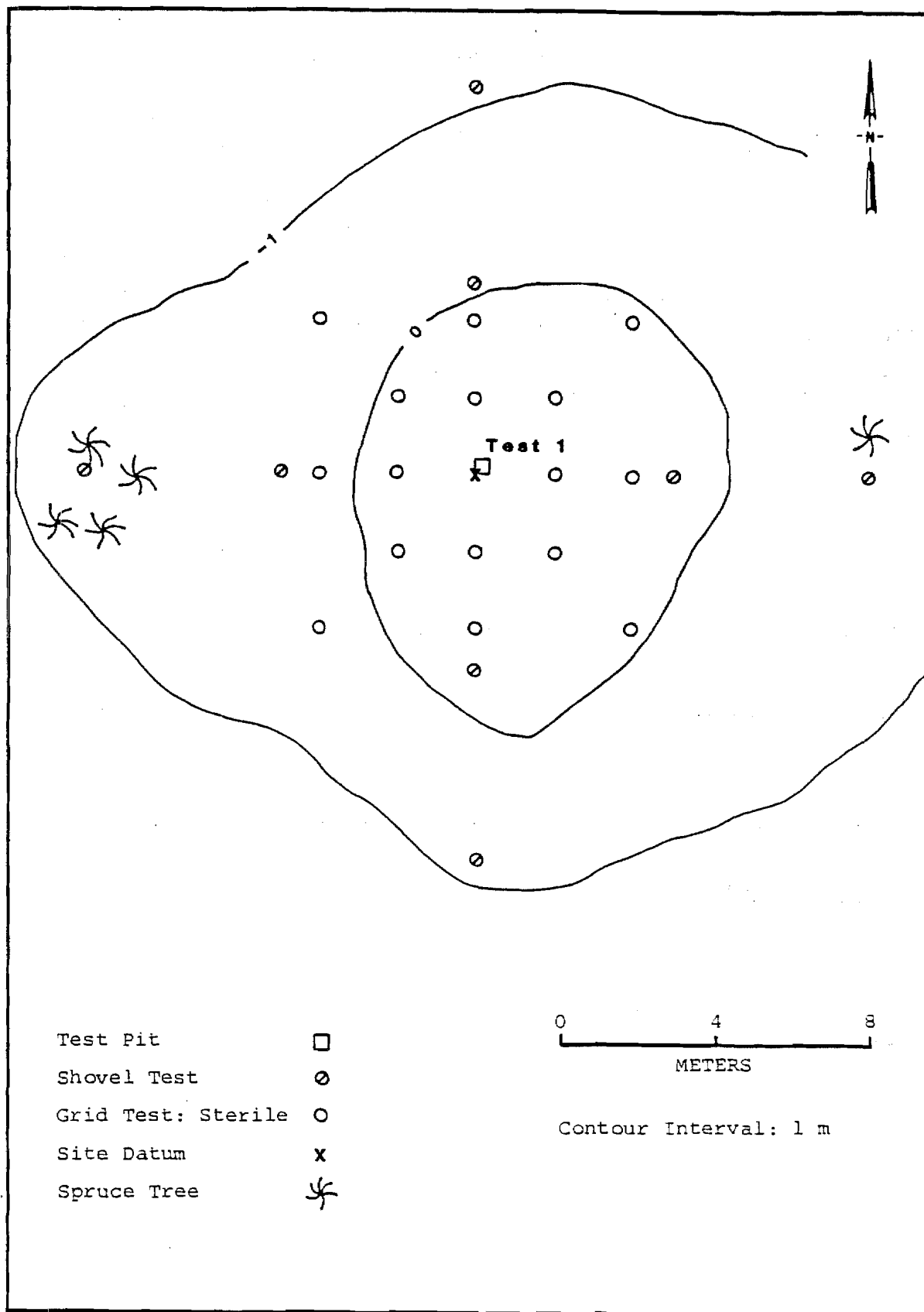


Figure D.219. Site Map, TLM 176

AHRS Number TLM 177; Accession Number UA83-103

Area: East of Deadman Creek Mouth
Site Map: Figure D.220
Survey Locale 133: Figure E.211
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 177 is located on the southern edge of a bench, ca. 30 (east-west) x 12 m (north-south), northeast of the confluence of Deadman Creek with the Susitna River. The site, at an elevation of 679 m asl (altimeter: 2228 feet), is situated between an upper glaciolacustrine plain, ca. 3 m higher in elevation, and a terrace of the Susitna River, ca. 15 m lower in elevation. A prominent ravine is southwest of the site and drains a small catchment area to the north. The bench itself does not form a prominent topographic feature and is characterized by bedrock exposures on its northern face, and a gully beyond the western edge of the bench ca. 2 m lower in elevation. Visibility from the site encompasses the lower terrace and the south valley wall of the Susitna River, the ravine and other terrain west of the site, and similar benches east of the site. Visibility to the north is obscured by the gradually rising slope of the glaciolacustrine plain. Vegetation in the area of the site includes willow, dwarf birch, blueberry, lowbush cranberry, Labrador tea, moss, and lichen.

Testing:

TLM 177 was located when a piece of chert was recovered during survey testing from a shovel test located near the bench edge. The shovel test was expanded into a 40 x 40 cm test pit (test pit 1), and an additional piece of chert was found within a silty matrix that contained an abundance of gravels. Six shovel tests were excavated around test pit 1, however, no additional artifacts were located. While the first piece of chert, recovered from the initial shovel test, had the general

morphology of a flake it lacked definitive flake characteristics, i.e., a striking platform or bulb of force. Further testing was deemed necessary in order to evaluate the legitimacy of the presumed artifacts and, therefore, the existence of a site. Grid shovel testing and systematic testing were initiated to address these issues. Grid shovel testing involved the excavation of 16 shovel test. A single test square, N98/E100, 60 cm north of test pit 1 was excavated during systematic testing. Refer to Figure D.220 for the location of shovel tests, the 40 x 40 cm test pit, and the 1 x 1 m test square.

Discussion:

No artifactual material was located in either the 16 grid shovel tests or in the 1 x 1 m test square at N98/E100. However, two small, subangular pieces of chert were located that were similar to the material collected during survey testing. The two pieces of chert, one from shovel test N99/E98 and the other from the test square, considerable rounding on the edges, and were positioned stratigraphically within a silty sediment that contains an abundance of gravels. The two pieces of chert were collected as rock samples.

Stratigraphic data accumulated as a result of the excavation of the test square revealed a stratigraphic sequence of lacustrine sediments overlain by organic material. Four soil/sediment units were defined in the test square profiles, and are shown in Figure D.221 and described on Table D.283. These units include a surface organic mat (unit 1) underlain by finely sorted organic material with silt (unit 2). Gravels and angular rocks were abundant in both of the upper organic units. The organic units were underlain by a fine silty sediment with gravels (unit 3), and a very compacted fine silt to clay that also contained pebbles (unit 4). The two pieces of chert were recovered from unit 3, and with the exception of material type these pebbles do not vary considerably from other pebbles in that unit (Tables D.284 and D.285).

Evaluation:

No evidence was accumulated during testing subsequent to survey testing to verify that TLM 177 represents a site. In consideration of a number of factors: the stratigraphic position of the chert within lacustrine sediments with gravels, the situation of the bench on which it is located, and the lack of definitive flake characteristics on the lithic specimens, it is possible that TLM 177 may not be an archeological site. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

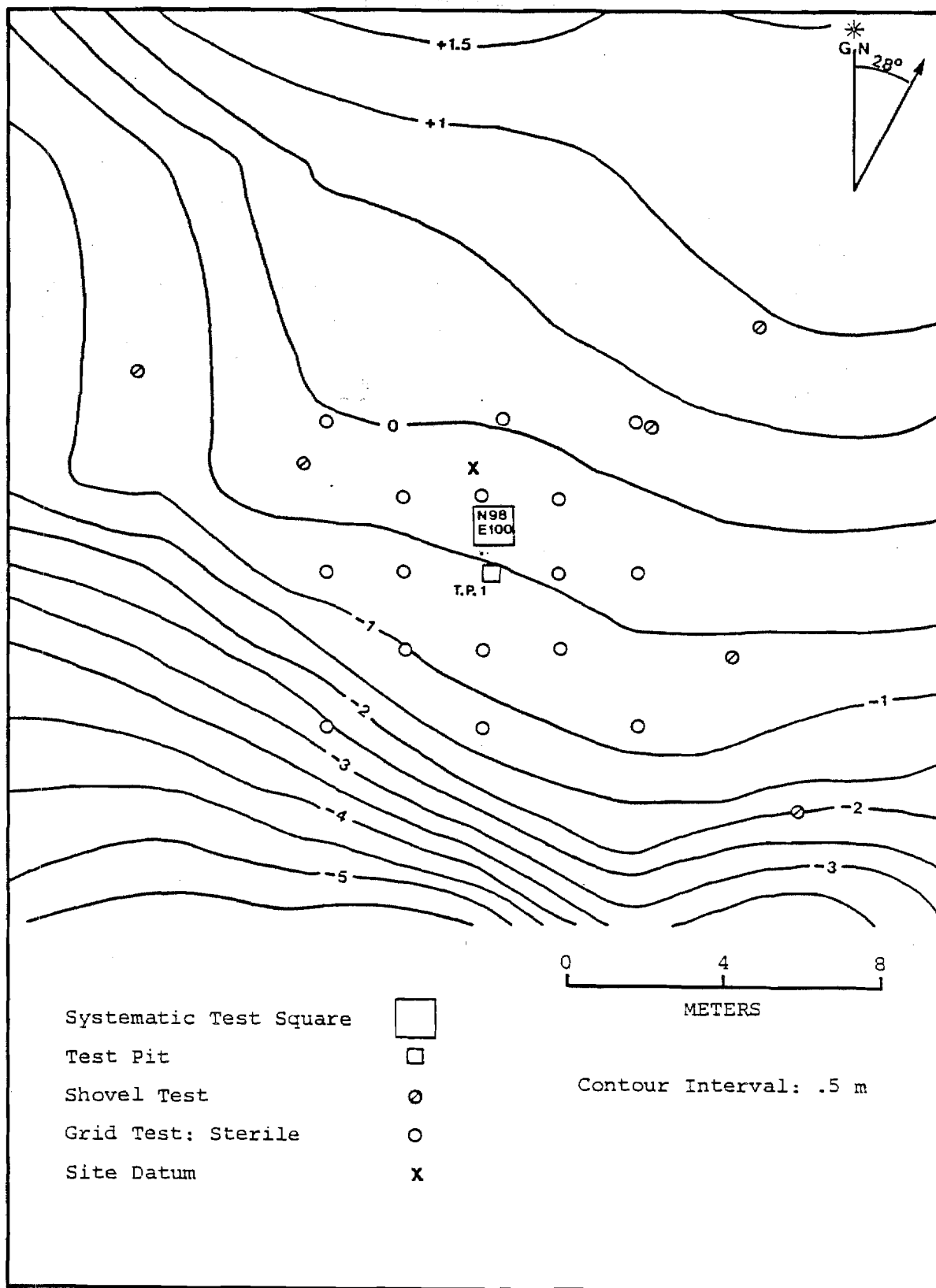


Figure D.220. Site Map, TLM 177

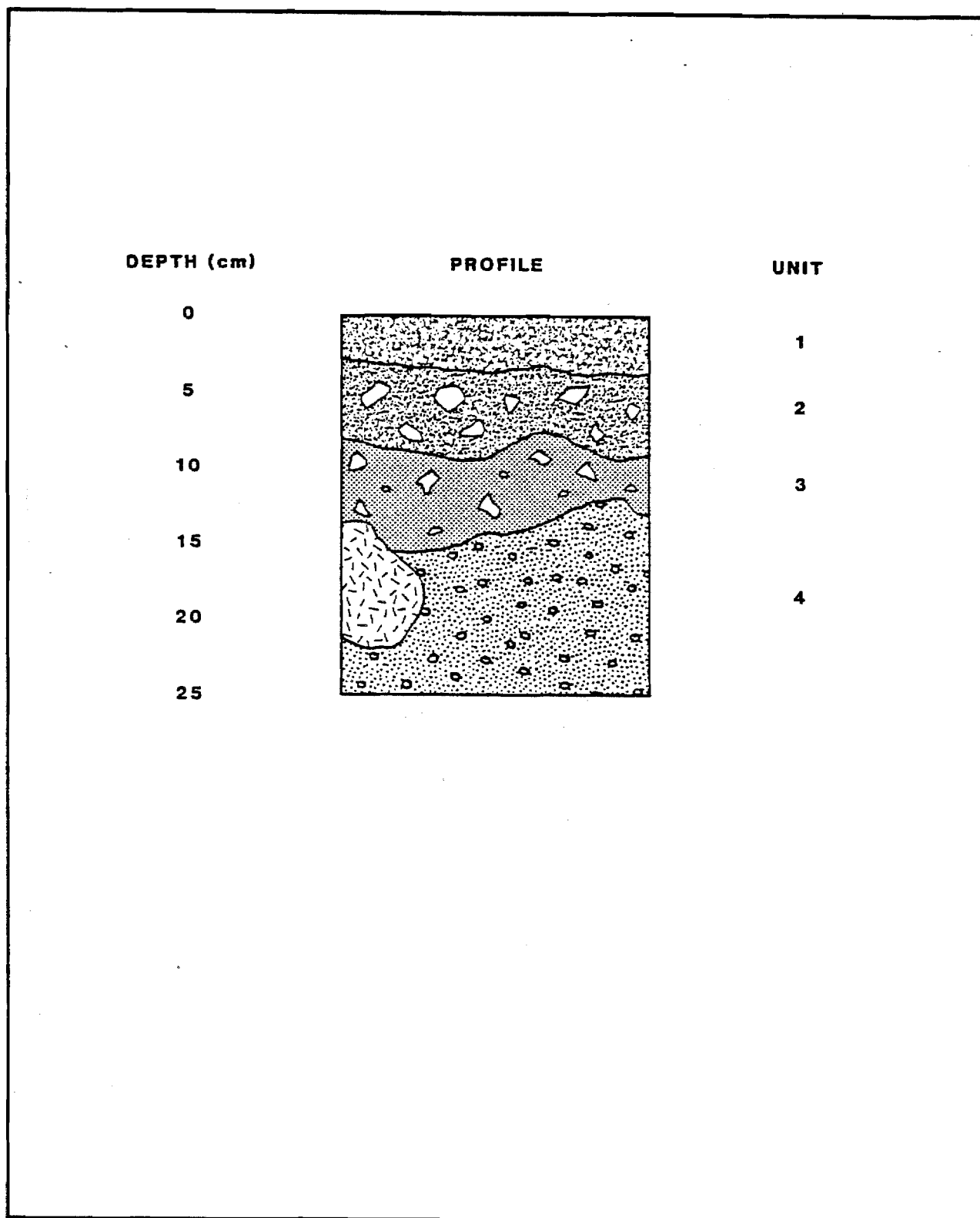


Figure D.221. Composite Profile, TLM 177

Table D.283.

Soil/Sediment Description for Composite Profile, TLM 177

Unit	Description
1	Organic mat; lichens, dwarf birch, blueberry, Labrador tea, and willow. Unit varies from 1-5 cm in thickness. Unit depressed in area of game trail. Gravels ranging from 1-5 cm encountered.
2	Finely sorted organic mat, with gravels ranging in size from 1-5 cm; dark reddish brown (5YR 3/2). Continuous. Ranges in thickness from 1-4 cm. Some gray silty particles present, suggesting that some tephra may be intermixed in this unit.
3	Silty soils, with extensive gravels, ranging from 1-7 cm; dark brown (7.5YR 3/4). Thickness varies from 3-5 cm. Upper contact clear; lower contact clear to gradual. Compact, generally continuous.
4	Fine-grained, clayey compact soil with pea gravels intermixed; dark brown (10YR 3/3). Soils are heavy and wet, and compact to hardpan. Upper contact clear to gradual.

Table D.284.

Artifact Summary, TLM 177

Lithic Material

4	Chert rock fragments
<hr/>	
4	

Table D.285.

Artifact Summary by Stratigraphic Unit, TLM 177

Unit	Description
<hr/>	
Unknown	4 Chert rock fragments
Subsurface	

AHRS Number TLM 178; Accession Number UA83-104

Area: South-southwest of Fog Creek Mouth
Site Map: Figure D.222
Survey Locale 155: Figure E.251
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

TLM 178 is located at a major bend in the Susitna River south-southwest of the mouth of Fog Creek. The site, consisting of the remains of a cabin and other historic features, lies at 427 m asl (altimeter: 1400 feet) near the tip of a gravel bar on the north bank of the river. This gravel bar offers excellent access to the river and to the low-lying, thickly forested flood plain (not more than 2 m above present water level) in the site vicinity. Five hundred meters north of the site, the flat flood plain is bordered by a steep razorback ridge. To the northwest, however, the flood plain extends for approximately 2 km. To the west lies an abandoned silted-in river channel. On the opposite side of the river, particularly to the south and southeast of the site, there is a steep bluff dissected by two small streams. The site vegetation is lowland spruce-hardwood forest, with the predominant vegetation being spruce, dwarf birch, alder, grasses, and sphagnum moss. The area around the cabin, within approximately 10 m, has been cleared of many of the trees, leaving sawn stumps, and a number of fallen trees. Approximately 70 m north of the site is another clearing that is approximately 50 x 70 m in size. Dense vegetation has restricted visibility, with only a limited view of the gravel bar, river, and cutbank to the south, and of the river bank to the east. The dense vegetation has been a factor in site destruction as a fallen tree appears to have caused the collapse of the cabin roof and walls. Moss, lichens, and grasses have grown over much of the site.

Testing:

The site consists of four surface features and a wolverine (Gulo gulo) burial (Table D.286). Feature 1 is a small (13'1" x 16'4"), one-room log cabin. The cabin is constructed primarily of hand-hewn spruce logs, which still retain the axe marks, and a few birch logs. The corner notching is "U"-shaped, cut on the down-facing side of the log. The notch rests on the next lower log, which has had little preparation for fitting. The door jambs are made from squared boards, probably milled lumber. These are attached to the logs by machined, round steel nails. The cabin is collapsed inward by a large spruce which apparently fell across the roof. Presently a white spruce (approximately 8 m in height) is growing out of the sod roof of the cabin.

Feature 2 is a large pit (4.5 x 1.4 x 0.4 m) located adjacent to the northeast wall of the log cabin. Test pit 1 was placed in the bottom of Feature 2, along the northwest wall. An incomplete, articulated male wolverine skeleton (feature 5, Table D.286) was recovered in test pit 1. The skeleton was partially covered and surrounded by bark (probably spruce). The head was not recovered, and may not have been present. The presence of the bark, and the position of the skeleton relative to it, suggests that the skeleton may have been intentionally buried in "ceremonial" fashion. This "ceremonial" burial may indicate Athapaskan use of the cabin (Nelson, Mautner, and Bane 1982).

Feature 3 is a small pit (8 x 5 x 15 cm), that is located 5 m west of the log cabin. It appears to be very regular in shape, and carefully dug. It may be a cache pit or latrine.

Feature 4 is a dog sled. The sled is constructed with hand-hewn wood slats that are held together with wire and steel nails. The runners are "U"-shaped wooden slats. The sled is 3'3" x 1'6" in size. It is sitting near the edge of the river bank in an area of fallen timber about 5 m south of the log cabin. Estimated site size based on the distribution of artifacts is 150 square meters (Table D.2).

Table D.286.

