UTAH ARTIQUITIES SITE FORM
developed by cooperative agreement by:
Bureau of Land Management
Division of State History
University of Utah Archeological Center

1. Site No. [I/1-10] 42Cb247

2. County Carbon
3. Temp. No. ____

4. Class: ___ Prehistoric x Historic ___ Paleontologic
5. Cultural Site Type (interpreted function): Tran Way
6. Paleontological Site Type: ___ Invertebrate; ___ Vertebrate; ___ Flora
7. Elevation [I/11-15] 6900-9000 ft. X .3048 = 2103-2743 m.
elevation source: Contours
8. UTM Grid: [I/16-30] zone 12 ; ____ m E; ____ m N
9. [II/1-16] ____ of NW of NW of Section 20 T. 14 S, R. 14 E
10. Map Reference: Sunnyside and Patmos Head, Ut Series: 7.5 Date: 1972
11. Aerial Photo-Data: ____

12. Site Location: Tramway End Points UTM coordinates: from 553500 E. 4383300 N to 556000 E. 4387000 N.

13. Land Owner [II/17-18]: Private-Kaiser Steel Corp.
BLM District/Forest [II/19]: ____
14. Site Name/Previous Designations: Utah Asphaltum Company Tramway

15. Description of Site: Consist of numerous tram towers, cables and buckets that carried tar sands (asphaltum) from the mines above Water Canyon down into Whitmore Canyon for transport elsewhere. Bucket and cable still hang between towers on several locations. Towers are in various state of ruin.

16. Artifacts: Artifacts should be described/drawn on a continuation sheet and their locations plotted on the site map.

CLASS	QUANTITY
Debitage [II/30]	
Bifaces [III/1-9]	
Scrapers [III/1-9]	
Utilized Flakes	

CLASS	TYPE	QUANTITY
Ceramics [III/10-21]		
Proj Pnt [III/1-9]		
Gnd Stn [II/22-29]		
Glass [II/22-29]	x	
Metal [II/22-29]	x	
Nails [II/22-29]		
Cans [II/22-29]		
Wood [II/22-29]	x	
Other [II/22-29]	x	

Description: built of concrete, wood frames and metal supports

17. Non-Structural Features: (describe and locate on site map) [III/22-27]

_hearth/firepit(HE)	_rubble mound(RM)	_earthen mound(EM)	_trail/road(TR)
_midden(MD)	_stone circle(SC)	_burial(BU)	_RR grade(RG)
_depression(DE)	_rock alignment(RA)	_pictograph(PI)	_tram way/road(TW)
_water control(WC)	_mine tailings(MT)	_petroglyph(PE)	_other(OT)

Description: ____

18. Structural Features: (describe and locate on site map) [III/28-IV/6]

CLASS	MATERIAL	QUANTITY	CLASS	MATERIAL	QUANTITY
Single rm			Tower	wood, concrete	30
Multiple rm			Cairn		
Granary			Corral		
Cist			Dugout		
Pithouse			Kiln		
Kiva			Monument		
Well			Mine		

Description: Each tower an A frame or ⊔ retangular - bars vary with locations as do height. More massive typed tend to set on canyon edges where tram makes large spans

19. Cultural Affiliation [IV/7-14]: Historic American
How Determined? Historic Records
20. Site Dimensions : ___m X ___m; Area [IV/17-21]: ___sq
21. Were surface artifacts collected? __Yes; x No; [IV/22] If yes, attach a continuation sheet describing sampling method used.
22. Estimated depth of fill [IV/23] : ___
Subsurface test? __Yes; x No (Include location of test on site map)
Description: ___
23. Site Condition [IV/25] : __Excellent; __Good; x Fair; __Poor
Agent of Impact: erosion, vandalism
24. Nat. Register Potential [V/1]: x Significant (C); __Non-Significant (D)
Justification: Mine historic and tedinology

25. Research Potential: yes
26. Recommended Mitigation: preserve
27. Direction/Distance to Permanent Water [V/5-10] : ___/___m
Type/Name of Water Source [V/11] : ___
Distance to nearest other Water Source [V/2-4]: ___
Type of other water source: ___
Distance to Cultivatable Soil [V/12-14] : ___
28. Topographic Location (check one under each heading) [V/15-18]

SITE NO. ___

PRIMARY LANDFORM
_mountain spine(A)
_hill/butte(B)
_tableland/mesa(C)
_ridge(D)
_valley(E)
_plain(F)
_canyon(G)

POSITION ON LANDFORM
_top/crest/peak(A)
_edge(B)
_slope(C)
_toe/foot/bottom(D)
_saddle/pass(E)
_bench/ledge(F)
_rimrock(G)
_interior(H)

DEPOSITIONAL ENVIRONMENT
_fan(A)
_talus(B)
_dune(C)
_stream terrace(D)
_playa(E)
shore feature
_extinct lake(F)
_extant lake(G)
_alluvial plain(H)
_coluvium(I)
_moraine(J)
_flood plain(K)
_marsh(L)
_landslide/slump(M)
_delta(N)
_island(O)
_cliff(P)
_outcrop(Q)
_stream bed(R)

SECONDARY POSITION
_top/crest/ridge(A)
_edge(B)
_slope(C)
_toe/foot(D)
_cutbank(E)
_detached monolith(F)
_interior(G)
_step(H)
_riser(I)
_port.geo.feature(J)
_spring mound/bog(K)
_cave(L)
_alcove/shelter(M)
_patterned grou

Description: Begins on Whitmore Canyon floor and proceeds to cross talus slopes, ridge lines cliff, etc. to old asphalt mines.

29. Degree/Aspect of slope [V/19-23] : ___
30. Vegetation COMMUNITY and association [V/24-25]:

_ALPINE GRASSLAND(AA)
_SPRUCE FIR(BZ)
_krumholz(BA)
_white fir-spruce(BB)
_ASPEN DOUGLAS FIR(CZ)
_limber pine(CA)
Xdouglas fir(CB)
_lodgepole pine(CC)
_bristlecone pine(CD)
_aspen(CE)
_streamside(CD)
_meadow grassland(CG)

_YELLOW PINE-OAK(DZ)
_ponderosa pine(DA)
_oakbrush(DB)
Xmountain brush(DC)
_maple(DD)
_streamside(DE)

_PLAINS/PRAIRIE(EZ)
_grasslands(EA)
Xpinyon-juniper(EB)
_streamside(EC)

_COLD DESERT SHRUB(FZ)
_sagebrush(FA)
_small sagebrush(FB)
_little rabbitbrsh(FC)
_shadscale(FD)
_horsebrush(FE)
_winter-fat(FF)
_hop-sage/blkbrsh(FG)
_bud sagebrush(FH)
_nat. saltbrush(FI)
_gray molly(FJ)
_streamside(FK)

_SALT DESERT SHRUB(GZ)
_greasewood(GA)
_greywood-shadscl(GB)
_seepweed(GC)
_picklewd/samphire(GD)
_saltgrass(GE)
_alkali sacaton(GF)
_rabbitbrush(GG)