Artifact Summary, TLM 178

Provenience	Description
<u>Historic Remains</u>	
(Collected)	1 Steel nail Bark fragments
(Uncollected)	Steel nails Cut logs Dog sled Steel wire
<u>Faunal Remains</u>	
Subsurface:	
Feature 5	1 Partial male wolverine (<u>Gulo gulo</u>) skeleton including: 1 Epistropheus 4 Cervical vertebrae 14 Thoracic vertebrae 7 Lumbar vertebrae 1 Sacrum 2 Caudal vertebrae 1 Sternum 23 Ribs 1 Right scapula 1 Right humerus

Table D.286. (Continued)

Provenience	Description
	1 Right radius
	1 Right ulna
	1 Right pelvis
	1 Left pelvis
	1 Baculum
	1 Right calcaneus
	1 Metacarpal
	2 Phalanges

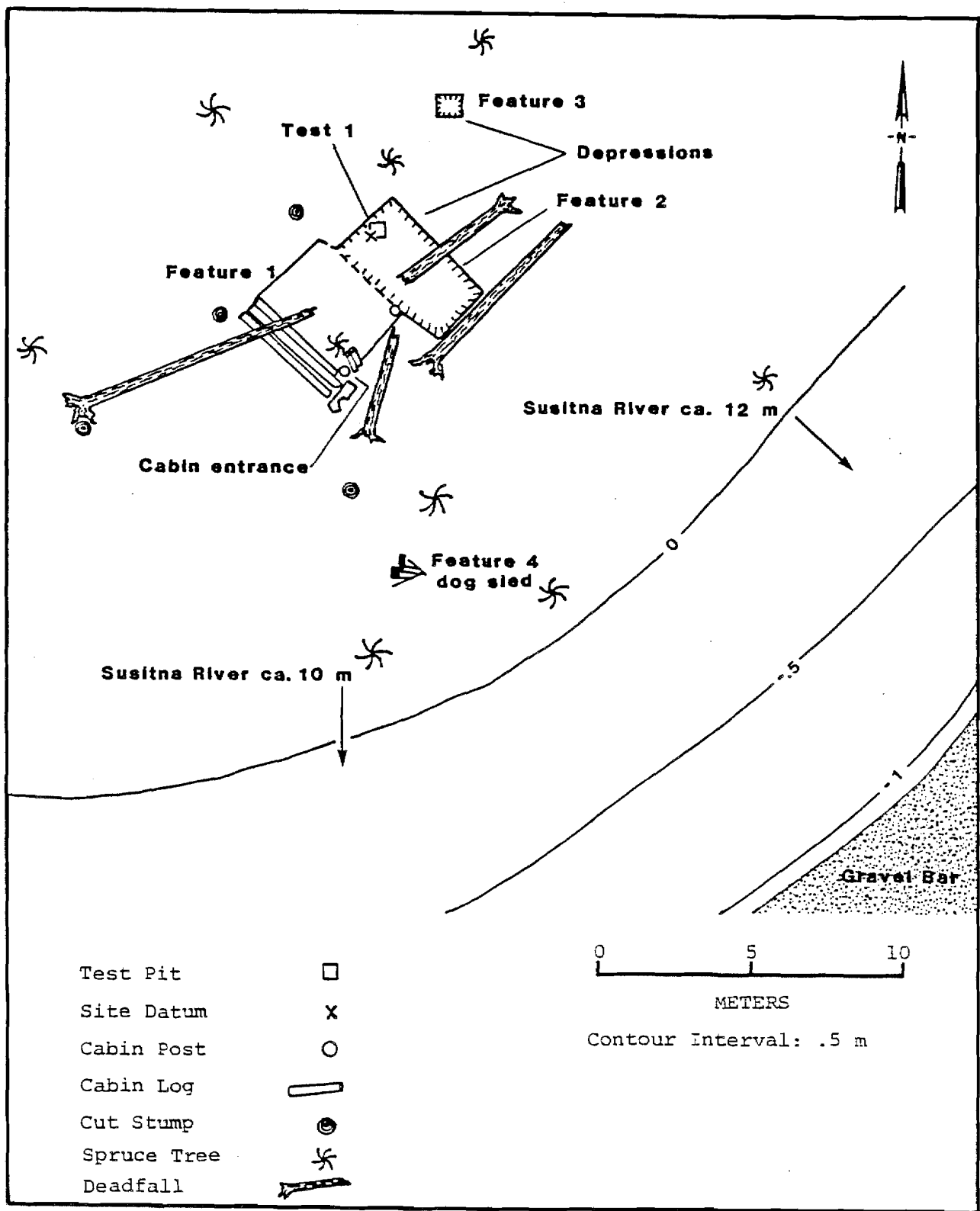


Figure D.222. Site Map, TLM 178

AHRS Number TLM 179; Accession Number UA83-103

Area: South of Kosina Creek Mouth
Site Map: Figure D.223
Survey Locale 129: Figure E.205
USGS Map: Talkeetna Mts. C-2, Figure E.7
Site Location: Appendix F

Setting:

TLM 179 is situated at an elevation of ca. 793 m asl (2600 feet) on the crest of a discrete ridge along a terrace southwest of the confluence of an unnamed creek with Kosina Creek. TLM 179 is directly south of the mouth of Kosina Creek. The valley wall of the unnamed creek descends to the north at a 10 degree gradient below the nearly level crest of the ridge on which the site rests. A small north-south trending saddle separates TLM 179 from a similar ridge crest to the west. Northward and approximately 31 m lower in elevation is another terrace. Massive downcutting is evidenced by both the terrace below and steep cut banks that are upstream and visible northwest from the site. The unnamed creek trends east-west and is relatively wide below the site. Above the site in a south-southwest direction is a large, flat plateau approximately 100 m wide between the amphitheater-shaped valley rim on the east and the descending slope of the creek valley to the west. The drainage creek forks west of this plateau upstream from the Kosina Creek confluence. One branch trends north-south and appears to be dry. The other branch, trending east-west, is the active channel and exhibits somewhat greater downcutting with a longer cut channel extending to the west. The glaciolacustrine plain to the west encompasses the unnamed creek's catchment area.

There is a group of six lakes on the north side of the unnamed creek and one isolated lake, slightly over 1 ha in size to the west of the site. This isolated lake has an outlet stream that discharges into the unnamed creek. The group of six lakes is situated northwest of TLM 179, the largest of these is approximately 3 ha in size. Only the largest lake

is visible from the site. From aerial reconnaissance, these lakes appear not to drain into the unnamed creek, and appear to be receding. A commanding view of the surrounding terrain is available in all directions except to the south-southwest where it is blocked by the slightly higher plateau. TLM 186 can be easily seen to the north across the unnamed creek on a lower knoll. Mt. Watana is easily seen to the west. The opposite valley wall and a series of knolls are visible to the north; Gilbert Creek, Kosina Creek, and the terrace between these creeks are in view to the south. Also south and southwest, the amphitheater-shaped valley rim is clearly visible. At the site vegetation includes dwarf birch, alder clusters, bearberry, crowberry, white and yellow lichens, blueberry, dwarf willow, mosses, and grasses on the northern edge of the site ridge. Approximately 50% of the site surface has been wind deflated.

Testing:

TLM 179 consists of two surface artifacts, a large black basalt flake and a light gray chert flake (Table D.287). One 40 x 40 cm test pit (test pit 1) was placed upslope from the deflated surface to reveal stratigraphy. No additional artifacts were recovered in test pit 1. Four shovel tests were excavated, but all were sterile. Estimated site size based on the distribution of artifacts is 6 square meters (Table D.2).

Table D.287.

Artifact Summary, TLM 179

Provenience	Description
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Lithic Material

Surface:	1	Basalt flake
	1	Chert flake

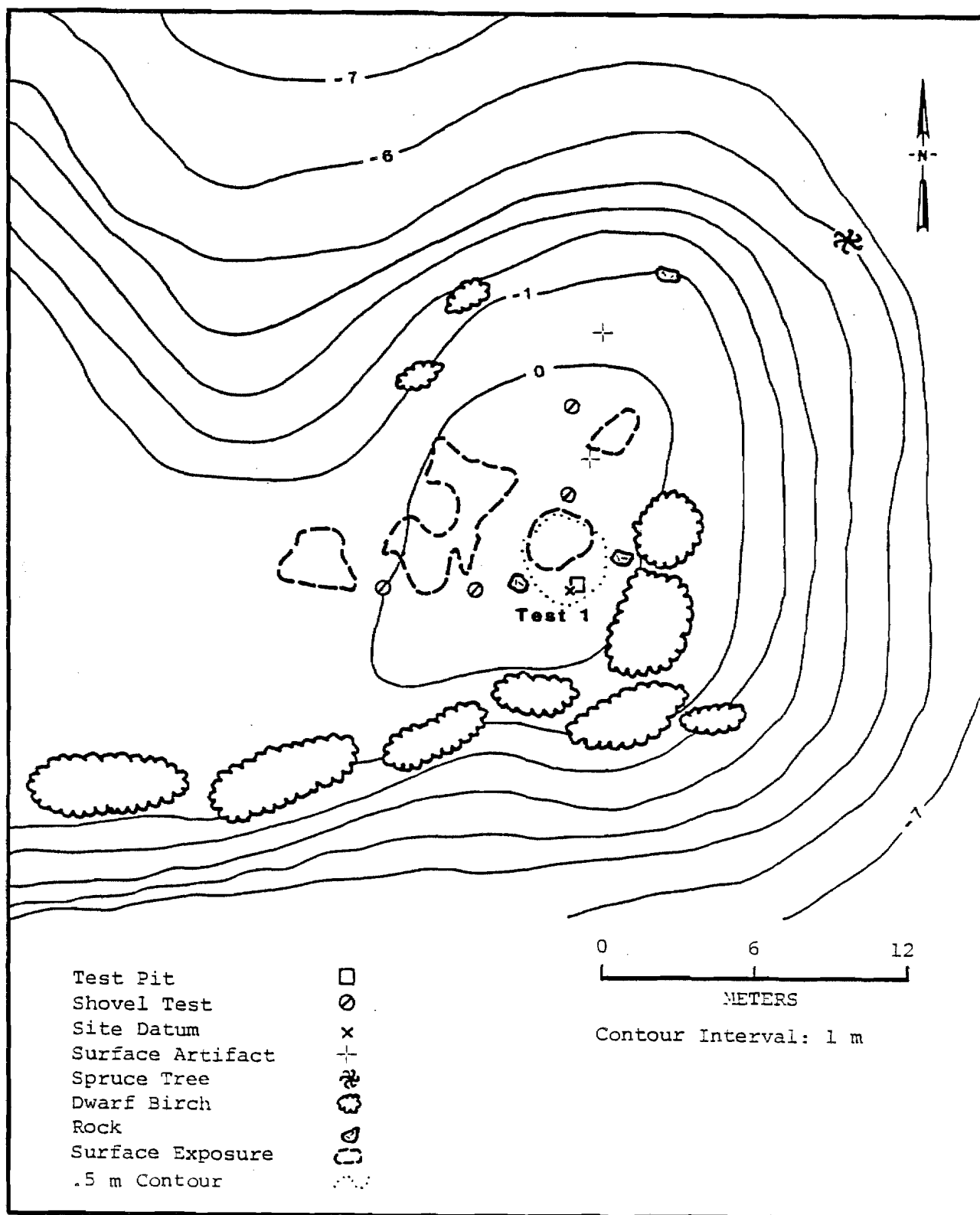


Figure D.223. Site Map, TLM 179

AHRS Number TLM 180; Accession Number UA83-106

Area: Northeast of Tsusena Creek Mouth
Site Map: Figure D.224
Survey Locale 153: Figure E.248
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

The site is located on the top of a kame at an elevation of 556 m asl (altimeter: 1824 feet), east of Tsusena Creek and northeast of the confluence of Tsusena Creek with the Susitna River. The site lies on an elongated kame, ca. 50 (east-west) x 20 m (north-south), one of many such kames in the area. The site is situated on the southern slope just off the crest. A prominent ridge that runs along the east bank of Tsusena Creek lies approximately 75 m to the west. This ridge has a sharp narrow crest and may be an esker. It is heavily used by contemporary game as evidenced by a deeply incised game trail. Visibility from the site area is minimal because of the rugged local terrain and thick stands of spruce. The game trails along the esker ridge overlooking Tsusena Creek are visible from the site but the creek cannot be seen. The view in all directions is obstructed by current vegetation, lowland spruce-hardwood forest. Vegetation on the site includes black spruce, white spruce, birch, dwarf birch, dwarf willow, blueberry, Labrador tea, mosses, and lichens. The vegetation in surrounding areas is virtually identical to that found on the site with the exception of thicker stands of dwarf birch in areas off of kames.

Testing:

The site was initially discovered by a survey shovel test. This shovel test was expanded into a 40 x 40 cm test pit (test pit 1). Nine shovel tests were excavated on the kames to determine the size of the site area. Artifactual material was only found in test pit 1.

The systematic phase of testing at TLM 180 involved excavating five 1 x 1 m test squares. Four of the squares were placed on the south-sloping side of the kame where survey testing revealed a dense artifact cluster. The two southern squares were superimposed over test pit 1. The arrangement of the test squares provided three continuous profiles, each of 3 m in length, running along the E98 and E99 gridlines from N97 to N100, and along the N99 gridline from E97 to E100. The fifth test square was placed 9 m to the east along the N99 gridline.

Discussion:

Over 600 argillite flakes 2 chert blades (UA83-106-16, 17; Figure D.387a,i), and 1 argillite rejuvenation flake (UA83-106-89; Figure D.387k) were uncovered in a shovel test which was expanded to a 40 x 40 cm test pit (test pit 1) during survey testing. It appears that the site was very localized because eight of the nine shovel tests placed on the kame were culturally sterile. One cultural component, lying at the contact between a grayish sandy silt stratigraphic unit and glacial drift, was represented in the only productive test pit. In addition to yielding 784 lithic artifacts from the five test squares, the systematic phase of excavation also revealed that the site extended upslope and eastward at least 12 m across the summit of the kame, and that an upper cultural component was present at TLM 180. A summary of the artifacts collected is presented in Table D.289; artifact distribution by stratigraphic unit is presented in Table D.290.

Argillite was the predominant lithic material encountered at TLM 180. All artifacts had a characteristic weathered light brown patina. The other four types of lithic material (basalt, chert, obsidian, and quartzite) were sparsely represented. Basalt was present only in the easternmost test square, N99/E109, and a single quartzite flake was found in test square N99/E99. With the exception of a small gray chert piece of angular shatter, the only chert artifacts at the site were blades, ranging in color from white to gray to dark brown. A single black obsidian proximal blade segment (UA83-106-169) was encountered in test square N98/E98.

Six major stratigraphic units and numerous subunits were recognized at the site (Figure D.225; Table D.288). In each square, the organic unit is underlain by Devil tephra (unit 2), Watana tephra (unit 3), sandy silt (unit 5), and finally glacial drift (unit 6). Although all the major stratigraphic units, except unit 4, are present in each of the squares, three of the subunits (1c, 2b, and 6c) are restricted to test square N99/E97. Unit 4 is a fine-grained silt with decomposed organics and some charcoal flecks. A great deal of variability in color, mixing, and continuity of strata within each test square is evident at the site. In general, the stratigraphy at TLM 180 is characterized by much postdepositional disturbance. Downslope movement in the form of solifluction is apparent. Frost heaving and deflation were also responsible for further disturbance of the stratigraphy.

A distinct contrast in the amount of noncultural disturbance between the three western squares (N99/E99, N98/E98, and N97/E98) and the two eastern squares (N99/E99 and N99/E109) was noted early in the excavation. Despite the fact that test squares N99/E99 and N99/E109 are separated by 9 m, their stratigraphy is similar in terms of relative continuity of the Devil tephra (unit 2), Watana tephra (unit 3), and the grayish sandy silt (unit 5). Similarity also exists in the depth, up to 25 cm, of the soils/sediments overlying the drift. The western squares, on the other hand, exhibit very shallow (usually not greater than 10 cm) deposition over the drift. Because the tephra units in these squares are represented by discrete lenses, the surface being excavated usually had a very mottled appearance. Mottling and mixing were particularly evident in test square N99/E97 where subunit 1c (comprised of organics, Devil and Watana tephras, and glacial drift) and subunit 2b (a color gradation of Devil tephra) were identified.

A cultural unit of sandy silt varying in color from grayish brown to dark yellowish brown (unit 5), and containing lithic material particularly abundant in test square N99/E99, was encountered immediately above the glacial drift in all the test squares. A sample of this stratum from test square N99/E109 was submitted for petrographic analysis. Although it was not found to be a tephra, it did have some

tephra components. This cultural unit's stratigraphic position above the drift suggests that it may represent a reworked Oshetna tephra mixed with eolian sediments. A thin charcoal lens directly above unit 5 on the west wall of test square N99/E109, submitted for radiocarbon analysis, provided an upper bracketing date for this unit of 2800 ± 90 years: 850 B.C. (Beta-7297).

Cultural material at the site is associated with stratigraphic units 2, 3, 5, and 6, and the zones of contact between these units. A marked contrast can be seen in the stratigraphic distribution of artifacts between the contiguous squares, on the one hand, and the isolated easternmost test square, N99/E109, on the other. Ninety-two percent of all artifacts situated above the sandy silt cultural unit (unit 5) were recovered from N99/E109, whereas the vast majority of artifacts from all other squares occurred below this unit. The presence of basalt flakes only in this isolated test square, N99/E109, further contrasts it with the other squares on the same.

Upper Component: Artifacts from test square N99/E109 consist primarily of small basalt and argillite flakes. Although not stratigraphically well defined in all test squares, the upper component is clearly evident in N99/E109. Whether the seven lithics lying at the contact between units 5 and 6 in this square are representative of a lower site component or merely indicate displacement from the upper component as a result of cryoturbation is still unclear. The association of the 2 argillite flakes, 2 chert blades (UA83-106-168, 290: Figure D.387g,h), and 1 obsidian blade (UA83-106-169; Figure D.387c) found above unit 5 in test squares N98/E98 and N99/E97 with the upper component is problematic. The disturbed nature of the stratigraphy and the difficulty in positively identifying tephra units while excavating this highly mottled surface prevented their positive association with either of the cultural components. However, the variability in lithic material (white chert, brown chert, and obsidian) of blades from above unit 5, as opposed to the similarity in lithic material (gray chert with patinated surfaces) of blades occurring in unit 5 argues for a differentiation between upper and lower component in N98/E98 and N99/E97.

Lower Component: The lower component at TLM 180, stratigraphically situated in the sandy silt cultural unit (unit 5), at the contact between this unit and glacial drift (unit 5/6), and lying immediately on top of the drift (unit 6), is well represented in the four contiguous test squares. In two test squares where unit 5 is discontinuous, N98/E98 and N99/E97, artifacts were also found at the contact of Watana tephra and the drift (unit 3/6). Seven hundred eighteen lithics comprise the artifact assemblage from the lower component in these four squares. Included within this total are 702 argillite flakes, ranging in length from 5-70 mm, 1 quartzite flake, 2 argillite pieces of angular shatter, 1 chert piece of angular shatter, 2 argillite retouched (modified) flakes (UA83-106-303, 304), 2 argillite rejuvenation flakes (UA83-106-204, 336; Figure D.387j,l), 3 argillite blade cores (UA83-106-390, 400, 401; Figure D.387o,m,n), and 4 chert blades (UA83-106-310, 312, 359, 396; Figure D.387f,e,b,d).

The densest concentration of lower component artifacts is situated directly on top of the glacial drift, even though it appears that their primary association might actually be with the overlying sandy silt cultural unit (unit 5). This was best exemplified in test square N99/E99 where a heavy concentration of argillite flakes was found within thick pockets of sandy silt (unit 5) in the northern half of the square. This square, lying slightly upslope from the other three contiguous squares, exhibited the least postdepositional disturbance and greatest continuity of unit 5. In the two downslope test squares, N98/E98 and N97/E98, where an abundance of artifacts was found lying on the drift, unit 5 appears to have been eroded to such an extent that it occurred only as a thin layer or as a discrete lens.

Dating of the lower component at TLM 180 has proven to be difficult because of the scarcity of charcoal or other organic remains in the test squares. The only charcoal sample taken at the site was radiocarbon dated at 2800 ± 90 years: 850 B.C. This sample, however, does not date the cultural component, but a thin charcoal lens lying between the Watana tephra (unit 3) and the sandy silt (unit 5) in test square N99/E109. At present, the actual date for the lower component at TLM

180 can only be approximated by typological comparison with assemblages from other sites.

Evaluation:

TLM 180, located on one of several kames just east of Tsusena Creek, lies within close proximity to a potentially good source of lithic material along the stream course. Argillite cobbles were collected during survey around the mouth of Tsusena Creek, less than 2 km from the site. Although the view from the site is presently obstructed by thick stands of spruce, in the past it may have afforded a good vantage point for spotting game. Tool manufacture appears to have been the primary cultural activity at the site as indicated by the abundance of lithic debitage and discarded primary reduction flakes. The artifact assemblage supports the interpretation that the site was used mainly as a tool manufacturing station during at least two different time periods, probably separated by several thousand years.

Two cultural components have been recognized at TLM 180. The upper component is positioned above the Watana tephra while the lower occurs below it. The radiocarbon analysis derived from charcoal just below the Watana tephra in test squares N99/E109 provides a lower limiting date of 2800 ± 90 B.P.: 850 B.C. for the upper component. The only tools probably associated with this component are three blades with raw materials that differ from the blades occurring stratigraphically lower in the site.

Much better represented at TLM 180 is the lower cultural component lying on glacial drift and within an overlying sandy silt stratum possibly containing reworked tephras. The assemblage from this component, comprised of very large argillite flakes, bladelike flakes, blocky cores, and chert blades, greatly resembles the assemblage from the lower component at TLM 027, situated approximately 3 km to the southwest on the opposite side of the Susitna River. The similarities between these two sites includes not only artifact types, e.g., blocky rotated blade cores, large flakes, etc., but also lithic material used in tool

manufacture. The weathered argillite identified at TLM 027 is visually identical to what has been called heavily patinated argillite at TLM 180. The stratigraphic context of artifacts found lying just above the drift is also quite similar for both sites. Like TLM 027, TLM 180 is most appropriately placed within the American Paleoarctic tradition. Estimated site size based on the distribution of artifacts is 42 square meters (Table D.2).

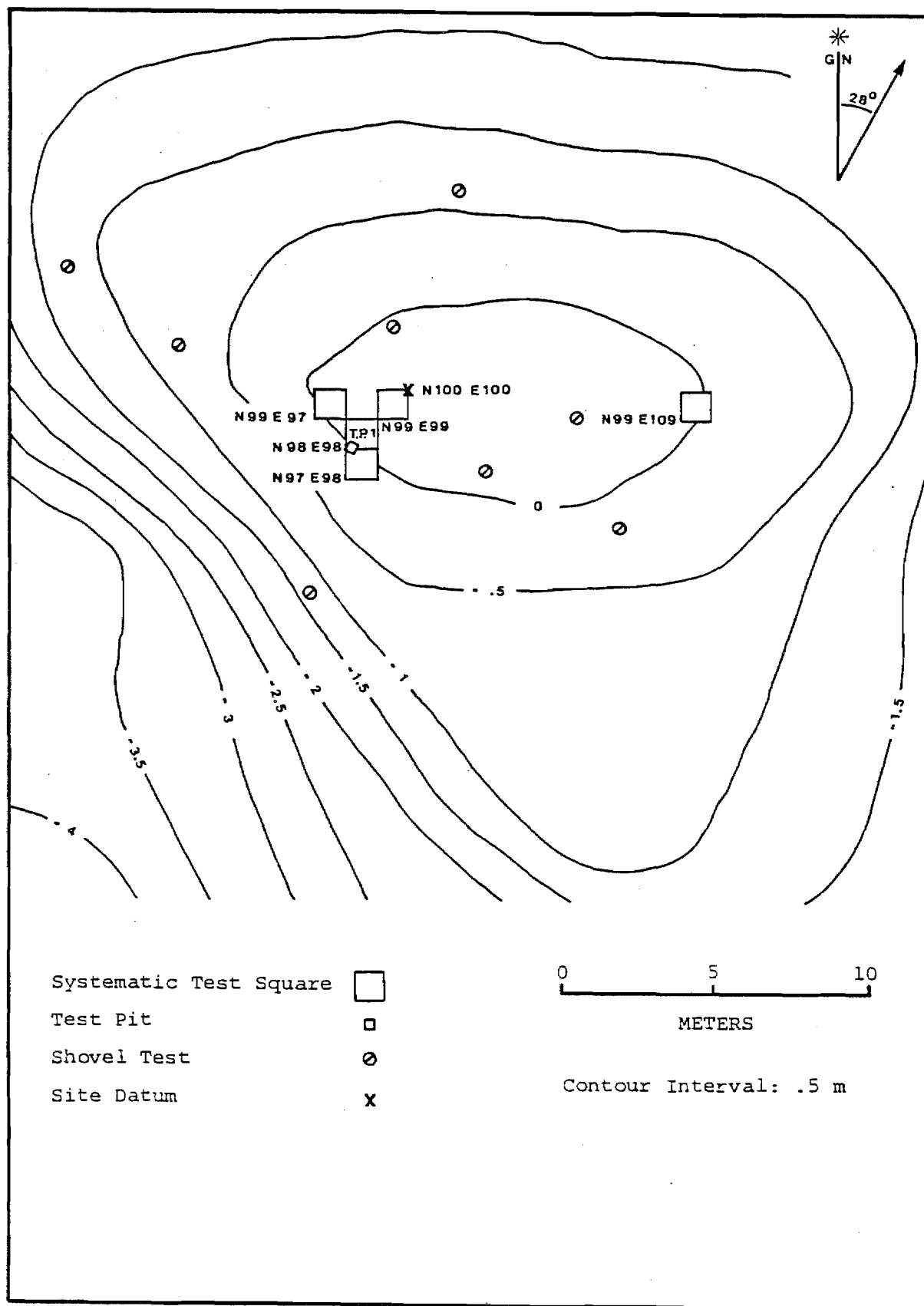


Figure D.224. Site Map, TLM 180

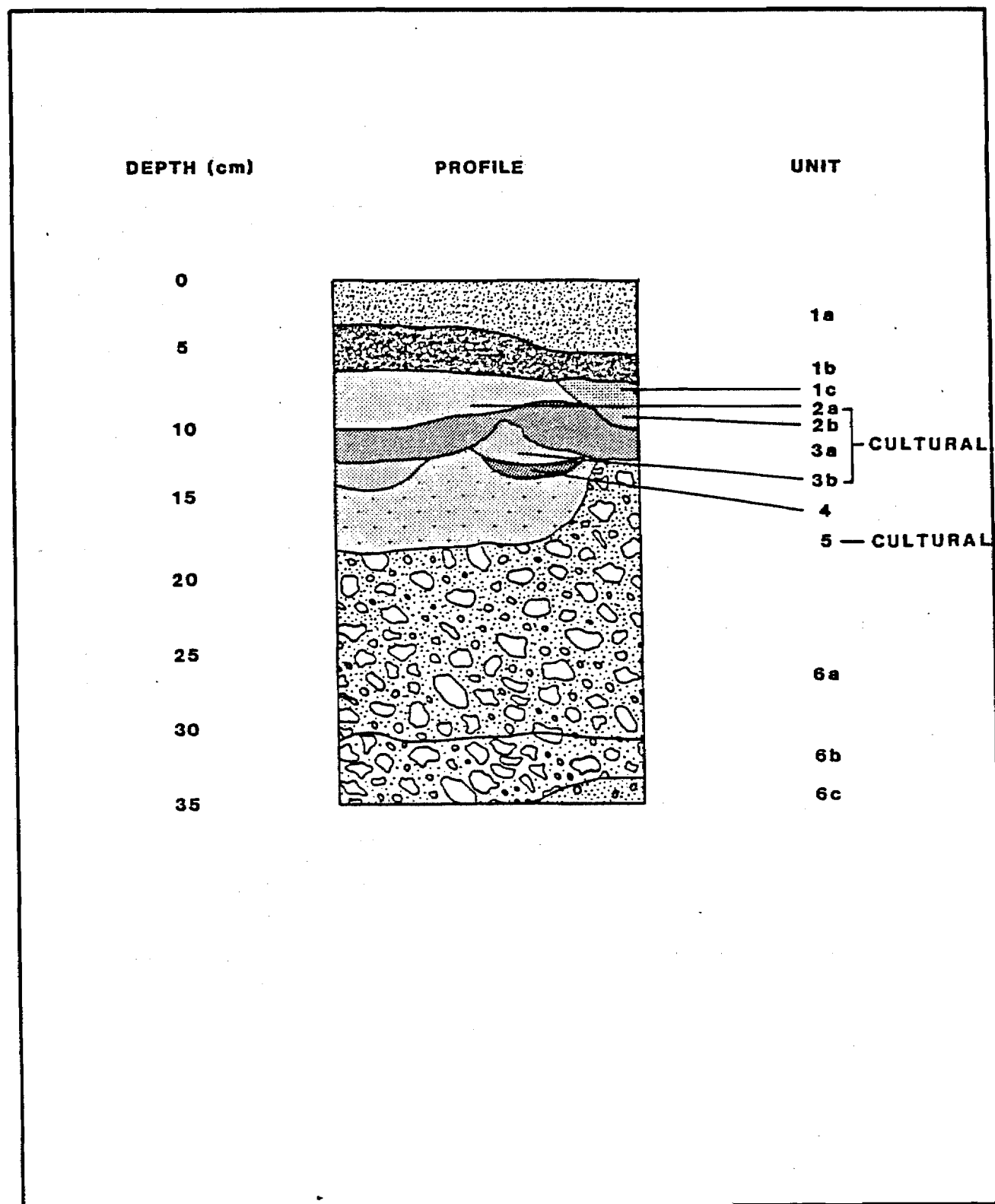


Figure D.225. Composite Profile, TLM 180

Table D.288.

Soil/Sediment Description for Composite Profile, TLM 180

Unit	Description
1a	<p>Surface organic layer: roots and plant material from lichen, moss, crowberry, blueberry, lowbush cranberry, Labrador tea, dwarf birch, and white spruce underlain by consolidated sandy silt; dark reddish brown (5YR 3/3). Generally 2-6 cm in thickness, but varies from not present on north wall of N99/E97 to 17 cm in eastern squares. Lower boundary is clear and wavy. Continuous except where deflated in N99/E97.</p>
1b	<p>Fine sandy silt humus layer; black (5YR 2.5/1). Varies from 0.5-6 cm in thickness. Clear and wavy upper contact; lower contact clear to diffuse. Leaching of organic material and mixing with underlying unit evident. Generally continuous, but also occurs as lens.</p>
1c	<p>Sandy silt mixed with pebbles; mottled coloration (5YR 3/3, 7.5YR 2/0, 10YR 6/2, 7.5YR 3/4, 7.5YR 4/6). Thickness varies from 0.5-3 cm. Indistinct lower boundary. Mixed unit containing sediments from 1a, 1b, 2a, 3a, and 6a. Occurs only in a slight surface depression or gully in the northern half of N99/E97.</p>

Table D.288. (Continued)

Unit	Description
2a	Fine silt; color varies from pinkish gray (7.5YR 7/2) to pale brown (10YR 6/3), light brownish gray (10YR 6/2), dark gray (1YR 4/1), and light reddish brown (5YR 6/3) depending upon degree of leaching from overlying unit. Thickness varies from 0.5-5 cm. Clear to diffuse contacts. Tephra (Devil). Consolidation of unit by roots and rootlets. Discontinuous; occurs as lens or intermixed with adjacent units. Cultural.
2b	Silt mixed with finely sorted organics; dark grayish brown (10YR 4/2). Variation in thickness from 0.5-5 cm. Clear to diffuse contacts. Tephra (Devil); illuvial B horizon. Discontinuous; occurs only in N99/E97 as lenses.
3a	Fine silt, mixed with grus; dark brown (7.5YR 3/4) to dark reddish brown (5YR 3/4). Thickness varies from 1-3 cm. Diffuse contacts and mixing with underlying unit. Tephra (Watana). Root penetration. Discontinuous, appears as oxidized lenses.
3b	Fine silt mixed with grus; varies from yellowish brown (10YR 5/6) in 2 eastern squares to dark brown (7.5YR 4/2 to 7.5YR 4/4) in 3 western squares. Thickness varies from 1-2 cm pockets in the 3 western squares to 4-8 cm in the 2 eastern squares. Undulating surfaces; gradational upper boundary and mixing with underlying unit. Discontinuous, occurs frequently as lenses. Cultural.

Table D.288. (Continued)

Unit	Description
4	<p>Fine silt with decomposed organic material; black (5YR N 2/). Very thin (0.5 cm) layer. Clear to diffuse contacts with undulating boundaries. Occurs only in N98/E98, N99/E99, and N99/E109 as discrete lens. Charcoal flecks and chunks occur only on west wall of N99/E109. One radiocarbon date: 2800 \pm 90 years B.P.: 850 B.C. (Beta-7297)</p>
5	<p>Sandy silt with grus and pebbles; color varies from grayish brown (10YR 5/2) to brown (10YR 5/3) in eastern squares and from dark brown through yellowish brown (10YR 3/3, 10YR 5/4, 10YR 3/4) in western squares. Thickness varies from 1-2 cm in western squares to 3-10 cm in eastern squares. Clear to diffuse contacts with adjacent unit. Some tephra components in unit present in all squares but discontinuous in each. Cultural.</p>
6a	<p>Sandy silt, with pebbles, and cobbles; strong brown (7.5YR 4/6) to dark brown (7.5YR 3/4) in all squares except N99/E109 where color graded from yellowish brown (10YR 5/6) into yellowish red (5YR 4/6). Thickness generally ranged from 10-20 cm. Undulating surfaces. Gradational lower boundary. Glacial drift with cobbles reaching a maximum of 40 cm. Poorly sorted. Cultural material, presumably displaced from level 5.</p>

Table D.288. (Continued)

Unit	Description
6b	Sandy silt with pebbles and cobbles; generally dark grayish brown (2.5YR 4/2). Glacial drift. Poorly sorted. Excavation into this unit determined the limit of excavation except in N99/E97.
6c	Clayey sandy silt mixed with pebbles and cobbles; dark grayish brown (2.5YR 4/2). Glacial drift. Poorly sorted. Excavation into this unit determined limit of excavation of N99/E97.

Table D.289.

Artifact Summary, TLM 180

Tools

9	Modified flakes 9 Argillite (UA83-106-1, 21, 22, 32, 39, 88, 91, 303, 304)
9	Blades 8 Chert (UA83-106-16, 17, 168, 290, 310, 312, 359, 396) 1 Obsidian (UA83-106-169)
3	Rejuvenation flakes 1 Argillite (UA83-106-89, 204, 336)
3	Blade cores 3 Argillite (UA83-106-390, 400, 401)

24

Lithic Material

1,346	Argillite flakes
28	Basalt flakes
2	Chert flakes
1	Quartzite flake
1	Rock fragment

1,378

Table D.290.

Artifact Summary by Stratigraphic Unit, TLM 180

Unit	Description	
2	2	Argillite flakes
Devil tephra	2	Basalt flakes
	2	Chert blades (UA83-106-168, 290)
2/3	8	Argillite flakes
Contact between	3	Basalt flakes
Devil and Watana	1	Obsidian blade (UA83-106-169)
tephras	1	Rock fragment
3	4	Basalt flakes
Watana tephra		
3/5	18	Argillite flakes
Contact between	18	Basalt flakes
Watana tephra and		
sandy silt cultural		
unit		
5	132	Argillite flakes
Sandy silt	1	Quartzite flake
cultural unit		
3/6	32	Argillite flakes
Contact between		
Watana tephra and		
glacial drift		

Table D.290. (Continued)

Unit	Description
5/6 Contact between sandy silt cultural unit and glacial drift	136 Argillite flakes 1 Basalt flake 1 Chert flake 3 Chert blades (UA83-106-310, 359, 396)
6 Glacial drift	410 Argillite flakes 2 Argillite modified flakes (UA83-106-303, 304) 1 Chert blade (UA83-106-312) 3 Argillite blade cores (UA83-106-390, 400, 401) 2 Argillite rejuvenation flakes (UA83-106-204, 336)
Unknown (Survey testing)	608 Argillite flakes 1 Chert flake 7 Argillite modified flakes (UA83-106-1, 21, 22, 32, 39, 88, 91) 2 Chert blades (UA83-106-16, 17) 1 Argillite rejuvenation flake (UA83-106-89)

AHRS Number TLM 181; Accession Number UA83-107

Area: North-northeast of Deadman Creek Mouth
Site Map: Figure D.226
Survey Locale 150: Figure D.243
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 181 is located at ca. 732 m asl (2400 feet) at the southeast side of a small knoll west of Deadman Creek and north-northeast of the creek's confluence with the Susitna River. The site is located on a 5-15 degree slope on the southeast side of a knoll and is approximately 10 m below the summit. The site is about 80 m higher than Deadman Creek as it flows southward to the east. The knoll slopes abruptly (ca. 30 degrees) down to the east and west but more gradually to the northwest and south. The knoll may be considered to be in the saddle between two higher kames to the north and south. The area to the west of TLM 181 consists of kames forming north-south trending ridges and kettle lakes and ponds. The view to the north and northwest is obstructed by the knoll on which the site sits, but an unobstructed view is available to the east of Deadman Creek and the plateau above the Deadman Creek valley. To the south, Deadman Creek is visible, as is TLM 170 on another ridge. TLM 193 is located to the northwest, but is not visible from TLM 181 because of the shoulder of the knoll on which TLM 181 is located. TLM 181 is heavily vegetated with white and black spruce, dwarf birch, blueberry, bearberry, Labrador tea, mosses, and lichens. East of the site, toward Deadman Creek, the vegetation becomes more dense, consisting of willow thickets and black spruce. To the south, moist tundra appears in a drainage separating the site from TLM 170.

Testing:

A single argillite flake, probably derived from a tan silty sand layer thought to be the Watana tephra in test pit 1, constitutes the cultural assemblage from the site (Table D.291). Six shovel tests to the north, west, and south did not reveal additional cultural material (Figure D.226). Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.291.