_WARM DESERT SHRUB(HZ)
_desert saltbrush(HA)
_creosote bush(HB)
_creosote/bursage(HC)
_joshua tree(HD)
_MARSH COMMUNITY(IA)

_ALKALI FLATS/MUD FLATS/DRY LAKE/ WASTELAND(KZ)

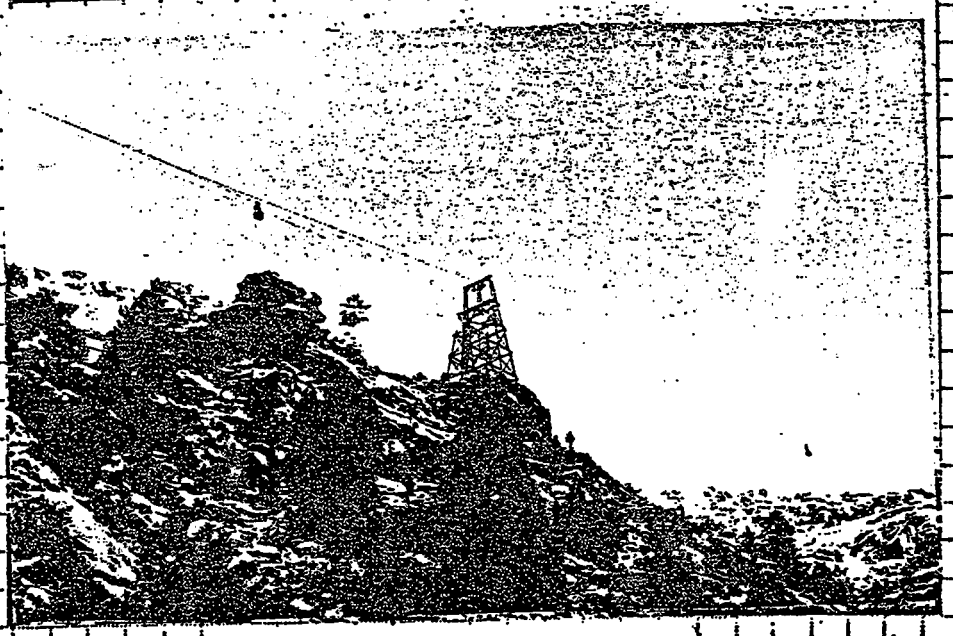
_CULTIVATED LAND(JZ)

(Check COMMUNITY only if association cannot be determined)

Description: Crosses several vegetation zones - mostly pinyon-juniper, oak brush, sage, grasses, aspen, douglas fir.

31. Next nearest plant association/distance: ___
32. Photograph Numbers [V/26] : ___
33. Recorded by: Asa Nielson - David Merril
Survey Org. [V/27-28]: Antiquities Section Date: 02/28/81
Assisting Crew Members: Jack Oviatt, Jim Kirkman

34. Sponsoring Agency: Kaiser Steel Contract No. ___



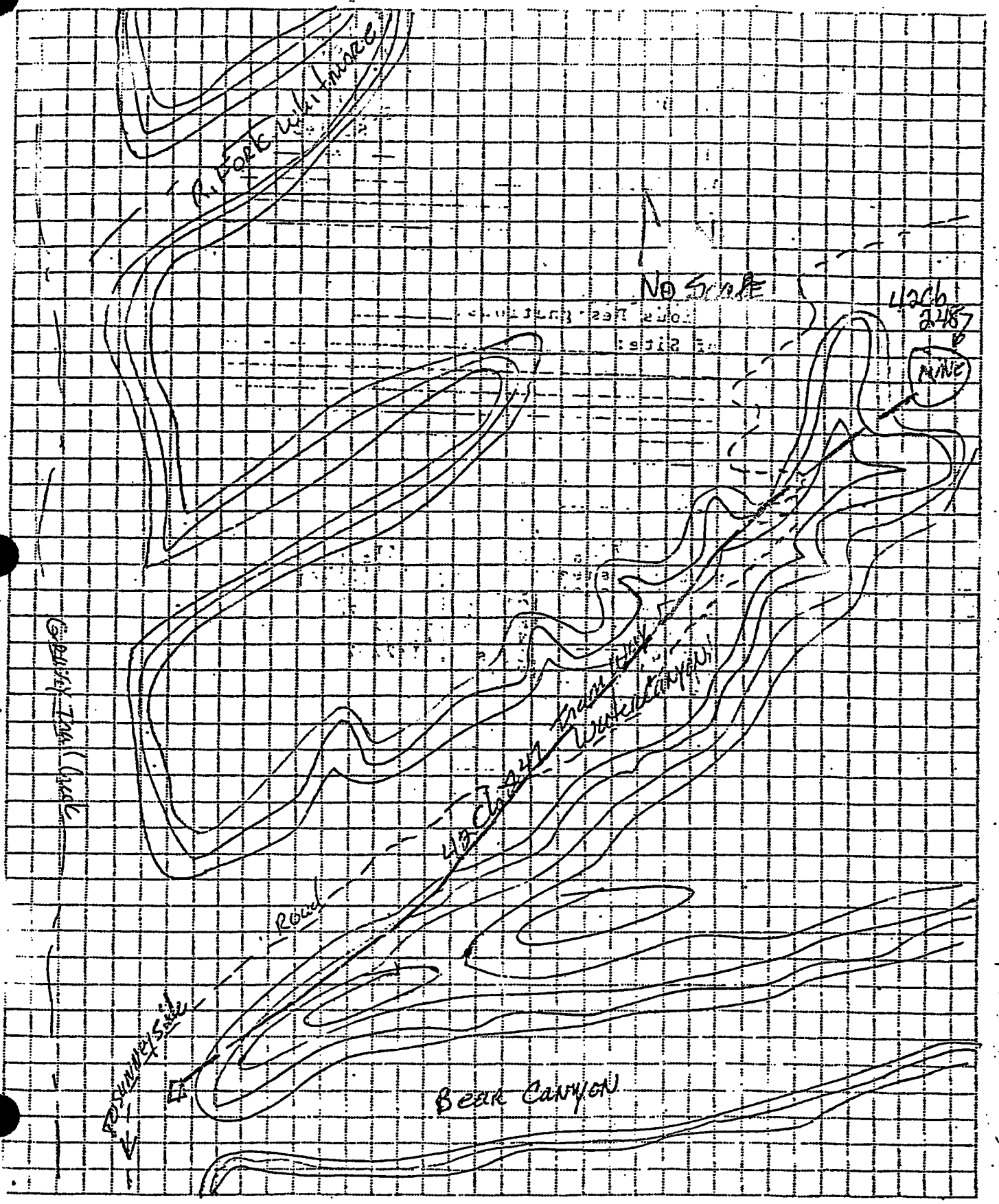
Site 42Cb247
Two Views of Tramway
Tower Structures in Water
Canyon.