Artifact Summary, TLM 181

Provenience	Description
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Lithic Material

Subsurface:

Test Pit 1	1 Argillite flake
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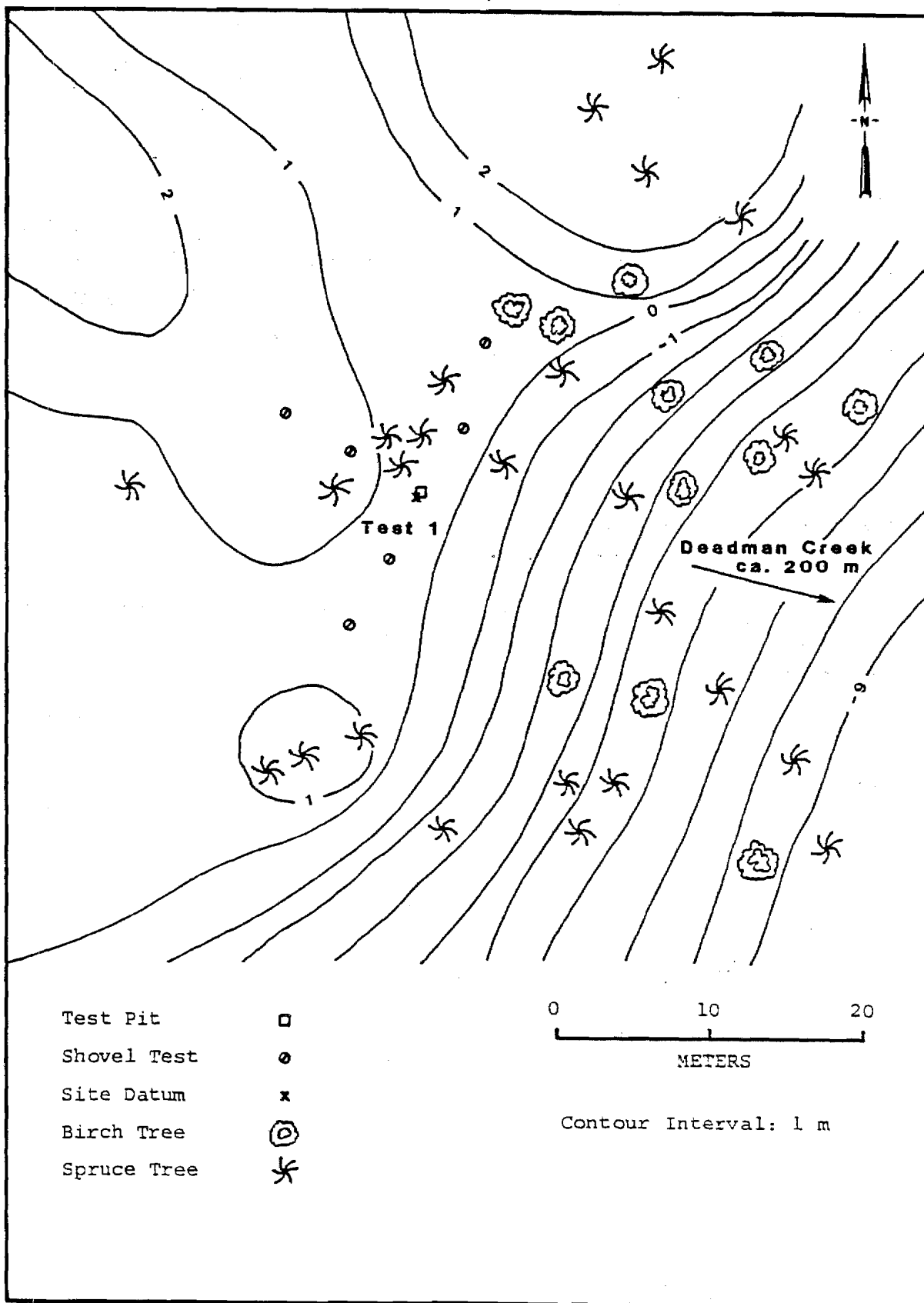


Figure D.226. Site Map, TLM 181

AHRS Number TLM 182; Accession Number UA83-108

Area: South of Kosina Creek Mouth
Site Map: Figure D.227
Survey Locale 128: Figure E.204
USGS Map: Talkeetna Mts. C-2, Figure E.7
Site Location: Appendix F

Setting:

TLM 182 is situated on the edge of a terrace above the east side of Kosina Creek and south of its confluence with the Susitna River. This fairly flat terrace measures ca. 60 (north-south) x 50 m (east-west) and lies at 654 m asl (altimeter: 2147 feet). The southern end of the terrace is defined by a bluff which drops approximately 12 m at a ca. 40-degree slope from the terrace edge down to Kosina Creek. The western edge of the terrace slopes down to a lower terrace, which contains several relict channels. There is good accessibility from the western terrace edge to the lower terrace and Kosina Creek, and this area is characterized by well-defined game trails which descend down the slope. The view to the south overlooks a wide bend of Kosina Creek flowing north and curving to the west with a gravel bar situated south of the site. The site is situated on the western edge of the terrace above the bluff face which steeply slopes down to the lower river terrace. The mouth of an unnamed stream draining the uplands trending east-west is ca. 700 m north of TLM 182. The terrain to the east and northeast of the site is low and boggy for approximately 100 m before rising to higher terraces and knolls which form the valley rim. The view to the west is limited to the high terraces and western slopes of Kosina Creek. Rugged foothills to the north are partly obscured by lowland spruce stands. Although not visible from the site, TLM 179 and TLM 186 are upstream on Kosina Creek to the south. Alder, paper birch, and white spruce are found along the terrace edge. The top of the terrace is densely vegetated with small spruce, low dwarf birch, a few alder thickets, sparse willows, with a dense mat of Labrador tea, blueberry,

lowbush cranberry, crowberry, wild rose, grass, white lichen and sphagnum moss.

Testing:

TLM 182 was initially located during survey testing when a potlid-fractured chert flake was found in a shovel test. The shovel test, located along the western terrace edge, was expanded into a 40 x 40 cm test pit (test pit 1). Two potlid-fractured flake fragments of chert and an additional chert flake were found in a stratigraphic unit tentatively defined as the Oshetna tephra. The two flake fragments articulate with the flake from the shovel test. All four pieces show evidence of thermal alteration. A second test pit (test pit 2), on the southern end of the terrace, and the 19 shovel tests excavated prior to discovery of the site provided no additional artifactual material.

In an effort to make preliminary determinations of the areal extent of the site, and the content and stratigraphic position of the cultural component, grid shovel testing and systematic testing were implemented. Grid shovel testing included the excavation of 13 shovel tests in the area surrounding test pit 1 and 3 additional shovel tests placed on the terrace along the E99 grid line. None of these shovel tests contained artifacts. Systematic testing consisted of the excavation of one 1 x 1 m test square (N100/E96), placed in close proximity to test pit 1, the only test which contained artifacts. Figure D.227 shows the location of shovel tests, test pits, and the test square in relation to the site topography.

Discussion:

Despite the excavation of 16 grid shovel tests and a 1 x 1 m test square, no artifactual material was located subsequent to survey testing. Therefore the only artifacts included in the assemblage of the site are the chert flakes from test pit 1 (Tables D.293 and D.294).

Five soil/sediment units were defined in the profiles of the test square. Figure D.228 illustrates the generalized stratigraphic sequence and Table D.292 contains unit descriptions. This stratigraphic sequence is applicable to the shovel tests and test pits excavated across the terrace area. Stratigraphy includes an organic mat (unit 1a) underlain by finely sorted organic material (unit 1b), two tephra units of Devil tephra (unit 2) and Watana tephra (unit 3), and two sand units (units 4 and 5).

The Devil tephra at TLM 182 is very thin and discontinuous. The Watana tephra forms the most massive sediment unit accounting for about half of the volume of excavated sediment. The upper extent of the Watana tephra is characterized by a dark reddish brown color (unit 3a) which is probably the result of oxidation.

The most notable observation in regard to site stratigraphy pertains to the grayish brown sand unit (unit 4) beneath the Watana tephra. During survey testing this unit was defined as the Oshetna tephra, and while similar in stratigraphic position and color, it is composed of medium grain sand. There is some evidence for a paleosol between the Watana tephra and the sand unit as characterized by a very thin (0.5 cm) discontinuous lens of black silty matrix. The grayish brown sand unit probably represents a buried eluvial horizon associated with the paleosol. This unit is underlain by coarse sand with gravels and cobbles (unit 5) which is reddish brown at its upper extent.

Evaluation:

The three articulating chert flake fragments, and the one additional chert flake are the only artifacts that have been located at TLM 182. The flakes were originally recorded as being positioned within the Oshetna tephra. Reexamination of the stratigraphy of the site revealed that this is actually a medium grain sand unit beneath the Watana tephra.

The paucity of artifactual material in conjunction with its isolated occurrence in a single test suggests the the site represents a spatially and temporally discrete use of the area. While the terrace provides an excellent overview of Kosina Creek and good access to the creek, its use by prehistoric peoples appears to have been limited. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

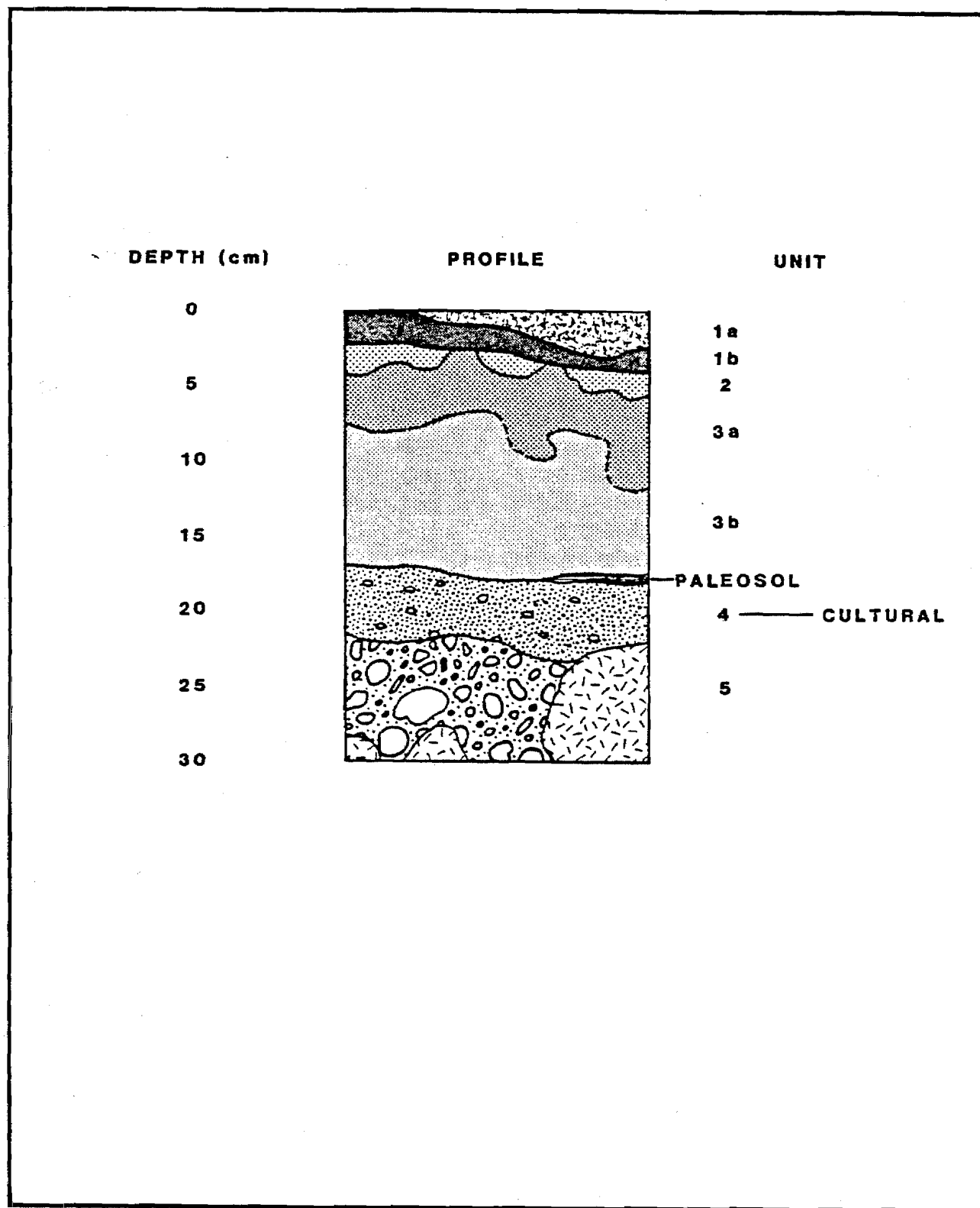


Figure D.228. Composite Profile, TLM 182

Table D.292.

Soil/Sediment Description for Composite Profile, TLM 182

Unit	Description
1a	Surface organic layer: roots and organic material from dwarf birch, low berry bushes, Labrador tea, lichen, and moss. Unit varies in thickness from 1-4 cm. Contact with lower unit clear to wavy. O1 horizon. Unit compressed and worn away due to activity on a game trail which traverses the test square.
1b	Fine silt size particles with finely sorted organics and roots; black (10YR 2/1). Varies in thickness from 1-6 cm. Contact with lower units 2, 3a, and 3b clear and smooth; O2 horizon. Generally continuous.
2	Fine silt size particles; pinkish gray (5YR 7/2). Varies in thickness from 1-3 cm. Contact with unit 3 clear and wavy. Devil tephra; eluvial A horizon. Discontinuous and displays dark staining from downward leaching of organic material.
3a	Fine grain silt size particles; dark reddish brown (2.5YR 2.5/4). Unit varies in thickness from 1-5 cm. Contact with unit 3b clear although irregular. Upper zone of tephra (watana); illuvial B horizon. Unit lacks continuity. The distinction between unit 3a and 3b is based on color which is probably correlated to a zone of iron accumulation.

Table D.292. (Continued)

Unit	Description
3b	Very fine grain silt size particles with intrusive pockets of gravels from underlying unit; light yellowish brown (10YR 6/4). Unit varies in thickness from 1-15 cm. Contact with underlying unit abrupt. Watana tephra; B horizon. The unit is generally continuous although it contains cryoturbated portions of unit 4.
4	Medium grain sand with occasional small gravels; grayish brown (10YR 5/2). Varies in thickness from 2-8 cm. Contact with the underlying unit clear and smooth being defined primarily on the basis of color but also on an increase in grain size of the sand. Buried eluvial horizon. Discontinuous. Evidence of paleosol at the upper contact as indicated by the lens of fine silty black material. Cryoturbation evident.
5	Medium to coarse grain sand mixed with gravels. Upper extent of unit is yellowish red (5YR 4/6). Excavation into this unit determined limit of excavation for test square.

Table D.293.

Artifact Summary, TLM 182

Lithic Material

4 Chert flakes (3 of which articulate)

Table D.294.

Artifact Summary by Stratigraphic Unit, TLM 182

Unit

Description

4

4 Chert flakes (3 of which articulate)

Grayish brown

sand beneath

Watana tephra

AHRS Number TLM 183; Accession Number UA83-109

Area: West-southwest of Vee Canyon and South of the
Susitna River
Site Map: Figure D.229
Survey Locale 122: Figure E.193
USGS Map: Talkeetna Mts. C-2, Figure E.7
Site Location: Appendix F

Setting:

TLM 183 is located on a ridge west-southwest of Vee Canyon. The ridge is south of the Susitna River and southeast of the stream draining the region east of Clarence Lake. Another steep drainage is located to the east of the site. The ridge is narrow, ca. 20 m wide, and parallels the Susitna River at an elevation of approximately 762 m asl (2500 feet). The ridge is situated between and perpendicular to two other ridges which extend north toward the Susitna River. The ridge to the west of the site is approximately 20 m higher than the one on which the site is located. A small grassy depression, ca. 50 (east-west) x 10 m (north-south), is located immediately south of the site and is 10 m below the level of the site. From the site the terrain slopes north at approximately 30 degrees toward the Susitna River allowing an unobstructed view of the river flowing from east to west. South of the site, the terrain generally rises sharply to a height of 1090 m asl (3575 feet). Vegetation on the site consists of dwarf birch, spruce, Labrador tea, mosses, and lichens. The surrounding vegetation is similar except for a higher density of spruce trees to the north and south.

Testing:

One obsidian flake was located on the surface of a game trail following the ridge top. A 40 x 40 cm test pit (test pit 1) excavated near the surface find produced three basalt flakes from between the Watana and Oshetna tephras (Table D.295). Eight additional subsurface tests placed around test pit 1 did not reveal any additional cultural material. Estimated site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.295.

Artifact Summary, TLM 183

Provenience	Description
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Lithic Material

Surface:	1	Obsidian flake
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Subsurface:

Test Pit 1	3	Basalt flakes
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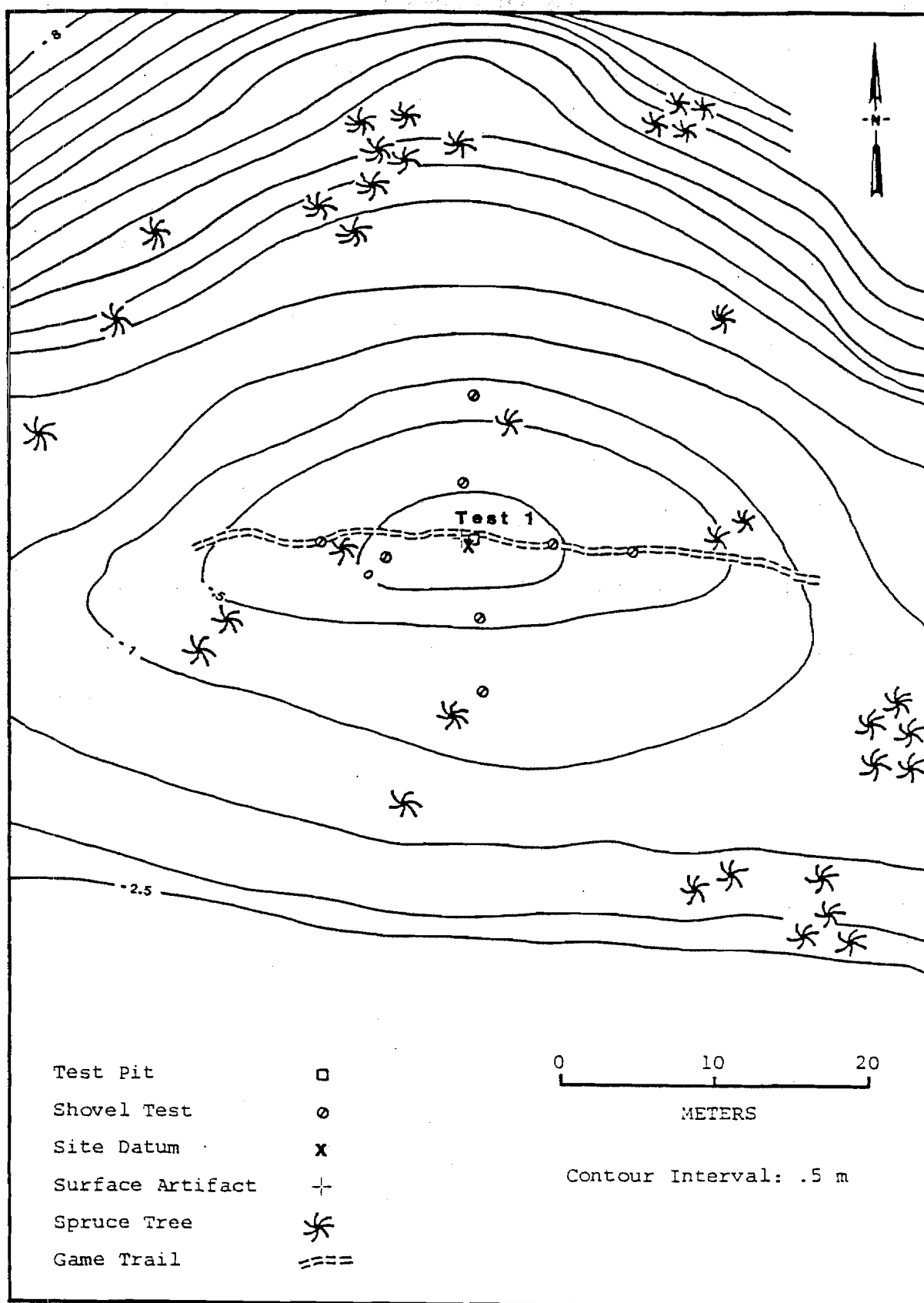


Figure D.229. Site Map, TLM 183

AHRS Number TLM 184; Accession Numbers UA83-110, UA84-56

Area: North-northeast of Watana Creek Mouth
Site Map: Figure D.230
Survey Locale 138: Figure E.221
USGS Map: Talkeetna Mts. D-3, Figure E.3
Site Location: Appendix F

Setting:

TLM 184 is located on the southern half of a knoll north-northeast of the confluence of Watana Creek with the Susitna River in a region of spruce bogs with widely separated kames. The knoll is ca. 50 m wide and lies at an elevation of 614 m asl (altimeter: 2014 feet). It is one of the highest land features within 3 km, and provides a clear view of the surrounding lowlands to the north and west for nearly 10 km. However, knolls of similar elevation to the south and east restrict views in those directions to a few hundred meters. A small pond of less than 1 ha is located out of view some 300 m southeast of the site. The knoll with the site has an open vegetation cover of scattered spruce and birch trees. The ground cover consists of mosses, lichens, dwarf birch, Labrador tea, and blueberry. Moist spruce bogs of black spruce characterize the intervening regions between the higher knolls which share the open, dry vegetation of TLM 184. At least twenty-five other sites are located within a 2 km radius of the site.