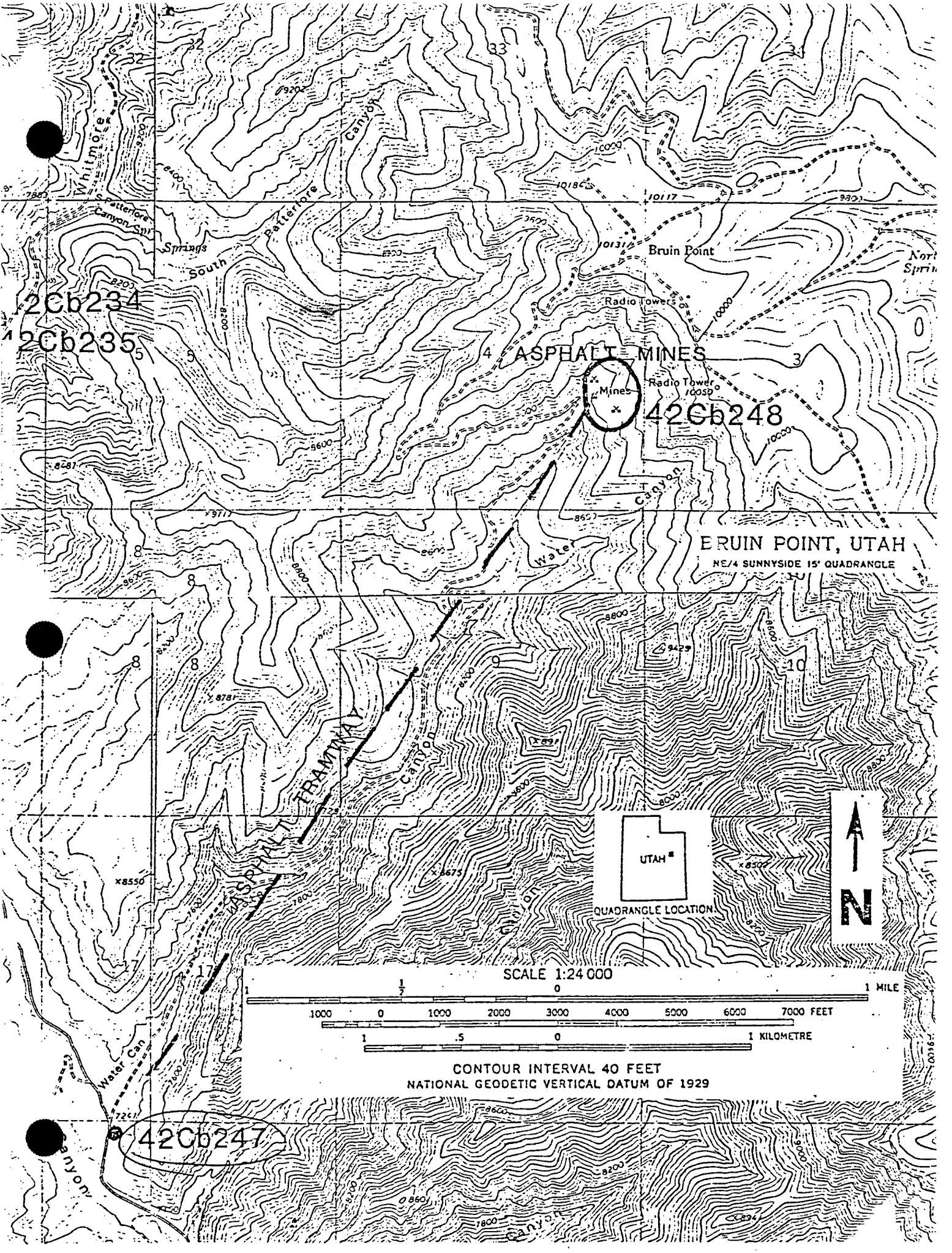
35. Encoding Form: (al fied)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
I																															
II																															
III																															
IV																															
V																															
VI																															

Form must be accompanied by a site map; photocopy of U.S.G.S. topo map with T., R., scale, and quad name; photographs of the site; and artifact sketches (if applicable).

SITE NO. 42Cb 247




42Cb234
42Cb235
ASPHALT MINES
Mines
42Cb248
Radio Towers
Bruin Point
South Patterfore Canyon
Whitmore
Patterfore Canyon Spr
Springs
Water Canyon
ASPHALT TRAMWAY
Canyon
BRUIN POINT, UTAH
NE/4 SUNNYSIDE 15' QUADRANGLE
UTAH
QUADRANGLE LOCATION
N
SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETRE
CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
42Cb247

UTAH ANTIQUITIES SITE FORM
developed by cooperative agreement by:
Bureau of Land Management
Division of State History
University of Utah Archeological Center

1. Site No. [I/1-10] 42Cb248
2. County Carbon
3. Temp. No.

4. Class: Prehistoric X Historic Paleontologic
5. Cultural Site Type (interpreted function): Asphalt (tar sand) Mine
6. Paleontological Site Type: Invertebrate; Vertebrate; Flora
7. Elevation [I/11-15] 9000 ft. X.3048 = 2743 m.
elevation source: Contour
8. UTM Grid: [I/16-30] zone ; m E; m N
9. [II/1-16] of NE of SE of Section 4 T. 14S, R. 14E
10. Map Reference: Bruin Point Series: 7.5 Date: 1972
11. Aerial Photo Data:
12. Site Location: Take state highway to Sunnyside; proceed past Kaiser Steel Mines 3.6 kilometers to Water Canyon. Travel east up Water Canyon about 4 kilometers. Mine access is on a large switch back on the road and is visable from road.
13. Land Owner [II/17-18]: Patent claim-Atlantic Richfield Oil Company
BLM District/Forest [II/19]:
14. Site Name/Previous Designations: Utah Asphaltum Company Mine
15. Description of Site: Two large tar sane/shale oil deposits on the west side of Patmos Ridge, just below Bruin Point. Site is a cliff cut type mine. One dug out building on the south side. Concrete building near tramway entry.

16. Artifacts: Artifacts should be described/drawn on a continuation sheet and their locations plotted on the site map.

CLASS	QUANTITY
Debitage [II/30]	
Bifaces [III/1-9]	
Scrapers [III/1-9]	
Utilized Flakes	

CLASS	TYPE	QUANTITY
Ceramics [III/10-21]	X	
Proj Pnt [III/1-9]		
Gnd Stn [II/22-29]		
Glass [II/22-29]	X	
Metal [II/22-29]	X	
Nails [II/22-29]		
Cans [II/22-29]		
Wood [II/22-29]	X	
Other [II/22-29]		

Description: Ironstone and porcelain, various green, blue, and brown glass types.

17. Non-Structural Features: (describe and locate on site map) [III/22-27]

_hearth/firepit(HE) _rubble mound(RM) _earthen mound(EM) _trail/road(TR)
_midden(MD) _stone circle(SC) _burial(BU) _RR grade(RG)
_depression(DE) _rock alignment(RA) _pictograph(PI) _tram way/road(TW)
_water control(WC) _mine tailings(MT) _petroglyph(PE) _other(OT)

Description: None

18. Structural Features: (describe and locate on site map) [III/28-IV/6]

CLASS	MATERIAL	QUANTITY
Single rm		
Multiple rm		
Granary		
Cist		
Pithouse		
Kiva		
Well		

CLASS	MATERIAL	QUANTITY
Tower	X	
Cairn		
Corral		
Dugout	block/wood	1
Kiln		
Monument		
Mine	X	2

Description: Two mine areas, about 100 meters across, concrete/block dugout about 4 X 4 meters. Also end of 42Cb247 is on the site - the last terminal tram support.

19. Cultural Affiliation [IV/7-14]: Historic
How Determined? Records
20. Site Dimensions : 300 m X 70 m; Area [IV/17-21]: _____ sq m
21. Were surface artifacts collected? __Yes; X No; [IV/22] If yes, attach a continuation sheet describing sampling method used.
22. Estimated depth of fill [IV/23] : Unknown
Subsurface test? __Yes; x No (Include location of test on site map)
Description: _____
23. Site Condition [IV/25] : __Excellent; __Good; x Fair; __Poor
Agent of Impact: Erosion - vandalism to dugout
24. Nat. Register Potential [V/1]: x Significant (C); __Non-Significant (D)
Justification: Only one of its kind in Utah with Tramway. Good for historic mine studies.

25. Research Potential: Yes
26. Recommended Mitigation: Preserve
27. Direction/Distance to Permanent Water [V/5-10] : West / 200 m
Type/Name of Water Source [V/11] : Water Canyon Creek
Distance to nearest other Water Source [V/2-4]: 2.5 kilometers
Type of other water source: Grassy Trail Creek
Distance to Cultivatable Soil [V/12-14] : _____
28. Topographic Location (check one under each heading) [V/15-18]

PRIMARY LANDFORM	POSITION ON LANDFORM	DEPOSITIONAL ENVIRONMENT		SECONDARY POSITION
_mountain spine(A)	_top/crest/peak(A)	_fan(A)	_marsh(L)	_top/crest/ridge(A)
_hill/butte(B)	X edge(B)	_talus(B)	_landslide/slump(M)	X edge(B)
X tableland/mesa(C)	_slope(C)	_dune(C)	_delta(N)	_slope(C)
_ridge(D)	_toe/foot/bottom(D)	_stream terrace(D)	_island(O)	_toe/foot(D)
_valley(E)	_saddle/pass(E)	_playa(E)	_cliff(P)	_cutbank(E)
_plain(F)	_bench/ledge(F)	shore feature	X outcrop(Q)	_detached monolith(F)
_canyon(G)	_rimrock(G)	_extinct lake(F)	_stream bed(R)	_interior(G)
	_interior(H)	_extant lake(G)		_step(H)
		_alluvial plain(H)		_riser(I)
		_coluvium(I)		_port.geo.feature(J)
		_moraine(J)		_spring mound/bog(K)
		_flood plain(K)		_cave(L)
				_alcove/shelter(M)
				_patterned ground(N)

Description: Upper Wasatch or Lower Green River Formation. A cliff outcrop on the edge of Bruin Point Mesa.

29. Degree/Aspect of slope [V/19-23] : 0-30 west
30. Vegetation COMMUNITY and association [V/24-25]:

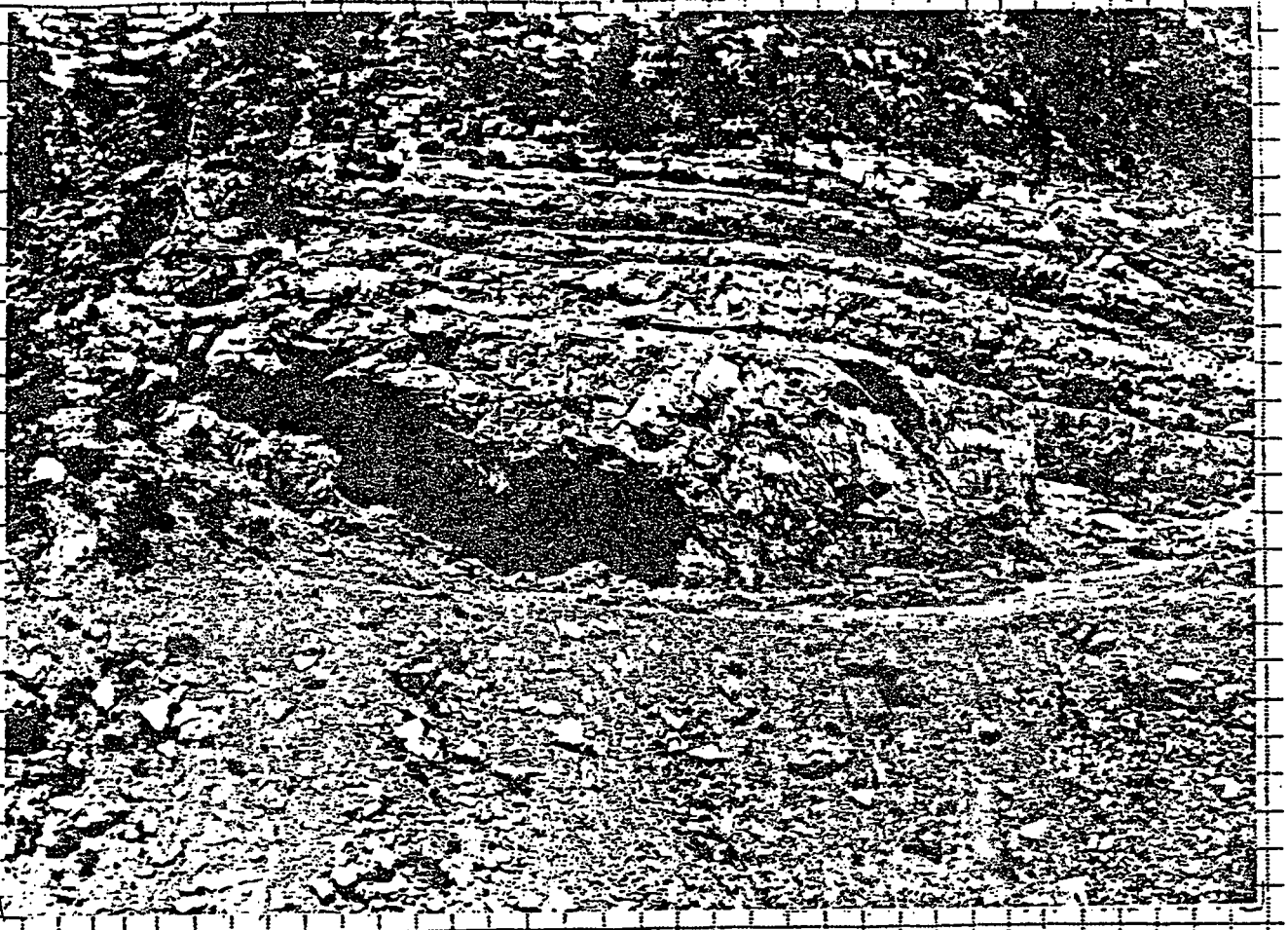
_ALPINE GRASSLAND(AA)	_YELLOW PINE-OAK(DZ)	_COLD DESERT SHRUB(FZ)	_SALT DESERT SHRUB(GZ)	_WARM DESERT SHRUB
	_ponderosa pine(DA)	_sagebrush(FA)	_greasewood(GA)	_desert saltbrush
_SPRUCE FIR(BZ)	_oakbrush(DB)	_small sagebrush(FB)	_grswood-shadscl(GB)	_creosote bush(HB)
_krumholz(BA)	_mountain brush(DC)	_little rabbitbrsh(FC)	_seepweed(GC)	_creosote/bursage
_white fir-spruce(BB)	_maple(DD)	_shadscale(FD)	_pickleWd/samphire(GD)	_joshua tree(HD)
X ASPEN DOUGLAS FIR(CZ)	_streamside(DE)	_horsebrush(FE)	_saltgrass(GE)	_MARSH COMMUNITY(
_limber pine(CA)		_winter-fat(FF)	_alkali sacaton(GF)	
_douglas fir(CB)		_hop-sage/blkbrsh(FG)	_rabbitbrush(GG)	_ALKALI FLATS/MUD FLATS/DRY LAKE/ WASTELAND(KZ)
_lodgepole pine(CC)	_PLAINS/PRAIRIE(EZ)	_bud sagebrush(FH)		
_bristlecone pine(CD)	_grasslands(EA)	_nat saltbrush(FI)		
_aspen(CE)	_pinyon-juniper(EB)	_gray molly(FJ)		_CULTIVATED LAND(JZ)
_streamside(CD)	_streamside(EC)	_streamside(FK)		
_meadow grassland(CG)				