Testing:

Survey testing at TLM 184 involved the excavation of four 40 x 40 cm test pits and seven shovel tests. Each of the test pits produced cultural material, but the shovel tests proved to be sterile. Test pits 1 and 2 were the most productive, with the former yielding ca. 100 flakes, primarily of argillite, and the latter yielding ca. 300 calcined and heavily burned bone fragments, charcoal, and nine flakes. The cultural remains of test pit 2 may indicate the presence of a hearth. Test pit 3 showed evidence of a possible hearth in the Watana tephra,

which consisted of thermally altered rocks and scattered charcoal fragments. Test pit 4, in an exposure produced by a fallen tree, produced two surface and two subsurface flakes.

During the initial systematic testing of the site, 10 1 x 1 m test squares, situated in a checkerboard pattern between test pits 1 and 2, were excavated. Further systematic testing was preceded by grid shovel testing to assist in determining site size. During this program, 51 grid shovel tests were excavated, five of which contained cultural material (a total of 8 flakes). In order to cover portions of the knoll untested by the grid shovel testing program, additional shovel tests were excavated. For the northern section of the knoll, 17 grid shovel tests were placed at 8 m intervals, but no artifacts were recovered. On the southern portion of the knoll, 12 grid shovel tests were excavated at 4 m intervals, these also proved to be sterile. On the basis of this grid shovel testing program, it was determined that the site lies on the south-central and southeastern portions of the knoll.

A second phase of systematic testing was initiated at TLM 184 in order to gain additional information on a distinct cultural horizon between the Devil tephra and eolian silt. The presence of blades within these stratigraphic units suggested a possible association with the Late Denali complex. In view of the small number of sites dating to this tradition within the project area and the low frequency of diagnostic artifacts and charcoal recovered during the initial systematic testing, further investigation of the site was warranted. Therefore, three additional 1 x 1 m test squares were excavated. N100/E101 was placed adjacent to a square N100/E102 that had proven earlier to be quite productive. N92/E100 was superimposed over a productive grid shovel test, and provided an opportunity to test a portion of the site not intensively examined. Finally, N100/E91 was placed adjacent to test pit 3 in order to investigate an unusual stratigraphic unit exposed during the excavation of a nearby shovel test.

Discussion:

Twelve of the 13 test squares excavated at TLM 184 contained artifactual material. Test square N100/E91 was the only one which proved to be sterile. Artifacts recovered from survey testing, the grid shovel testing program, and systematic testing phases constitute an assemblage of 32 lithic tools, 3,131 other lithics, 26,808 bones and bone fragments, and 7 pieces of ochre. Table D.297 presents an inventory of the entire assemblage, and Table D.299 lists the artifacts by stratigraphic unit.

Seven broad classes of raw material were identified in the collected assemblage of lithic material. Argillite and chert are by far the most predominant classes, together representing 92% of the lithics. Basalt, chalcedony, obsidian, quartzite, and rhyolite (in descending order of importance) also occurred in the assemblage. In addition to the unmodified flakes, a variety of tools, including modified flakes, scrapers, blades, biface fragments, a notched point fragment, rejuvenation flakes, flake cores, a preform, and a hammerstone were identified. Thermally altered rocks and lithic shatter (rock fragments) complete the lithic assemblage.

Eleven soil/sediment units and subunits were identified at TLM 184. Figure D.231 shows the vertical superposition of 10 of these units and Table D.296 provides a description of the various unit characteristics. All the soil/sediment units do not occur in each test square, but most are generally present. In some squares the units are mottled or slightly mixed, but, in general, the superposition of units is not inconsistent from square to square.

As with most sites in the project area, there are three broad kinds of soil/sediment units found at TLM 184. These include natural depositional units, the contacts between them, and cultural units. A general stratigraphic section from the site would consist of glacial drift (unit 6) as the lowermost unit. The drift consists of two major sections (units 6a and 6b), with the upper being heavily oxidized.

There is no difference in constituent parts between the two except for the oxidized nature of the upper portion. An eolian sediment zone (unit 5b), occurring where the Oshetna tephra is normally found, caps the glacial drift. Above this eolian silt is a paleosol (unit 5a) characterized as a black lens of charcoal and carbonized organics. This paleosol is overlain by the unoxidized (unit 4b) and oxidized Watana tephra (unit 4a). Above the Watana tephra is another volcanic sediment, the Devil tephra (unit 3). Above the Devil tephra is a lens of organics and charcoal (unit 2), usually associated with cultural material. This entire sequence is capped by a contemporary root mat (unit 1).

The effects of cryoturbation on soil/sediment stratigraphy is well illustrated at TLM 184. Cryoturbation resulted in uplift of pebbles, cobbles, boulders, and coarse sandy deposits of glacial drift that are variable in size, shape, and orientation. The displaced soil/sediment units were frequently found folded over the pebbles and cobbles that had originated from below. Disturbance of units was particularly evident in N100/E92 in which a portion of the paleosol and eolian silt was displaced by an uplifting of lightly oxidized sandy drift and folded over a deposit of unoxidized Watana tephra, making it appear as if there were a paleosol within the Watana tephra. This natural disturbance increased the complexity and mixing of the stratigraphic units, but did not prevent their separation during excavation.

The cultural deposit found within the Watana tephra (4c) occurs in four of the test squares. It is found in both of the northernmost test squares (N100/E101 and N100/E102), in the northeast corner of N99/E101, and the northwest corner of N99/E103. This unit averages approximately 8 cm in thickness, but varies from 2-13 cm. The matrix appears to be composed of an altered Watana tephra mixed with burned and unburned bone fragments and representative of a byproduct of a cultural feature such as a hearth or firepit. Chipped stone artifacts are found throughout the matrix.

Nine of the eleven soil/sediment units have associated cultural material within or at their contacts. The site is multicomponent in character

with three separate components. The lower component is fairly distinct stratigraphically and occurs in the paleosol and eolian silt. The middle component occurs at the contact of the Devil and Watana tephras (unit 3/4a) and continues into the Watana tephra (4a, 4b, and 4c). The greatest concentration of artifacts is found at the contact of the finely divided organics and the Devil tephra (unit 2/3), from which the first component is derived.

Bone from TLM 184 was found predominantly in Watana tephra units 4a and 4c of test square N100/E102 (Table D.298). Most specimens are small calcined unidentifiable fragments, usually with a maximum dimension of less than 5-10 mm. Of the 26,828 bone fragments, 120 pieces were identified to skeletal element, and 75 of these were determined to be caribou (Rangifer tarandus). The remaining identified fragments could be tentatively classified as caribou or, in some cases, only as medium-large mammal. Although the possibility exists that the tentatively identified bones may be attributed to Dall sheep (Ovis dalli), the ecological setting suggests that they probably represent caribou rather than sheep. Ten bones were identified as the remains of small mammals or birds, even though the skeletal element usually could not be determined. It should be noted that the small mammal or bird bones were calcined suggesting they represent the remains of subsistence activities, and that they were only associated with the middle component at the site.

Foot bones (metapodial, tarsal, phalanx, and sesamoid fragments) comprise the highest percentage of identified elements, although long bone, rib, vertebra, cranial, and tooth fragments were collected. The higher incidence of foot bones may be accounted for by their actual higher frequency in the assemblage, by processing practices in which bones were less fragmented (and thus more easily identified) than other skeletal elements, or by differential destruction during burning which resulted in the calcination of these bones. The foot bones are fragmentary and, therefore, difficult to use in determining the minimum number of individuals represented at the site. The fact that both completely ossified and unossified articular surfaces (epiphyses) of

certain phalanges were present does suggest that at least two individual caribou can be identified in the faunal assemblage. Unlike the small mammal or bird bones, the foot fragments of caribou were recovered from all three of the components at TLM 184.

Upper Component: The upper component is concentrated at the contact between the organic silt and the Devil tephra (unit 2/3), although artifacts were also recovered from the contact between the organic and organic silt (unit 1/2) and within the organic silt (unit 2). Approximately 60% of the unmodified flakes found at the site originated from this component. All seven of the lithic materials are represented. Eighteen tools or tool fragments were also recovered from the component, nine of these being modified flakes manufactured from basalt (UA83-110-329; UA84-56-142b, 148b, 151) and chert (UA83-110-1, 306, 449, 575, 578). Other tools include scrapers, a notched point base, a biface fragment, rejuvenation flakes, and flake cores. Each of the three scrapers is quite different in terms of lithic material and morphology. A white chert scraper (UA83-110-448; Figure D.388b) is triangular in shape with dorsal chipping on all three edges which meet to form sharp tangs. Another chert scraper (UA84-56-134; Figure D.388c), struck from a blade, exhibits a dorsal ridge and a scraping edge on the distal end. The irregularly shaped basalt scraper (UA84-56-145; Figure D.388d) has a very acute scraping edge and multiple facets on the dorsal surface from previous flake removal. The biface tip (UA83-110-451; Figure 388f) and the notched point base (UA83-110-549) are both manufactured of white chert. The point base appears to be side-notched with shallow notches and a convex base. One face of the specimen has fine diagonal flake scars. Two rejuvenation flakes, one of argillite (UA83-110-505) and one of chert (UA83-110-332), a basalt biface fragment with multiple hinge fractures (UA84-56-149; Figure D.388g), and a small fragment of an obsidian flake core (UA84-56-41) complete the tool inventory.

The bone assemblage recovered from the upper component consists primarily of calcined unidentifiable fragments of medium-large mammal, although three caribou foot bones were also identified. Two radiocarbon samples composed of large charcoal chunks were submitted from the

contact of the organic silt with the Devil tephra (unit 2/3) and produced dates of 840 ± 60 years: A.D. 1110 (Beta-7692) and 1060 ± 70 years: A.D. 890 (Beta-7693).

Middle Component: Middle component artifacts are distributed at the contact of the Devil and Watana tephras (unit 3/4) and within the Watana tephra (units 4a, 4b, and 4c). One factor which indicates the separation between the upper and middle components at unit 3/4 is the significant difference in the abundance of faunal material between the stratigraphic units occurring above and below this contact. For example, in units 4a and 4c the total of bone fragments collected is significantly greater than those collected from units 2, 2/3 and 3. The frequency of lithic specimens, on the other hand, is reversed, with smaller percentage of lithics occurring in the Watana tephra than in the upper stratigraphic units.

Flakes in this assemblage are represented by six of the raw material classes. There are no quartzite flakes in this component. Four of the 12 tools and tool fragments were identified as modified flakes, one manufactured from obsidian (UA83-110-396) and three from chert (UA83-110-407, 799, 802). The one scraper fragment (UA83-110-402; Figure D.388e) from this component is gray chert and exhibits dorsal retouch only on one edge. Also included in the tool inventory are two blades: an almost complete argillite blade (UA83-110-525; Figure D.388i), displays a flat platform lying at right angle to the ventral surface, and has a single medial ridge on the dorsal surface with some cortex visible; the other gray argillite blade (UA83-110-776; Figure D.388j) is also characterized by a single medial ridge and flat platform. An adze preform (UA83-110-474) on a worn, flat, oval-shaped basalt pebble, was recovered from a pocket of mixed Watana and Oshetna tephras and is therefore only tentatively assigned to the middle component. A small fragment of an obsidian core (UA84-56-71; Figure D.388f), 2 white chert biface fragments (UA83-110-800, 808; Figure D.388k,a), and 1 brown quartzite hammerstone (UA83-110-792; Figure D.388h) complete the artifact inventory for this component.

Two radiocarbon samples submitted to date the middle component produced dates which were not expected given the stratigraphic position of the units sampled. The first, taken from the altered Watana tephra (4c - cultural unit), was dated at 1060 ± 70 years: A.D. 890 (Beta-7843). However, this date is suspect as it was derived from a bulk sample of charcoal and calcined bones from the 4c matrix. A discrete sample from this unit proved to be too small for dating. This date probably does not accurately reflect the true antiquity of the cultural unit based on the expected age of the Watana tephra. The second sample was taken from the oxidized Watana tephra (4a) and produced an age of 3920 ± 100 years: 1970 B.C. (Beta-7842). This sample may not represent organic material initially deposited in tephra as stratigraphic disturbance was evident. The sample was collected from the southwest quadrant of N98/E106 where the stratigraphy was truncated by the intrusion of glacial pebbles. Therefore, it is reasonable to expect that the radiocarbon sample represents redistributed material and also may not be accurately dating the Watana tephra.

Lower Component: The lower component is concentrated in the paleosol (unit 5a) and the eolian silt (unit 5b). Although a sterile stratum does not isolate this component from the overlying one, a decline in the artifact frequency at the upper contact of 5a suggests that a separate period of occupation is represented. One hundred twenty-seven flakes, predominantly argillite, were recovered from units 5a, 5a/5b, and 5b. Only one argillite modified flake (UA83-110-532) originated in the 5a paleosol, although a second flake (UA84-56-89; figure D.388m) was recovered at an upper contact (3/5a) of this unit. Two radiocarbon samples were submitted for unit 5a. These samples produced dates of 5230 ± 140 years: 3280 B.C. (Beta-7695) and 6480 ± 370 years: 4530 B.C. (Beta-7694). This component may be correlated with the Northern Archaic tradition but the lack of diagnostic artifacts makes it difficult to determine with certainty.

Also associated with the lower component from TLM 184 is a possible tent ring comprised of three boulders in an arc which, if complete, would produce a circle approximately 4 m in diameter. Each boulder, although

intrusive into upper units, rests directly on top of the eolian silt. Because of their apparently unique stratigraphic position, they could be considered as cultural in origin. The size (ca. 40 x 30 x 20 cm) and weight (ca. 19 kg each) of the boulders make them suitable for use in a tent ring. However, the presence of a upwardly displaced drift directly north of the boulder in N100/E101 raises the possibility of other processes being responsible for their presence. Cryoturbation may have caused the boulders to rise with the drift and then roll over on top of an adjacent deposit of eolian silt.

Only more extensive excavations at the site directed at investigation of the patterned nature of the boulders' alignment can differentiate whether their stratigraphic positions are the result of cultural or noncultural processes.

Evaluation:

Located on one of the highest knolls in an area north-northeast of the confluence of Watana Creek with the Susitna River, the site offers a clear view of the surrounding lowland to the west and north for nearly 10 km. The high frequency of large mammal bones, many identifiable as caribou, is evidence to support assumptions of caribou consumption by prehistoric inhabitants at the site. Whether caribou were procured, processed, or consumed directly at the site still remains to be tested archeologically. Artifact classes recovered from the site imply traditional sorts of activities associated with a hunting and gathering economy based on large mammal consumption. For instance, the scrapers recovered from the site may indicate hide-working activities. The unifacial tools and retouched flakes which have acute edge angles suggest butchering and skinning activities. Other sorts of maintenance work associated with woodworking is indicated by the recovery of the adze preform (UA83-110-474). A full interpretation of how the site may have functioned during its three periods of occupation may be documented with more archeological exploration.

At this time, TLM 184 represents one of the most valuable sites for obtaining information on the little known time period between ca. A.D. 500 and 1500 B.C. in Interior Alaska. In addition, because it is a multicomponent site, a better understanding of the relationship between earlier and later occupations may be obtained by further analysis of the cultural remains from TLM 184. Observed site size based on the distribution of artifacts is 93 square meters (Table D.2).