(Check COMMUNITY only if association cannot be determined)

Description: Douglas fir, aspen, sage.

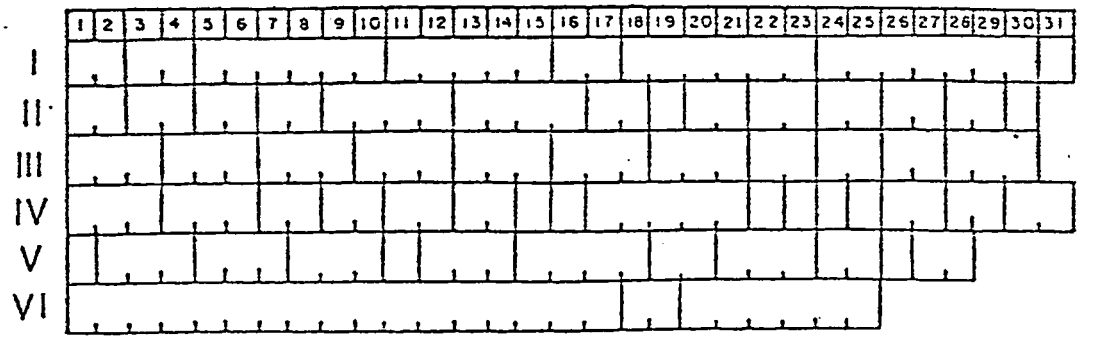
31. Next nearest plant association/distance: EC, 200 m
32. Photograph Numbers [V/26] : No number, personal copy courtesy of Phil Nota
33. Recorded by: Phil Notariani/Asa Nielson
Survey Org. [V/27-28]: Cultural Services, A.S. Date: March 4, 1981
Assisting Crew Members: _____