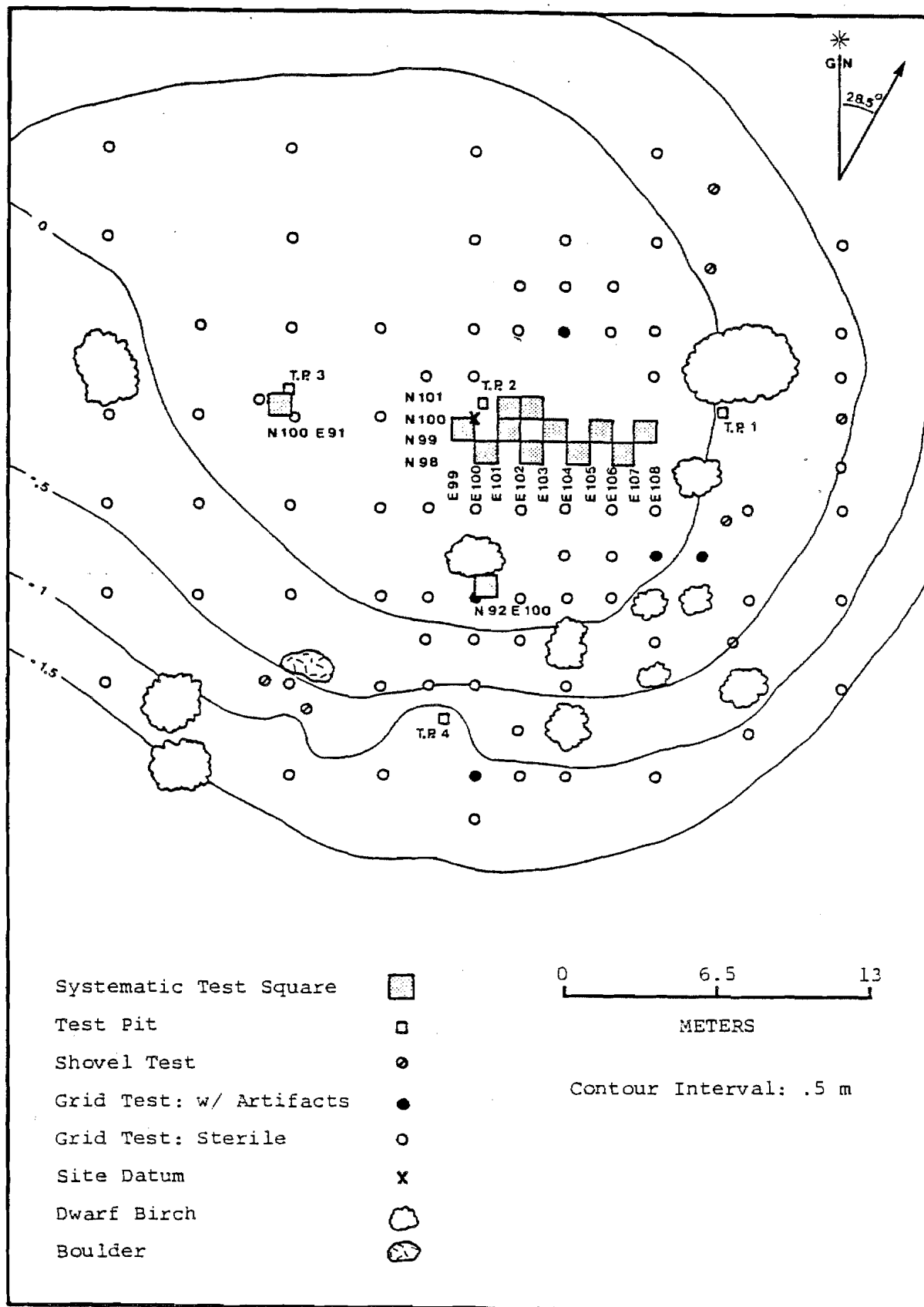


Figure D.230. Site Map, TLM 184

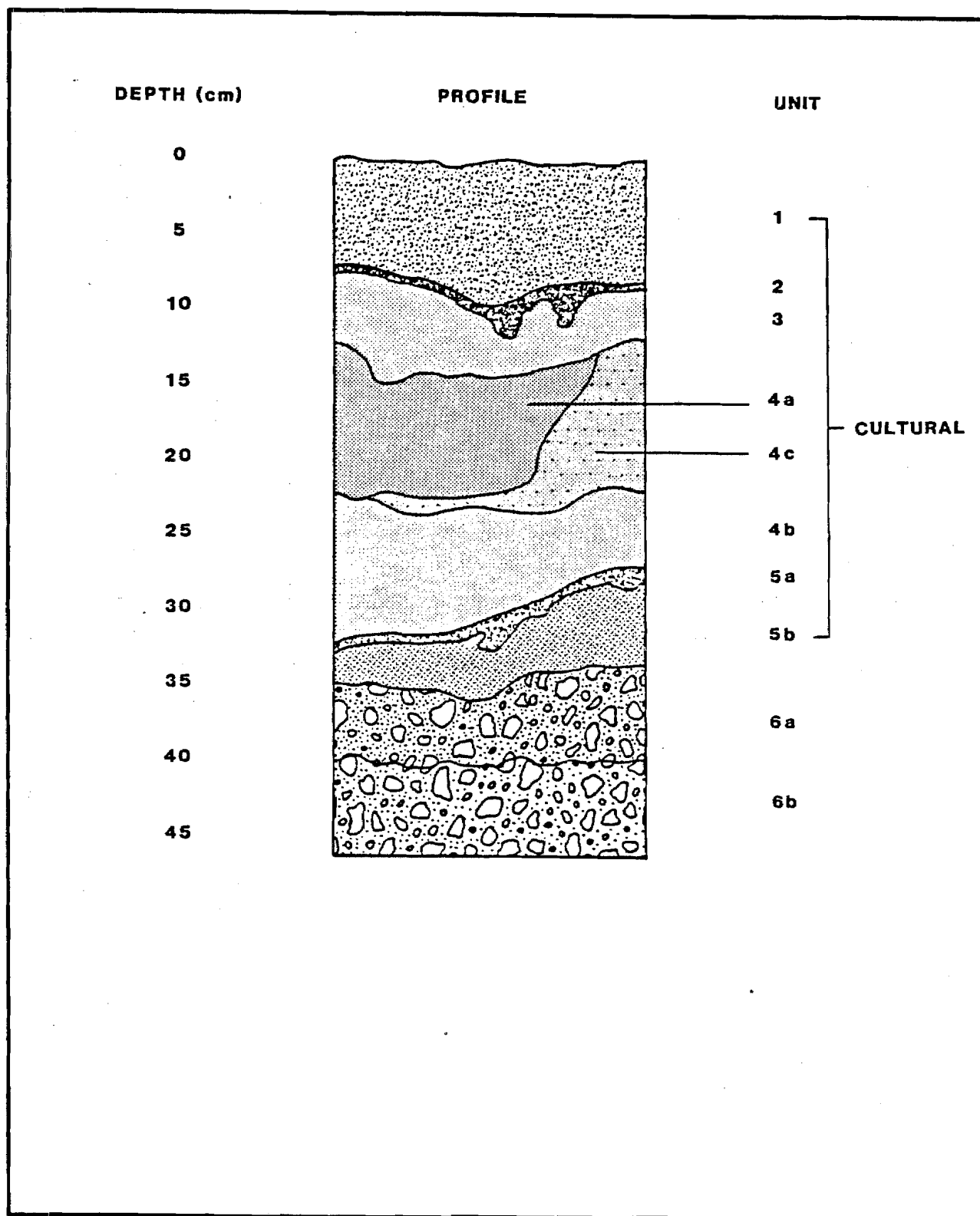


Figure D.231. Composite Profile, TLM 184

Table D.296.

Soil/Sediment Description for Composite Profile, TLM 184

Unit	Description
1	Organic root mat: birch, dwarf birch, lichen, sphagnum moss, Labrador tea, blueberry, and cranberry; varies from dark reddish brown (2.5YR 3/4) to dark brown (7.5YR 3/4). Thickness variable, ranges between ca. 1 cm and 15 cm. Artifacts at the contact with unit 2.
2	Fine grain sediment with finely divided organics, decomposed organics, and rootlets. Carbon staining occurs throughout; ranges from very dark brown (10YR 2/2) to black (10YR 2/1). Thickness variable, ranges from small stringers to 10 cm. Continuous, although missing in very small patches. Artifacts present, usually at contacts. The lower contact has been radiocarbon dated at 840 ± 60 years: A.D. 1110 (Beta-7692) and 1060 ± 70 years: A.D. 890 (Beta-7843)
3	Fine silt, fairly clean and powders in the hands; light gray (5YR 6/1) to pinkish gray (7.5YR 7/2). Thickness varies from 0.5-8 cm. Lower contact usually with unit 4a, but in some squares with unit 4c. Continuous, except in the northeast corner of test square N100/E102. Devil tephra. Cultural.

Table D.296. (Continued)

Unit	Description
4a	Compacted heavily to lightly oxidized fine silt, which powders in the hand; dark reddish brown (5YR 3/4). Pea gravels occur regularly. Upper contact most often with (unit 3); lower contact variable (units 4b, 4c, 5a or 5b). May be mottled. Oxidized Watana tephra. Continuous, but occasionally mixed with units 4b and 4c. Cultural
4b	Fine to medium silt; varies from brownish yellow (10YR 6/6) to light brown (7.5YR 6/4). Usually mottled or in patches. Typically associated with unit 4a. Very discontinuous. Unoxidized Watana tephra.
4c	Loose loamy silt with large amounts of decomposed organics, carbon, charcoal flecks, roots, and small calcined bone fragments; very dark grayish brown (10YR 3/2) to dark brown (10YR 3/3). Varies in thickness from 2-13 cm. In some places overlain by unit 4a and unit 3. Lower contact variable (unit 4b, 5a, 5b, or 6a). Altered Watana tephra. Discontinuous. Cultural.
5a	Lens of loamy silt with decomposed organics, carbon-staining, and small pieces of charcoal; black (10YR 2/1). Undulates in thickness from 0.5-2 cm. Lower contact with unit 5b; upper contact is variable. Paleosol. Discontinuous, but present in all squares. Cultural.

Table D.296. (Continued)

Unit	Description
5b	<p>Very fine silt which powders and streaks in the hand; gray (10YR 5/1). Thickness varies from 0.5-12 cm. Usually overlain by the black paleosol (5a) and underlain by glacial drift. Eolian silt (mixed with Oshetna tephra). The predominant component of this unit is not volcanic in origin. Disturbed and discontinuous. Cultural.</p>
6a	<p>Oxidized, compacted silts (50%) and gravels ranging from pea gravel to cobbles; strong brown (7.4YR 4/6) to yellowish red (5YR 4/6). Thickness undulates from patches approximately 2 cm to layers that extend to the base of the excavation. Oxidized glacial drift. Discontinuous, but present in all squares.</p>
6b	<p>Silts (50%) and gravels. Gravel consistency same as unit 6a, but silts less compacted and unoxidized; light olive brown (2.5YR 5/4). Usually occurs at base of unit 6a or 5b and extends to the bottom of the excavation. Unoxidized glacial drift. Continuous.</p>
6c	<p>Crumbly mud or siltstone which resembles decomposing shale; very dark grayish brown (2.5Y 3/2). Occurs as patch in one square, within glacial drift.</p>

Table D.297.

Artifact Summary, TLM 184

Tools

15	Modified flakes
	2 Argillite (UA83-110-532; UA84-56-89)
	4 Basalt (UA83-110-329; UA84-56-142b, 148b, 151)
	8 Chert (UA83-110-1, 306, 407, 499, 575, 578, 799, 802)
	1 Obsidian (UA83-110-396)
4	Scrapers
	1 Basalt (UA84-56-145)
	3 Chert (UA83-110-402, 448; UA84-56-134)
2	Blades
	2 Argillite (UA83-110-525, 776)
4	Biface fragments
	1 Basalt (UA84-56-149)
	3 Chert (UA83-110-451, 800, 808)
1	Notched point fragment
	1 Chert (UA83-110-459)
2	Rejuvenation flakes
	1 Argillite (UA83-110-505)
	1 Chert (UA83-110-332)
1	Preform
	1 Basalt (UA83-110-474)

Table D.297. (Continued)

<u>Tools</u>	
2	Flake cores 2 Obsidian (UA84-56-41, 71)
1	Hammerstone (UA83-110-792)
<hr/>	
32	
<u>Lithic Material</u>	
1,499	Argillite flakes
130	Basalt flakes
40	Chalcedony flakes
1,373	Chert flakes
61	Obsidian flakes
6	Quartzite flakes
6	Rhyolite flakes
3	Thermally altered rocks
13	Rock fragments
<hr/>	
3,131	
<u>Other</u>	
7	Ochre pieces
<u>Faunal Material</u>	
26,828	Bones and bone fragments

Table D.298.

Faunal Material by Stratigraphic Unit, TLM 184

Unit		Description
2	1	Proximal fragment distal phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
Organic silt	1	Left naviculo-cuboid fragment, heavily burned, caribou (<u>Rangifer tarandus</u>)
	5	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
2/3	1	Possible proximal fragment of vestigial phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
Contact between organic silt and Devil tephra	31	Unidentifiable bone fragments, calcined, medium-large mammals
3	13	Unidentifiable bone fragments, calcined, medium-large mammals
3/4a	1	Tooth fragment, calcined, probably caribou (<u>Rangifer tarandus</u>)
Contact between Devil and oxidized Watana tephra	1	Possible proximal fragment proximal phalanx, calcined, possibly caribou (<u>Rangifer tarandus</u>)
	1	Proximal fragment middle phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
	1	Distal fragment middle phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
	1	Proximal fragment distal phalanx, calcined, possibly caribou (<u>Rangifer tarandus</u>)

Table D.298. (Continued)

Unit	Description
	2 Proximal fragments distal phalanges, calcined, caribou (<u>Rangifer tarandus</u>)
	1 Distal metapodial fragment, calcined, caribou (<u>Rangifer tarandus</u>)
	1 Sesamoid fragment, calcined, possibly caribou (<u>Rangifer tarandus</u>)
	1 Possible transverse process of lumbar vertebra, calcined, possibly caribou (<u>Rangifer tarandus</u>)
	1 Possible facet fragment of lumbar vertebra, calcined, possibly caribou (<u>Rangifer tarandus</u>)
	22 Unidentifiable bone fragments, heavily burned, medium-large mammal
	5,387 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
4a	1 Antler fragment, calcined, caribou (<u>Rangifer tarandus</u>)
Oxidized	
Watana	1 Possible spinous process fragment of thoracic vertebra, calcined, caribou (<u>Rangifer tarandus</u>)
tephra	1 Possible proximal tibia epiphysis, calcined, probably caribou (<u>Rangifer tarandus</u>)
	1 Possible proximal tibia fragment, lightly burned, possibly caribou (<u>Rangifer tarandus</u>)
	1 Right naviculo-cuboid fragment, heavily burned, caribou (<u>Rangifer tarandus</u>)

Table D.298. (Continued)

Unit	Description
1	Astragalus fragment, calcined, caribou (<u>Rangifer tarandus</u>)
1	Astragalus fragment, calcined, possibly caribou (<u>Rangifer tarandus</u>)
2	Distal metapodial fragments, calcined caribou (<u>Rangifer tarandus</u>)
1	Metapodial shaft fragment, calcined, caribou (<u>Rangifer tarandus</u>)
1	Possible distal metapodial fragment, calcined, possibly caribou (<u>Rangifer tarandus</u>)
4	Sesamoids, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal fragment proximal phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal fragment proximal vestigial phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
7	Distal fragments proximal phalanges, calcined, caribou (<u>Rangifer tarandus</u>)
1	Probable distal fragment proximal phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal fragment middle phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
1	Distal fragment middle phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal fragment middle or distal phalanx, calcined, probable caribou (<u>Rangifer tarandus</u>)

Table D.298. (Continued)

Unit	Description
1	Proximal epiphysis fragment middle phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal fragment distal phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
1	Probable proximal fragment distal phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal phalanx fragment, calcined, caribou (<u>Rangifer tarandus</u>)
3	Distal phalanx fragments, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal phalanx fragment, calcined, possibly caribou (<u>Rangifer tarandus</u>)
2	Probable proximal phalanx fragment, calcined, artiodactyl
1	Probable epiphysis, calcined, large mammal
1	Possible basi-cranial fragment, calcined, medium-large mammal
1	Possible sesamoid, calcined, medium-large mammal
6,650	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
40	Unidentifiable bone fragments, heavily burned, medium-large mammal
3	Unidentifiable bone fragments, calcined, small mammal
3	Unidentifiable bone fragments, charred, taxon unknown

Table D.289. (Continued)

Unit		Description
4b	12	Long bone and unidentifiable bone fragments, medium-large mammal
Unoxidized		
Watana	4	Unidentifiable bone fragments, calcined, mammal
tephra		
4a/4c	1	Unidentifiable bone fragment, heavily burned, medium-large mammal
Contact between		
oxidized Watana	8	Unidentifiable bone fragments, calcined, medium-large mammal
tephra and cultural		
unit	10	Unidentifiable bone fragments, calcined mammal
4/4c	5	Unidentifiable bone fragments, lightly burned to calcined, medium-large mammal
Contact between		
Watana tephra		
and cultural unit		
4c	1	Tooth fragment, calcined, possibly caribou (<u>Rangifer tarandus</u>)
Cultural unit		
	2	Lumbar vertebra facet fragments, calcined, probably caribou (<u>Rangifer tarandus</u>)
	1	Cuneiform fragment, calcined, caribou (<u>Rangifer tarandus</u>)
	1	Right naviculo-cuboid fragment, calcined, caribou, (<u>Rangifer tarandus</u>)
	1	Calcaneus fragment, calcined, possibly caribou (<u>Rangifer tarandus</u>)

Table D.298. (Continued)

Unit	Description
2	Metapodial shaft fragments, calcined, probably caribou (<u>Rangifer tarandus</u>)
2	Distal metapodial fragments, calcined, caribou (<u>Rangifer tarandus</u>)
1	Distal metapodial fragment, calcined, possibly caribou (<u>Rangifer tarandus</u>)
7	Sesamoids, calcined, caribou (<u>Rangifer tarandus</u>)
7	Sesamoid fragments, calcined, caribou (<u>Rangifer tarandus</u>)
2	Sesamoid fragments, calcined, possibly caribou (<u>Rangifer tarandus</u>)
6	Distal fragments, proximal phalanges, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal epiphysis proximal phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
4	Proximal fragments middle phalanges, calcined, caribou (<u>Rangifer tarandus</u>)
1	Distal fragment middle phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
2	Proximal fragment middle vestigial phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
3	Proximal fragments distal phalanges, calcined, caribou (<u>Rangifer tarandus</u>)
1	Distal phalanx, calcined, caribou (<u>Rangifer tarandus</u>)
1	Proximal fragment distal vestigial phalanx, calcined, caribou (<u>Rangifer tarandus</u>)

Table D.298. (Continued)

Unit	Description
8	Distal phalanx fragments, calcined, possibly caribou (<u>Rangifer tarandus</u>)
1	Proximal fragments middle or distal phalange, calcined, probably caribou (<u>Rangifer tarandus</u>)
1	Tooth fragment, heavily burned, artiodactyl
1	Tooth fragment, calcined, medium-large mammal
2	Possible cranial fragments, calcined, medium-large mammal
2	Vertebral fragments, calcined, medium-large mammal
1	Possible proximal tibia fragment, calcined, large mammal
2	Rib fragments, calcined, medium-large mammal
1	Rib fragment, calcined, small mammal
1	Unidentifiable bone fragment, unburned, medium-large mammal
40	Unidentifiable bone fragments, heavily burned, medium-large mammal
14,404	Long bone and unidentifiable bone fragments, calcined, medium-large mammal
6	Unidentifiable bone fragments, calcined, small-medium mammal or bird
1	Unidentifiable bone fragment, calcined, probably mammal

Table D.298. (Continued)

Unit	Description
4a/5a Contact between oxidized Watana tephra and paleosol	7 Unidentifiable bone fragments, calcined, mammal
4b/5a Contact between unoxidized Watana tephra and paleosol	2 Long bone and unidentifiable bone fragments, calcined, medium-large mammal
5a Paleosol	2 Unidentifiable bone fragments, calcined, mammal
5a/5b Contact between paleosol and eolian silt	3 Long bone fragments, calcined, medium- large mammal 24 Unidentifiable bone fragments, calcined, medium-large mammal
5b Eolian silt	4 Unidentifiable bone fragments, calcined, medium-large mammal

Table D.299.