34. Sponsoring Agency: Kaiser Steel Corp. Contract No. _____

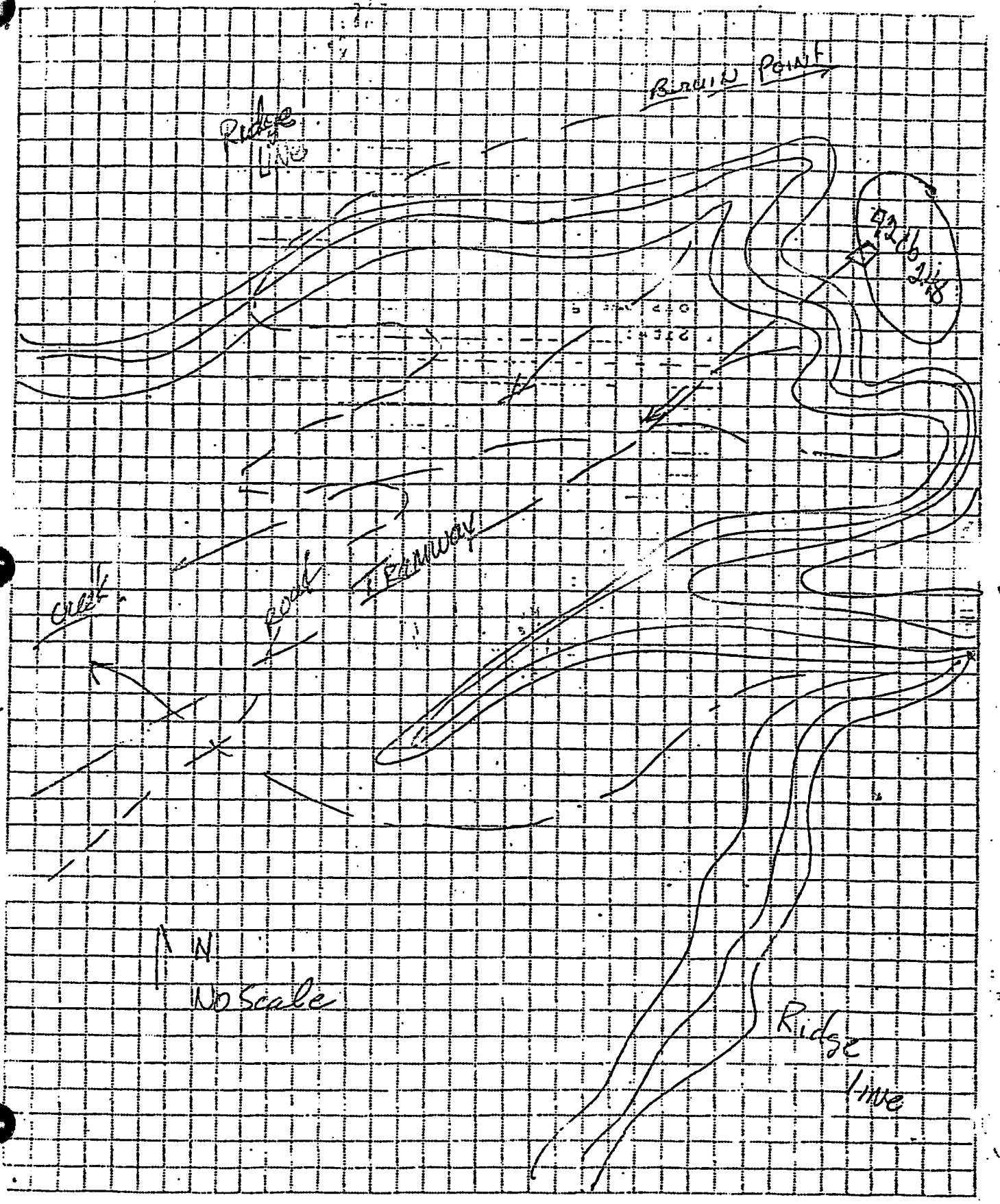


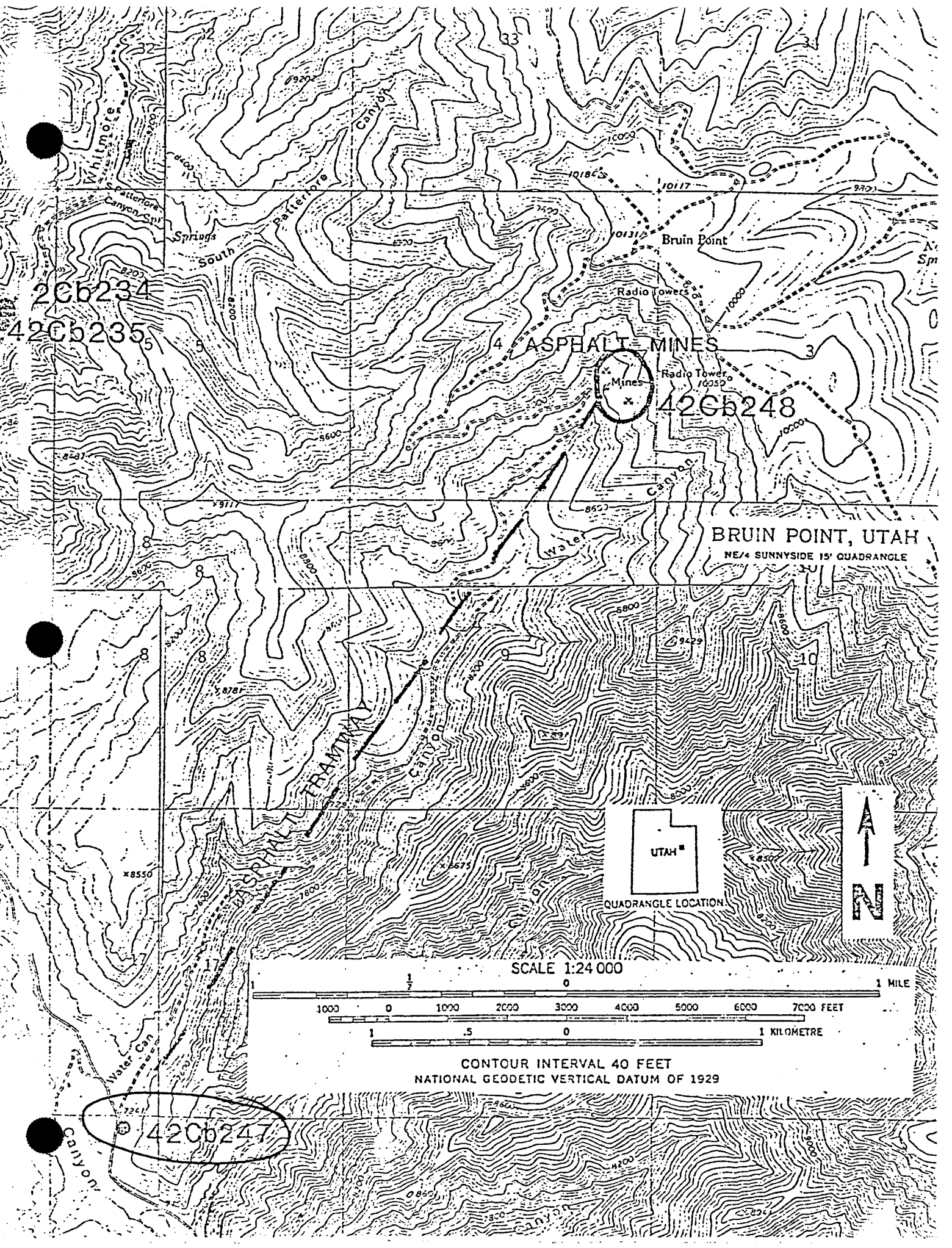
Site 42Cb248
General View of the Mine
Looking East.

35. Encoding Form: (all entries are right justified)



Form must be accompanied by a site map; photocopy of U.S.G.S. topo map with T., R., scale, and quad name; photographs of the site; and artifact sketches (if applicable).


Brain Point
Ridge Line
42 Cb 248
Tramway
Road
Creek
N
No Scale
Ridge line



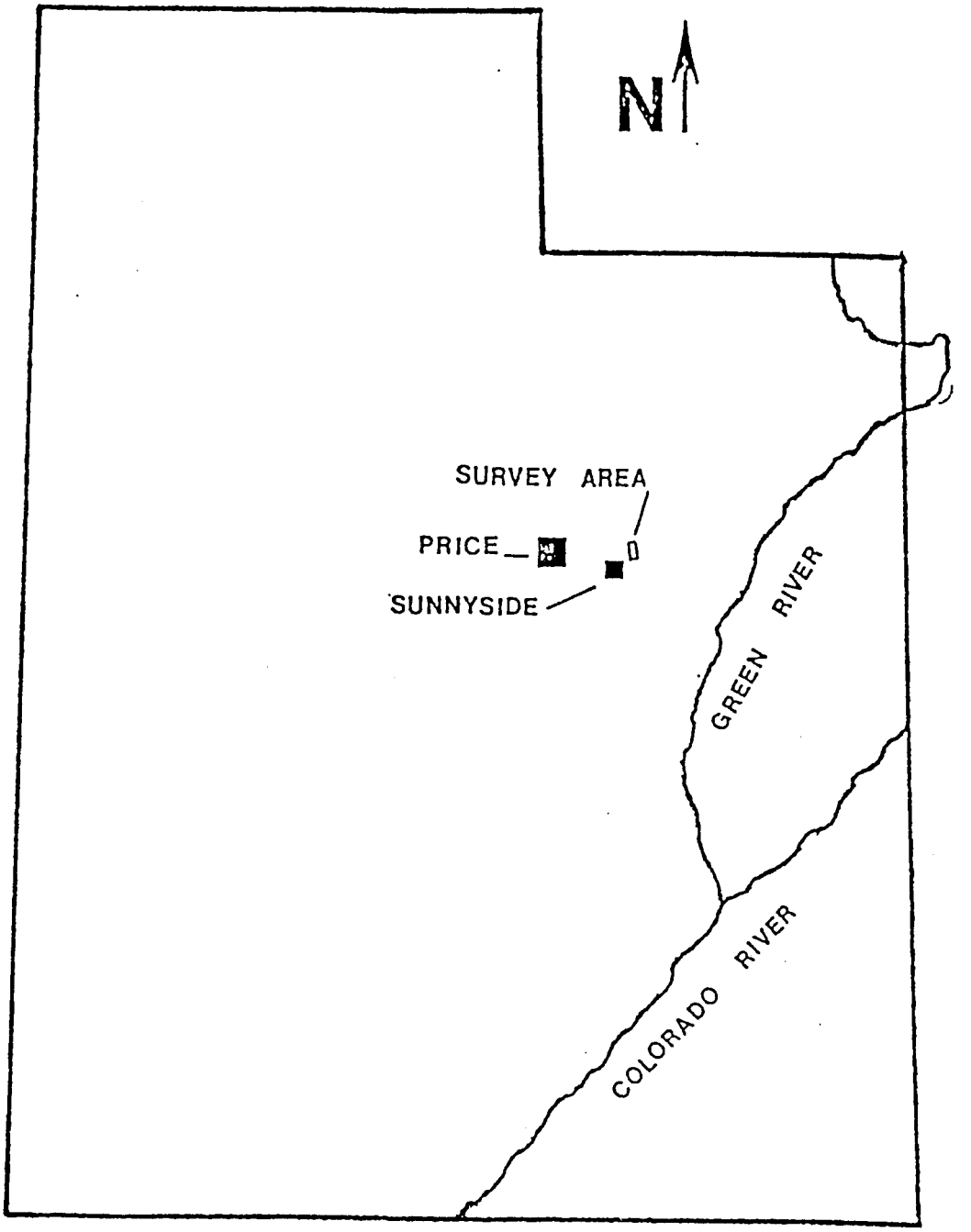
BRUIN POINT, UTAH
NE/4 SUNNYSIDE 15' QUADRANGLE
ASPHALT MINES
Mines
Radio Tower
Radio Towers
Bruin Point
South Patterfore Canyon
Whitmore
S. Patterfore Canyon Spr
Springs
Water Canyon
ASPHALT TRAMWAY
Canyon
Water Can
Canyon
2Cb234
42Cb235
42Cb248
42Cb247
UTAH
QUADRANGLE LOCATION
N
SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETRE
CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