Artifact Summary by Stratigraphic Unit, TLM 184

Unit		Description
Surface	1	Argillite flake
	1	Basalt flake
	2	Chert flakes
1/2	34	Argillite flakes
Contact between organic mat and organic silt	1	Basalt flake
	1	Chalcedony flake
	21	Chert flakes
	4	Obsidian flakes
	1	Quartzite flake
2	63	Argillite flakes
Organic silt	10	Basalt flakes
	6	Chalcedony flakes
	147	Chert flakes
	6	Obsidian flakes
	1	Basalt modified flake (UA83-110-329)
	3	Chert modified flakes (UA83-110-449, 575, 578)
	2	Chert scrapers (UA83-110-448; UA84-56-134)
	1	Chert biface fragment (UA83-110-451)
	1	Chert notched point fragment (UA83-110-549)
	5	Rock fragments

Table D.299. (Continued)

Unit		Description
2/3	477	Argillite flakes
Contact between	43	Basalt flakes
organic silt and	2	Chalcedony flakes
Devil tephra	289	Chert flakes
	7	Obsidian flakes
	5	Quartzite flakes
	3	Basalt modified flakes (UA84-56-142b, 148b, 151)
	2	Chert modified flakes (UA83-110-1, 306)
	1	Basalt scraper (UA84-56-145)
	1	Basalt biface fragment (UA84-56-149)
	1	Argillite rejuvenation flake (UA83-110-505)
	1	Chert rejuvenation flake (UA83-110-332)
	3	Ochre pieces
3	380	Argillite flakes
Devil tephra	48	Basalt flakes
	11	Chalcedony flakes
	228	Chert flakes
	18	Obsidian flakes
	5	Rhyolite flakes
	1	Obsidian flake core (UA84-56-41)
	3	Ochre pieces

Table D.299. (Continued)

Unit	Description
3/4a	157 Argillite flakes
Contact between	7 Basalt flakes
Devil and oxidized	6 Chalcedony flakes
Watana tephra	200 Chert flakes
	7 Obsidian flakes
	1 Obsidian modified flake (UA83-110-396)
	1 Obsidian flake core fragment (UA84-56-71)
	1 Rock fragment
3/4	63 Argillite flakes
Contact between	5 Chert flakes
Devil and Watana tephras	2 Rock fragments
3/5a	1 Argillite modified flake (UA84-56-89)
Contact between Devil tephra and paleosol	
4a	138 Argillite flakes
Oxidized Watana	5 Basalt flakes
tephra	1 Chalcedony flake
	154 Chert flakes
	5 Obsidian flakes
	1 Rhyolite flake
	1 Chert modified flake (UA83-110-407)
	1 Chert scraper fragment (UA83-110-402)
	1 Argillite blade (UA83-110-525)

Table D.200. (Continued)

Unit		Description
4a/4b	3	Argillite flakes
Contact between oxidized and unoxidized Watana tephra		
4b	4	Argillite flakes
Unoxidized	1	Chalcedony flake
Watana tephra	1	Chert flake
4a/4c	5	Argillite flakes
Contact between	5	Chalcedony flakes
the oxidized	5	Chert flakes
Watana tephra and cultural unit		
4b/4c	1	Chert flake
Contact between unoxidized Watana tephra and cultural horizon		
4c	26	Argillite flakes
Cultural unit	11	Basalt flakes
	6	Chalcedony flakes
	293	Chert flakes
	9	Obsidian flakes

Table D.299. (Continued)

Unit	Description
	2 Chert modified flakes (UA83-110-799, 802)
	1 Argillite blade (UA83-110-776)
	2 Chert biface fragments (UA83-110-800, 808)
	1 Hammerstone (UA83-110-792)
	3 Rock fragments
4	7 Argillite flakes
Watana tephra	1 Basalt flake
	20 Chert flakes
	4 Obsidian flakes
4a/5a	2 Argillite flakes
Contact between oxidized Watana tephra and paleosol	1 Chert flake
4b/5a	1 Chert flake
Contact between unoxidized Watana tephra and paleosol	
4c/5a	6 Argillite flakes
Contact between cultural unit and paleosol	1 Chert flake

Table D.200. (Continued)

Unit		Description
4b/5b	1	Argillite flake
Contact between unoxidized Watana and eolian silt	1	Basalt flake
4/5a	2	Argillite flakes
Contact between Watana tephra and paleosol		
4c/4/5b	1	Basalt preform (UA83-110-474)
Pocket comprised of cultural unit, Watana tephra, and eolian silt		
5a	98	Argillite flakes
Paleosol	1	Chert flake
	1	Argillite modified flake (UA83-110-532)
5a/5b	3	Argillite flakes
Contact between paleosol and eolian silt	1	Basalt flake
	1	Obsidian flake

Table D.299. (Continued)

Unit		Description
5b	20	Argillite flakes
Eolian silt	1	Chalcedony flake
	2	Chert flakes
	1	Rock fragment
	1	Ochre piece
5	2	Argillite flakes
Paleosol or eolian silt		
5b/6a	1	Argillite flake
Contact between eolian silt and oxidized glacial drift		
4/5/6	3	Argillite flakes
Mixed zone of Watana tephra, paleosol, eolian silt and drift		
6a	1	Rock fragment
Unoxidized glacial unit		
Unknown	3	Argillite flakes
subsurface	1	Basalt flake
	1	Chert flake
	3	Thermally altered rock fragments

Area: South of the Oshetna Susitna River Mouth
Site Map: Locus A, Figure D.232
Locus B, Figure D.233
Survey Locale 124: Figure E.196
USGS Map: Talkeetna Mts. C-1, Figure E.8
Site Location: Appendix F

Setting:

TLM 185 is located on a ridge west of the Oshetna River, south of the confluence of the Oshetna River with the Susitna River. The site is comprised of two loci (A and B) located on the same ridge. Locus A is positioned approximately 45 m to the south of locus B on a slight rise of the ridge at ca. 762 m asl (2500 feet), and locus B sits somewhat higher on a flat area of the ridge measuring about 40 (northeast-southwest) x 20 m (northwest-southeast) at an elevation of ca. 777 m asl (2550 feet). The views from both loci are very similar. The Oshetna River valley and uplands with tundra are visible when looking eastward and southward from the site. To the west and northwest the view is composed of rolling upland tundra. The visibility to the north is obscured by the gently rising ridge on which the site is situated. A small lake approximately 2 ha in size is just out of view from the site to the northwest. The vegetation in the site area is characterized as upland spruce-hardwood forest. Floral growth in the site area is composed of scattered stands of spruce, dwarf birch, dwarf willow, lowbush cranberry, blueberry, Labrador tea, and lichens. The vegetation in the surrounding area is similar to that found on the site, except for heavier stands of spruce in the low-lying valley floor and a muskeg bog in the upland marshes to the west of the site.

Testing:

Locus A: At locus A, a single chert flake was found on the surface of an exposure (Table D.300). A 40 x 40 cm test pit (test pit 1) and eight shovel tests were excavated in the vicinity of the surface artifact (Figure D.232), but none produced artifacts.

Locus B: At locus B, a lithic scatter and a stemmed point (UA83-111-1; Figure D.389a) were found exposed on the surface of a deflated area on the southeast margin, facing the Oshetna River. Bone fragments were also found on the site surface, but appear to be of recent origin. Six shovel tests and a single 40 x 40 cm test pit (test pit 2) were excavated to determine the spatial extent of the site and vertical provenience of cultural material. Three basalt flakes were found in test pit 2 (Table D.300), all of which were recovered from a silty sand matrix sitting upon an oxidized sandy matrix. No artifacts were recovered from the shovel tests.

Estimated site size based on the distribution of artifacts is 100 square meters (Table D.2).

Table D.300.

Artifact Summary, TLM 185

Provenience	Description
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Lithic Material

Surface:

<u>Locus A</u>	1	Chert flake
<u>Locus B</u>	1	Basalt flake
	1	Chert flake
	1	Chert stemmed point (UA83-111-1)

Subsurface:

Locus B

Test Pit 2	3	Basalt flakes
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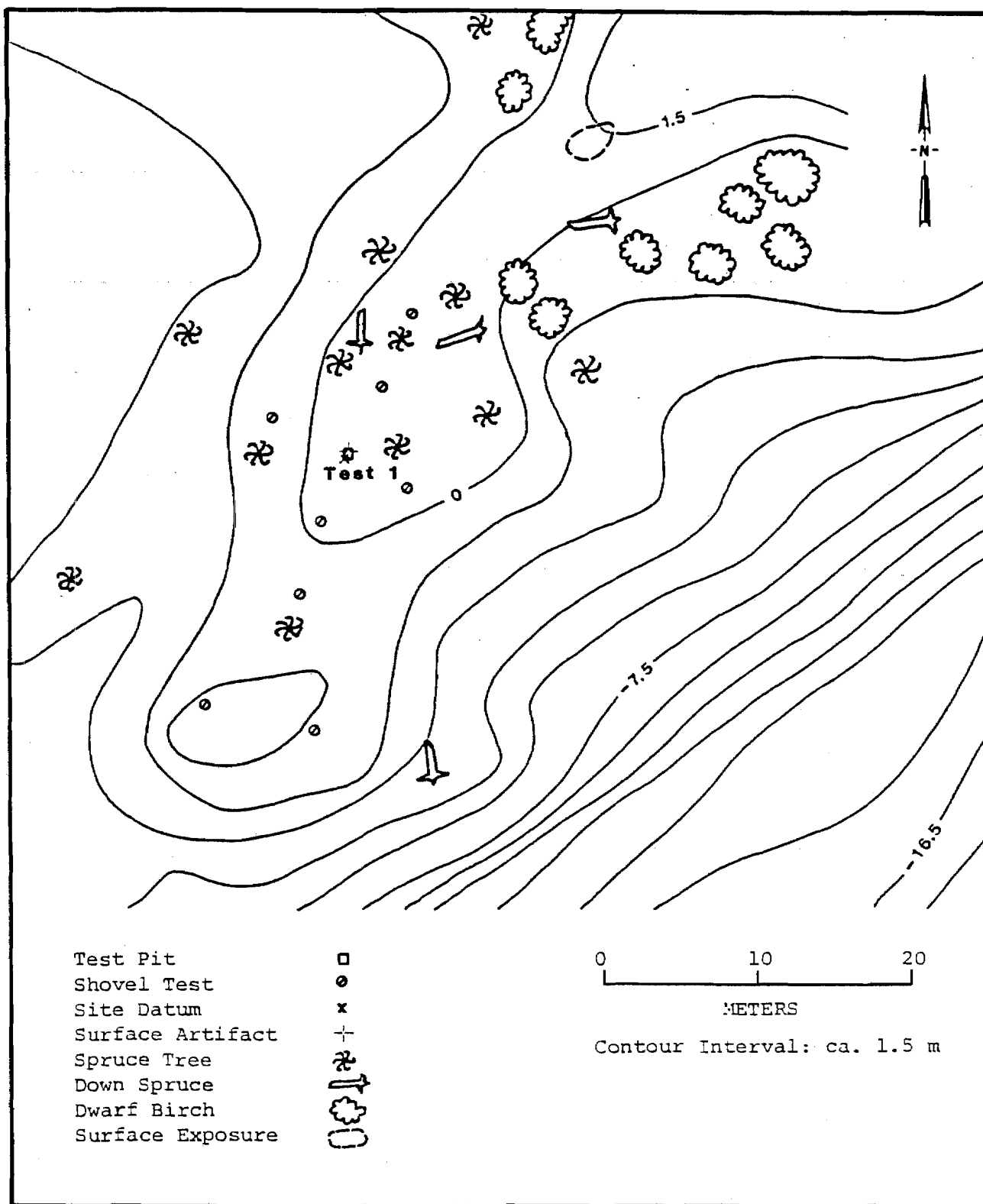


Figure D.232. Site Map, TLM 185 Locus A

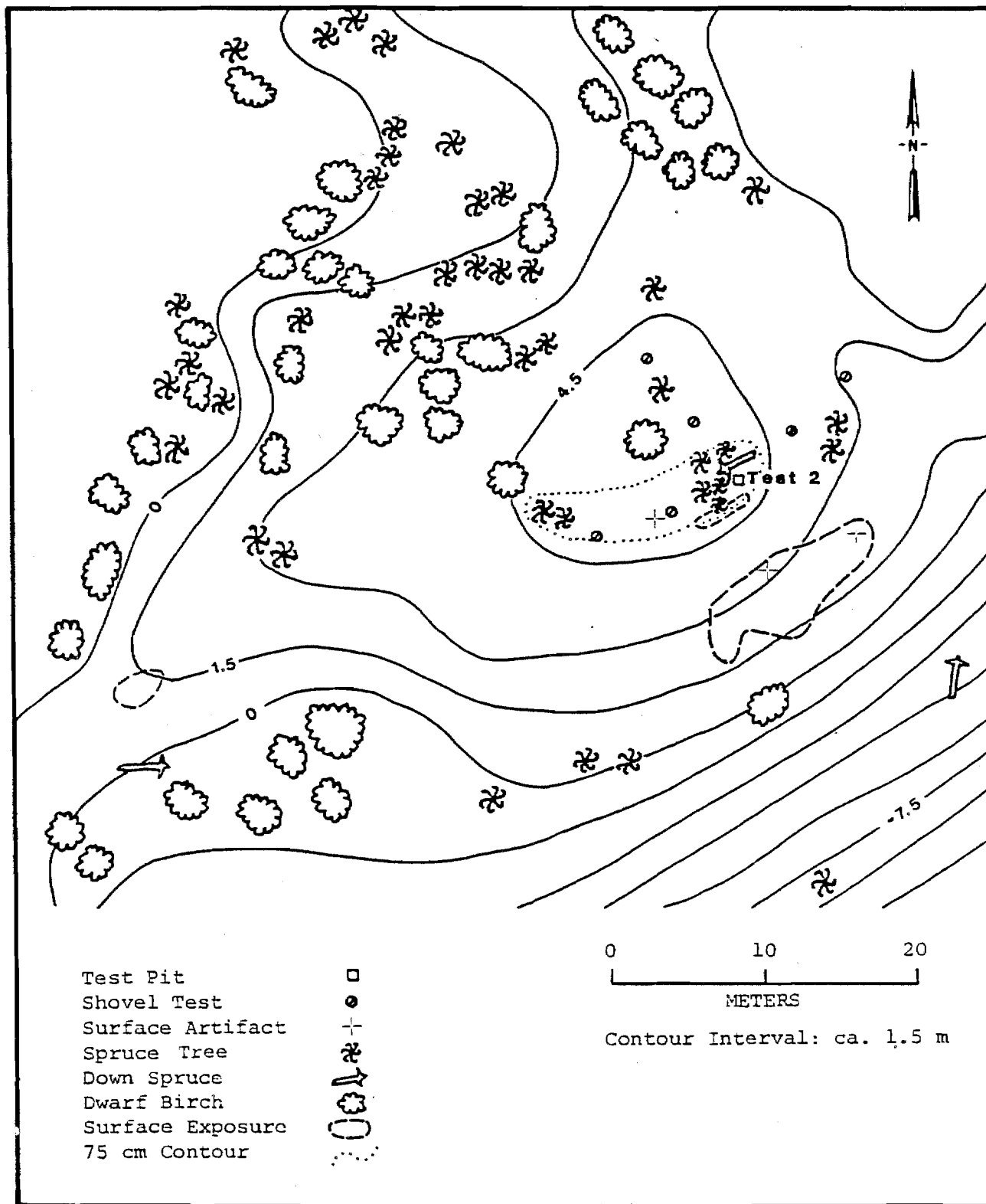


Figure D.233. Site Map, TLM 185 Locus B

AHRS Number TLM 186; Accession Number UA83-112

Area: West of Kosina Creek and North of its
Confluence with Gilbert Creek
Site Map: Figure D.234
Survey Locale 129: Figure E.204
USGS Map: Talkeetna Mts. C-2, Figure E.7
Site Location: Appendix F

Setting:

TLM 186 is located on a discrete elongated knoll northwest of the confluence of Gilbert Creek with Kosina Creek at an elevation of ca. 730 m asl (2400 feet). The northwest-southeast trending knoll is approximately 30 x 20 m. It has a prominent, south-facing, ca. 7-8 degree slope approximately 30 m above an unnamed east-west drainage to the south. The junction of this drainage and Kosina Creek is southeast of the site. The knoll descends north along a 4-degree slope for 10 m, then ascends up to a series of higher knolls approximately 12 m above the site. Visibility to the north is obstructed by the higher series of knolls. There is a clear view of TLM 179 across the unnamed drainage to the south. The higher peaks of the Talkeetna Mountains are visible to the south. Mt. Watana is visible to the west, and the eastern wall of the Kosina Creek valley is clearly visible. There is a series of freshwater lakes located to the northwest, west, and southwest of the site which vary in size. These lakes are in close proximity, but are not visible from the site. There is a second series of six lakes clustered together to the northwest. The largest of this cluster measures ca. 2.5 ha. Another lake is located west-southwest of the site measuring approximately 1 ha. This lake is drained by the unnamed drainage south of the site. Another series of five lakes is located south-southwest of the site. The largest of these lakes measures 1 ha. The top of the knoll is relatively flat with a game trail along the crest. On its southwest slope is an exposed erosional surface. Surface vegetation includes scattered white spruce with a ground cover of dwarf birch, lowbush cranberry, Labrador tea, blueberry, and lichen. Birch is

scattered along the south-facing slopes. The area surrounding the site is relatively well drained.

Testing:

The site consists of both surface and subsurface cultural material (Table D.301). An obsidian biface (UA83-112-1; Figure D.389b) was recovered from the surface of the game trail. Four basalt flakes were found on the exposed, eroded slope on the southwest end of the knoll. A 40 x 40 cm test pit (test pit 1) was placed over the area where the obsidian biface was recovered. One obsidian fragment was recovered from the lichen and spruce needle mat (organic mat) in test pit 1. Four shovel tests were placed on the level area of the site to the east and west, all with negative results. Estimated site size based on the distribution of artifacts is 35 square meters (Table D.2).

Table D.301.

Artifact Summary, TLM 186

Provenience

Description

Lithic Material

Surface:

3 Basalt flakes
1 Obsidian biface (UA83-112-1)
1 Rock fragment

Subsurface:

Test Pit 1

1 Obsidian fragment

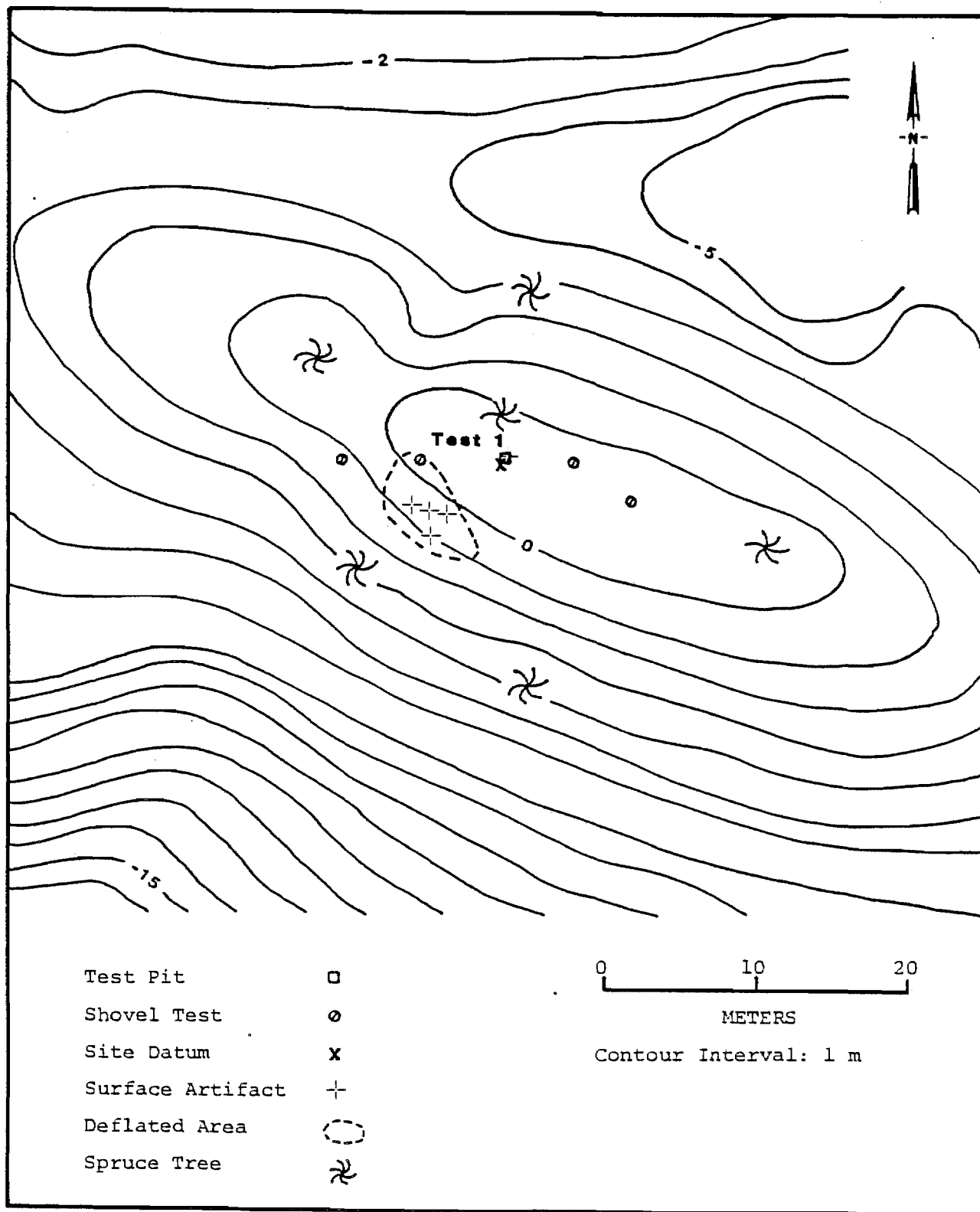


Figure D.234. Site Map, TLM 186

AHRS Number TLM 187; Accession Number UA83-113

Area: Southeast of Confluence of Gilbert Creek and
Kosina Creek
Site Map: Figure D.235
Survey Locale 128: Figure E.206
USGS Map: Talkeetna Mts. C-2, Figure E.7
Site Location: Appendix F

Setting:

The site is located on the crest of a small knoll southeast of the confluence of Gilbert Creek with Kosina Creek. Surrounding the site, situated at ca. 762 m asl (2500 feet), are three other small knolls of approximately the same elevation. A small creek, approximately 6 m below the site, drains the uplands to the north and east. To the south, west, and northwest, the terrain drops steeply to Gilbert Creek. Across Gilbert Creek to the west is a large rock outcrop that forms the divide between Kosina and Gilbert creeks. The site's location provides an excellent panoramic view for several kilometers. Three nearby sites that are visible are TLM 071, an historic cabin to the southeast, TLM 179, and TLM 186, two prehistoric sites located northwest across Kosina Creek. Vegetation around the site consists of open spruce woodlands, including black spruce, dwarf birch, Labrador tea, lowbush cranberry, crowberry, bearberry, grasses, lichen, and moss. The site has been deflated over one-half of its surface, leaving the underlying glacial drift exposed.

Testing:

Seven flakes were recovered from a surface context in a deflated area on the northwest edge of the knoll (Table D.302). One bone fragment of doubtful association with the flakes was also recovered. In addition, a chalcedony flake was found in test pit 1 at the contact of the organic mat and the light gray fine sandy silt (Devil tephra). Eleven shovel tests placed on the knoll, plus three on the adjacent knolls produced no additional cultural material. Estimated site size based on the distribution of artifacts is 16 square meters (Table D.2).

Table D.302.

Artifact Summary, TLM 187

Provenience		Description
<u>Lithic Material</u>		
Surface:	7	Argillite flakes
	1	Basalt flake
Subsurface:		
Test Pit 1	1	Chalcedony flake
<u>Faunal Material</u>		
Surface	1	Unidentifiable bone fragment

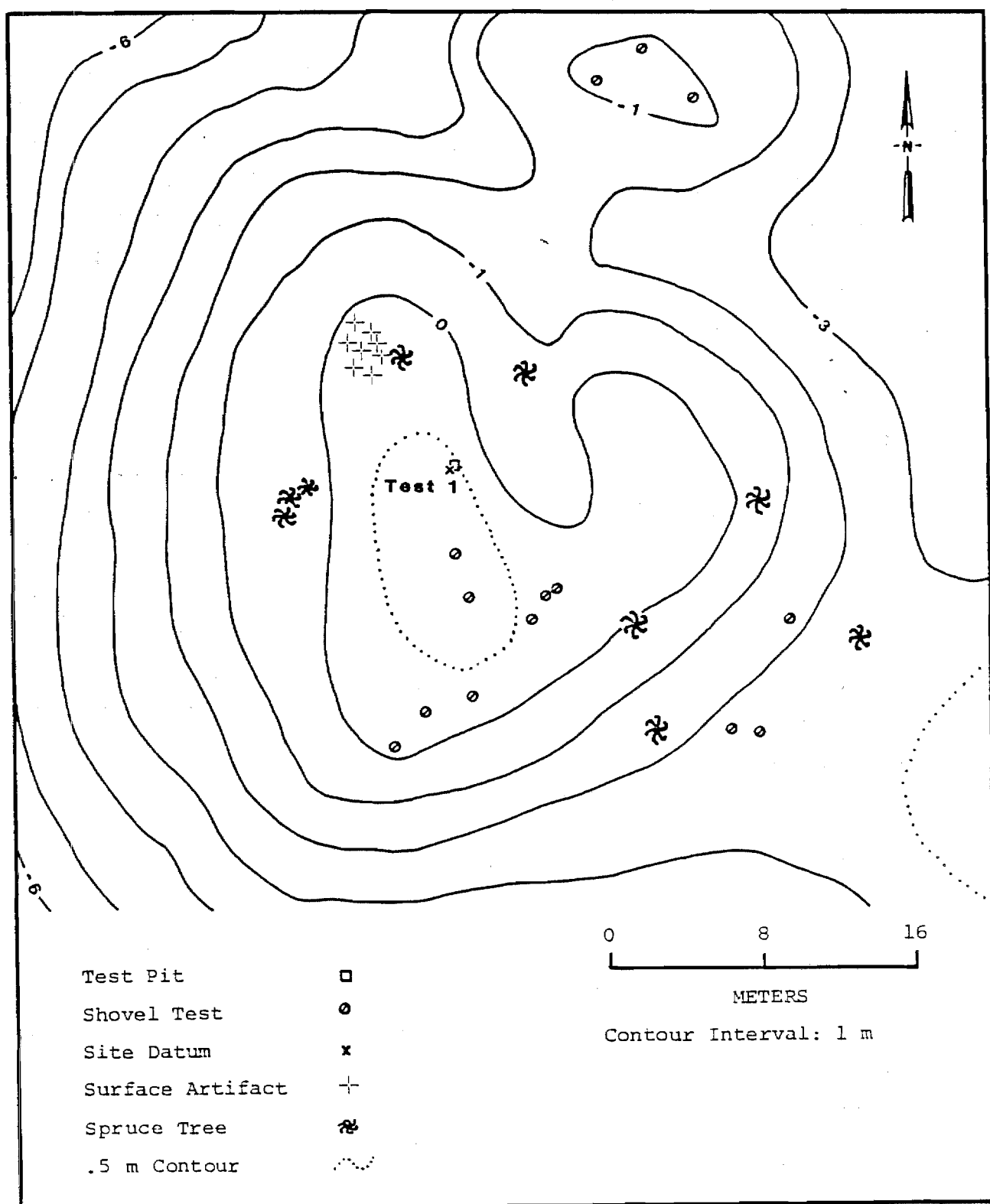


Figure D.235. Site Map, TLM 187

AHRS Number TLM 188; Accession Number UA83-228

Area: Northeast of Tsusena Creek Mouth
Site Map: Figure D.236
Survey Locale: Proposed Borrow F, Figure E.279
USGS Map: Talkeetna Mts. D-4, Figure E.2
Site Location: Appendix F

Setting:

TLM 188 is located on the west side of a small lake west of Tsusena Creek and northeast of the confluence of Tsusena Creek with the Susitna River. The site is on a small, flat knoll about 2 m above the lake surface at an elevation of 664 m asl (altimeter: 2178 feet). The 50 m diameter lake exists in a small depression between a series of kames and ridges near a bend in Tsusena Creek. Between the lake and Tsusena Creek are several gravel terraces with little soil development. Southwest of the site is a larger and higher ridge which overlooks Tsusena Creek to the north, south, and west. TLM 188 is located about 20 m west of the lake and 10 m southeast of a small stream draining into the lake. Both the lake and inlet stream are visible from the site, but Tsusena Creek is out of view. The knoll on which TLM 188 is located is relatively small and level, being approximately 20 (northwest-southeast) x 20 m (northeast-southwest). Vegetation on the site consists of black spruce, dwarf birch, blueberry, crowberry, bearberry, lichens, and mosses. The surrounding vegetation is more dense, particularly near the lake, and includes cottonwood, willow, dwarf birch, birch, mosses, and lichens.

Testing:

TLM 188 produced two green argillite flakes during survey testing, one found in the initial shovel test and the other in the subsequent 40 x 40 cm test pit (test pit 1). The excavated flake was found on top of the Devil tephra at the humus contact. The flake found in the shovel test was also probably associated with this level (Table D.303). Six survey shovel tests in the vicinity failed to reveal any additional

cultural material. A grid shovel testing program was undertaken to assist in determining site size and the distribution of cultural materials. Thirteen grid shovel tests were excavated; however, none contained cultural material. Observed site size based on the distribution of artifacts is 4 square meters (Table D.2).

Table D.303.

Artifact Summary, TLM 188

Provenience		Description
<u>Lithic Material</u>		
Subsurface:		
Shovel test 1	1	Argillite flake
Test pit 1	1	Argillite flake

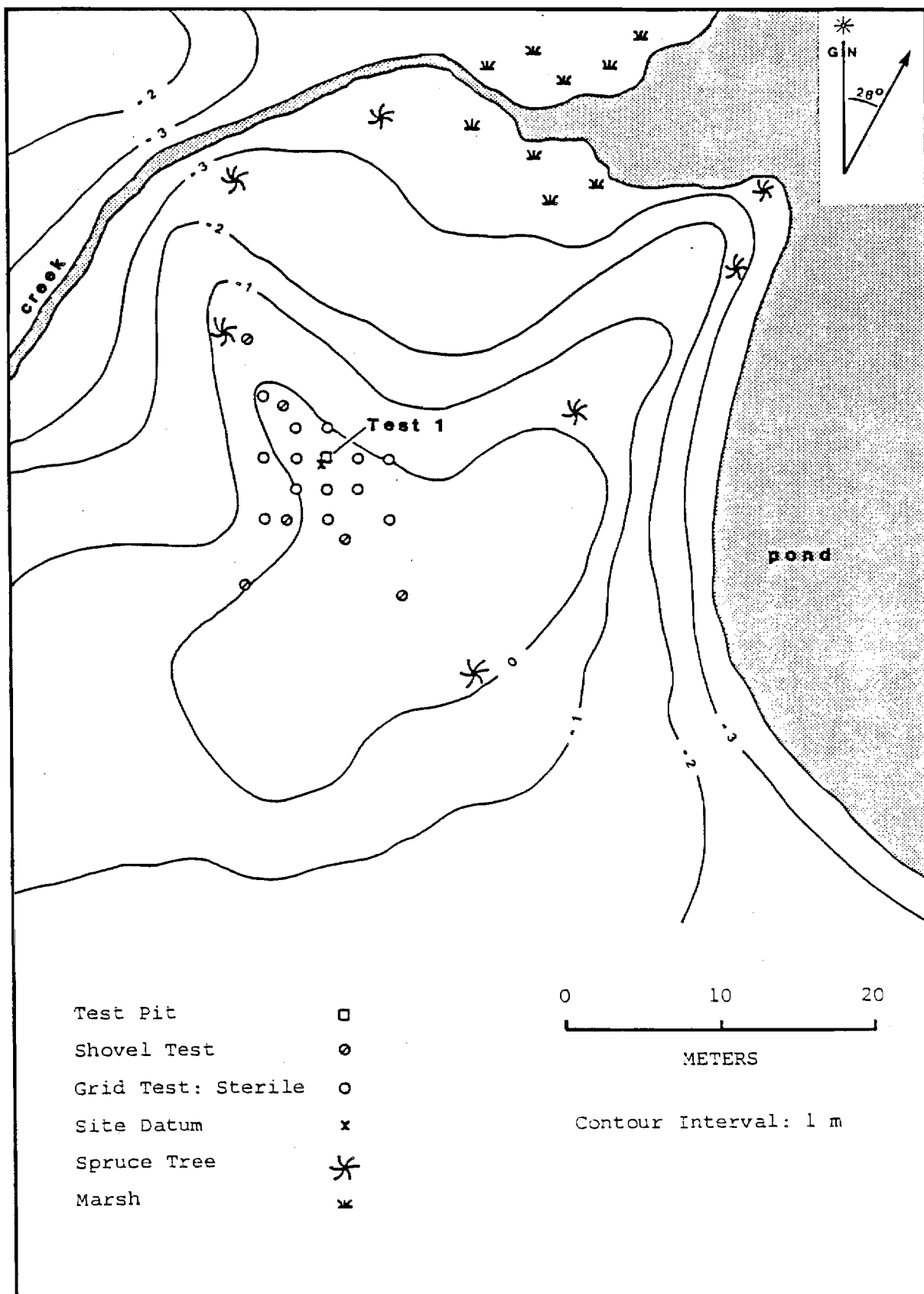


Figure D.236. Site Map, TLM 188

Area: South-southwest of Oshetna River Mouth
Site Map: Figure D.237
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, elongate knoll south-southwest of the mouth of the Oshetna River. The site occurs as three lithic scatters on the broad relatively flat summit of the knoll which is about 777 m asl (2550 feet) and 80 (east-west) x 40 m (north-south) in area. Scatter 3 occurs near the highest point of the knoll on the east end of the summit. The two other lithic scatters occur ca. 30 m west, on the southwestern margin of the knoll. The locations of scatters 1 and 2 allow views toward a 2 ha lake located southwest of the site and the surrounding marsh, with slopes to the west of the lake and ridges and knolls to the east of the lake at the top of the west wall of the Oshetna River valley. Also in view to the west is terrain of similar elevation for a distance of approximately 2 km. From the summit of the knoll, the slopes to the north, east, and south drop steeply (ca. 30 degrees), allowing a clear view of the confluence of the Oshetna River with Susitna River, flood plains, and areas across the rivers to the north and east. The south and southwest slopes descend more gradually (15 degrees) toward the lake and the surrounding marshy flats, while to the west, a broad saddle joins the site knoll to a north-south oriented ridge. The Oshetna River flows approximately 122 m below the site. Site vegetation consists of birch shrub with scattered spruce. Surface exposures resulting from wind deflation and animal burrowing are evident.

Testing:

Three lithic scatters were observed on the surface. Scatter 1 consisted of two basalt flakes; scatter 2 consisted of three basalt flakes clustered approximately 5 m southeast of scatter 1; scatter 3 consisted of a single red chert flake, located approximately 30 m east (Table D.304). A test pit (test pit 1) was placed between scatters 1 and 2, and produced a single basalt flake from the contact between the Watana tephra and drift. A shovel test 5 m north of test pit 1 produced a basalt flake from the lower contact root mat, and was expanded into a second test pit (test pit 2); however, no other lithic material was found. Seventeen additional shovel tests failed to reveal further subsurface cultural remains. Estimated site size based on the distribution of artifacts is 300 square meters (Table D.2).

Table D.304.

Artifact Summary, TLM 189

Provenience	Description
<u>Lithic Material</u>	
Surface:	
Scatter 1	2 Basalt flakes (uncollected)
Scatter 2	3 Basalt flakes
Scatter 3	1 Chert flake
Subsurface:	
Test Pit 1	1 Basalt flake
Test Pit 2	1 Basalt flake

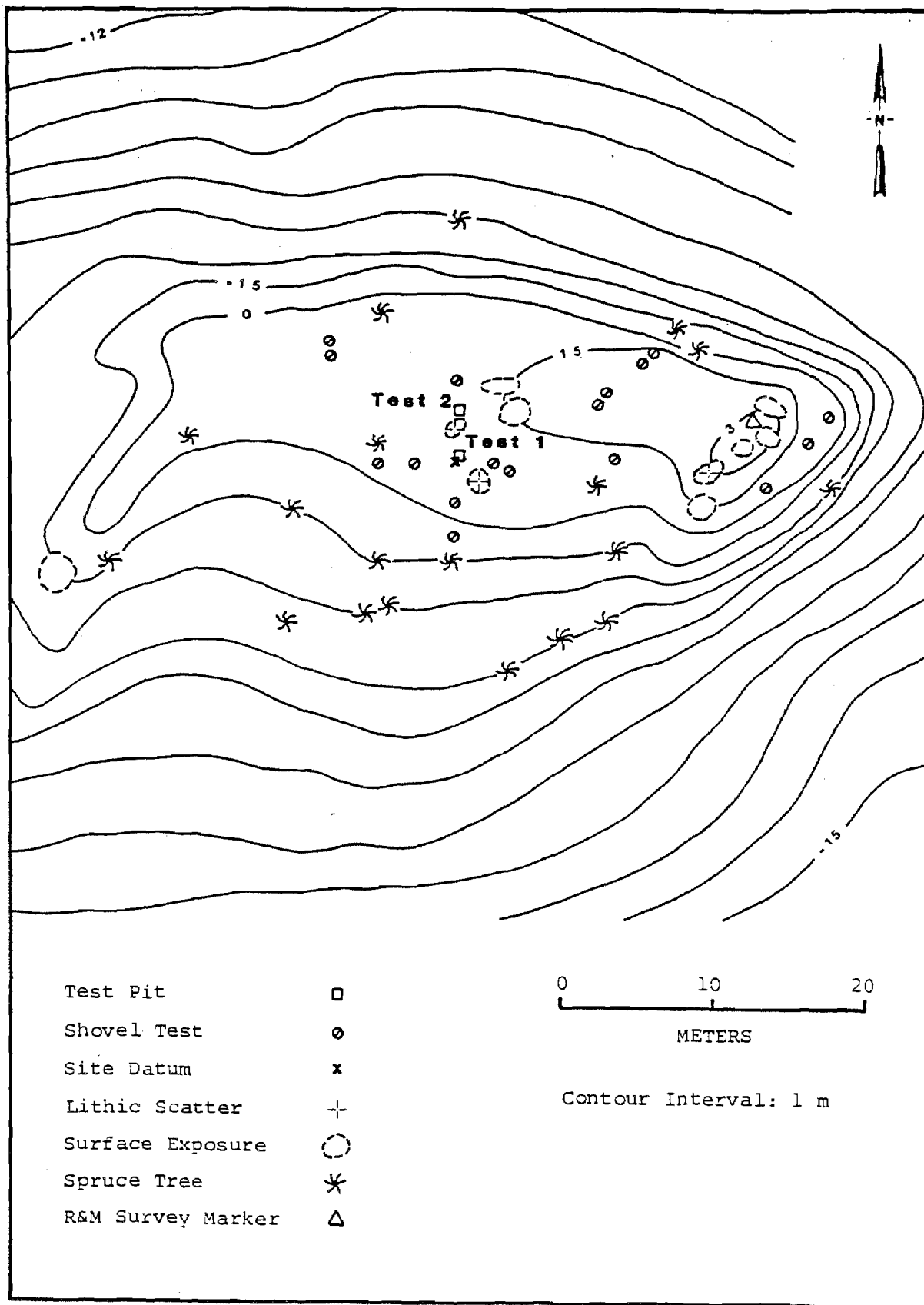


Figure D.237. Site Map, TLM 189