List of Exhibits

Figure 4-1	Survey Location
Figure 4-2	Bedrock Stratigraphy in the Sunnyside Area
Figure 4-3	Climatic Summary for the Hiawatha Area
Figure 4-4	Formative Culture Boundaries in Utah, 1,500-650 B.P. (after Aikens, 1970)
Figure 4-5	Sevier, Fremont and unnamed Plains derived cultures (after Madsen and Lindsay, 1977)
Figure 4-6	Sunnyside-Spring 1899
Figure 4-7	Wasatch Company Store Construction: Summer 1899
Figure 4-8	Sunnyside Liquor Store and School
Figure 4-9	West Sunnyside prior to 1935
Figure 4-10	The Continuum of Logistical Organization
Figure 4-11	Characterization of Subsistence-Settlement Systems
Figure 4-12	Levels of Logistical Organization for Archaic Sevier and Fremont Cultures
Figure 4-13	Ceramics from 42Cb239
Figure 4-14	Ceramics from 42Cb239
Figure 4-15	Glass from 42Cb239
Figure 4-16	Buttons and Doll Parts from 42Cb236
Figure 4-17	Ceramics from 42Cb236
Figure 4-18	Medical/Chemical Bottle from 42Cb236
Figure 4-19	Artifacts from 42Cb242
Table 4-1	Vegetation Observed During the Survey
Table 4-2	Fauna Observed During the Survey
Table 4-3	Quadrant Locations by Section, Township and Range
Table 4-4	Summary of Sites by Types and Relative Chronology

List of Exhibits
(Cont.)

Table 4-5	Sites Sections Summarized on the Five Sampling Universes
Table 4-6	List of Eligible/Non-eligible Sites for Nomination to the National Register of Historic Places
Plate 4-1	Survey Area and Land Ownership
Plate 4-2	Survey Area and Site Locations
Plate 4-3	Sensitivity Rankings



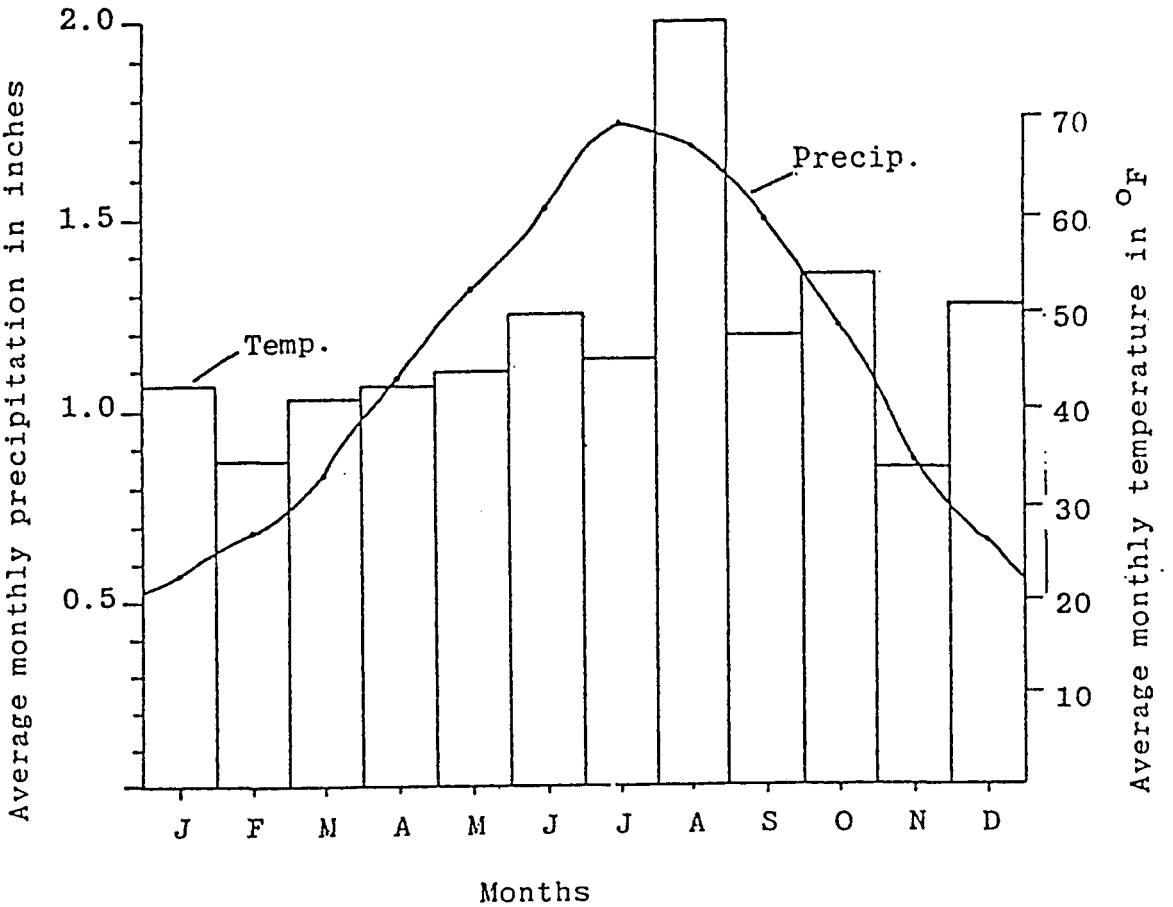
1 INCH; APPROX. 51 MILES

Figure 4-1. Survey Location.

Tertiary		Green River Formation	lowermost part exposed just east of permit area: fluvial sandstones and lacustrine shales
		Wasatch Formation	about 4000' of alternating sandstones, mud stones, and shales, and some limestone beds
		Colton Formation	
		North Horn Formation	
Cretaceous	Mesa Verde Group	Price River Formation	alternating sandstone and shale; 500'
		Castlegate Sandstone	cliff-forming sandstone; 180'
		Blackhawk Formation	includes: 680' upper shaley member upper and lower Sunnyside coal seams middle sandstone member middle shale member kenilworth coal seam lower sandstone member
		Mancos Shale	only uppermost part exposed in permit area; dark marine shales

Figure 4-2. Bedrock Stratigraphy in the Sunnyside area.

(After Doelling, 1972; and Clark, 1928)



Average monthly temperatures and precipitation at Hiawatha, Utah, altitude 7230 feet. Mean annual temperature is 45.5°F; mean annual precipitation is 14.15 inches. (U.S. Dept. Comm. 1973)

Figure 4 -3. Climatic Summary for the Hiawatha Area.

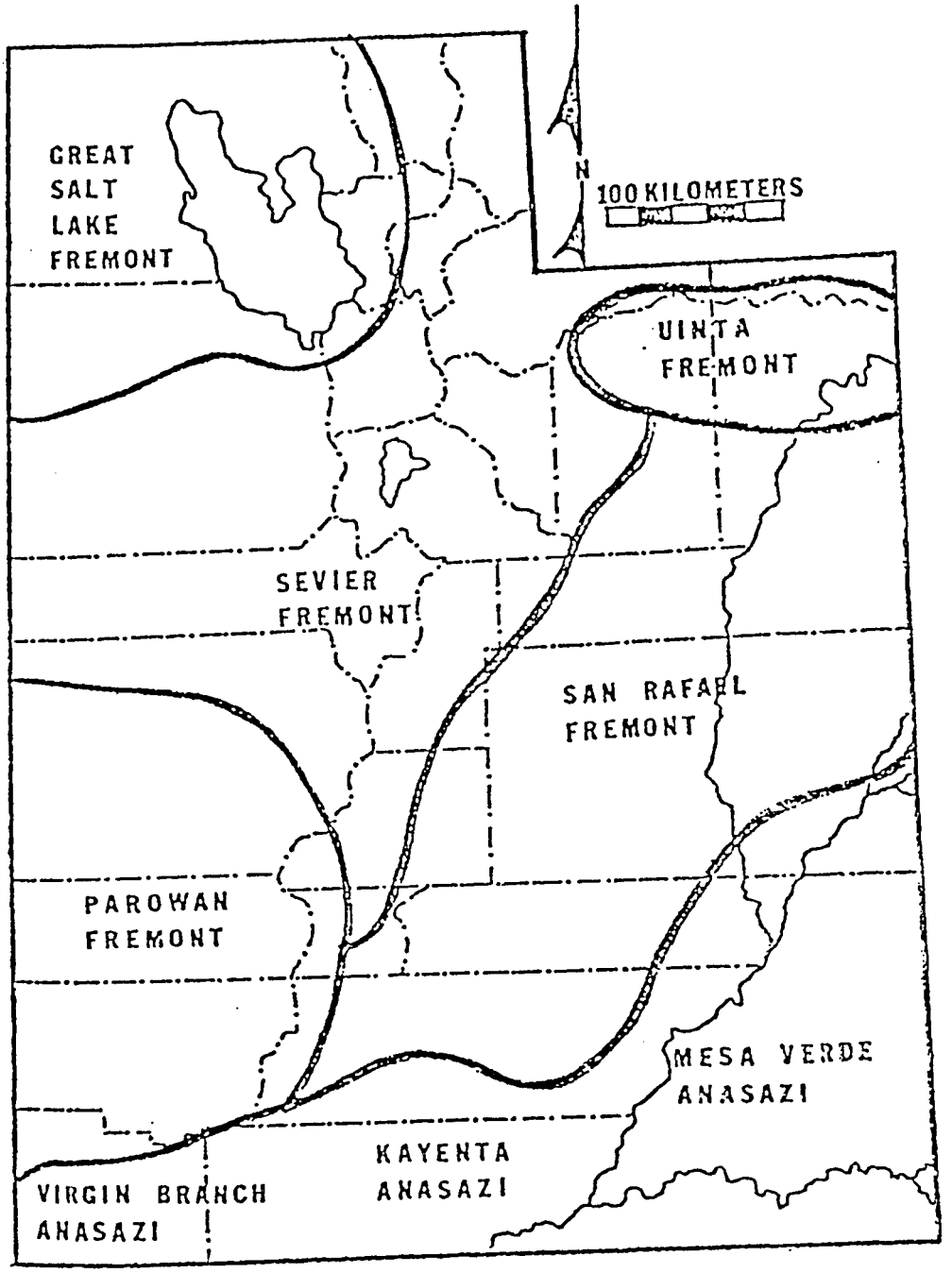


Figure 4-4. Formative Culture Boundaries in Utah, 1,500-650 B.P. (after Aikens, 1970).

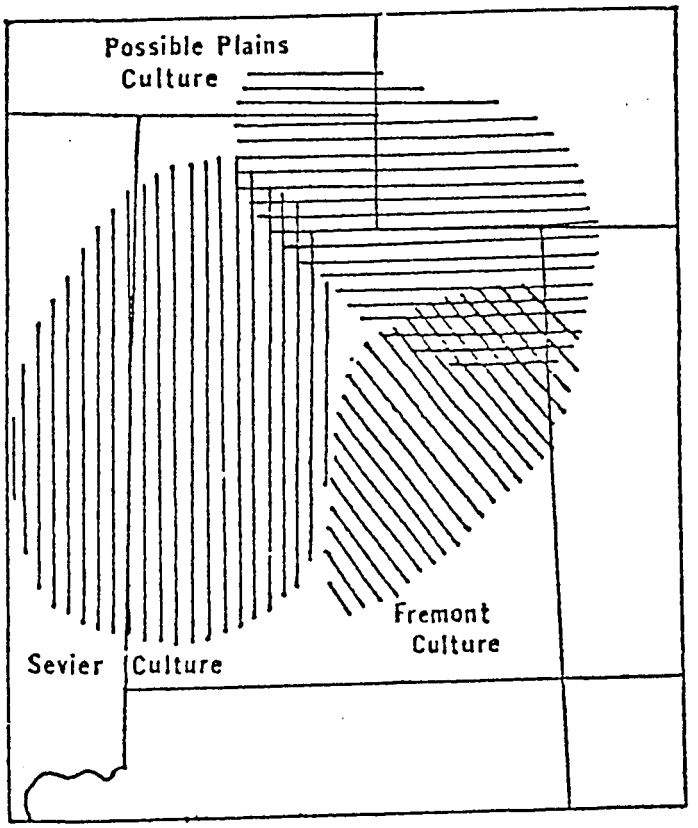


Figure 4-5. Sevier, Fremont and Unnamed Plains Derived Cultures (After Madsen and Lindsay 1977).

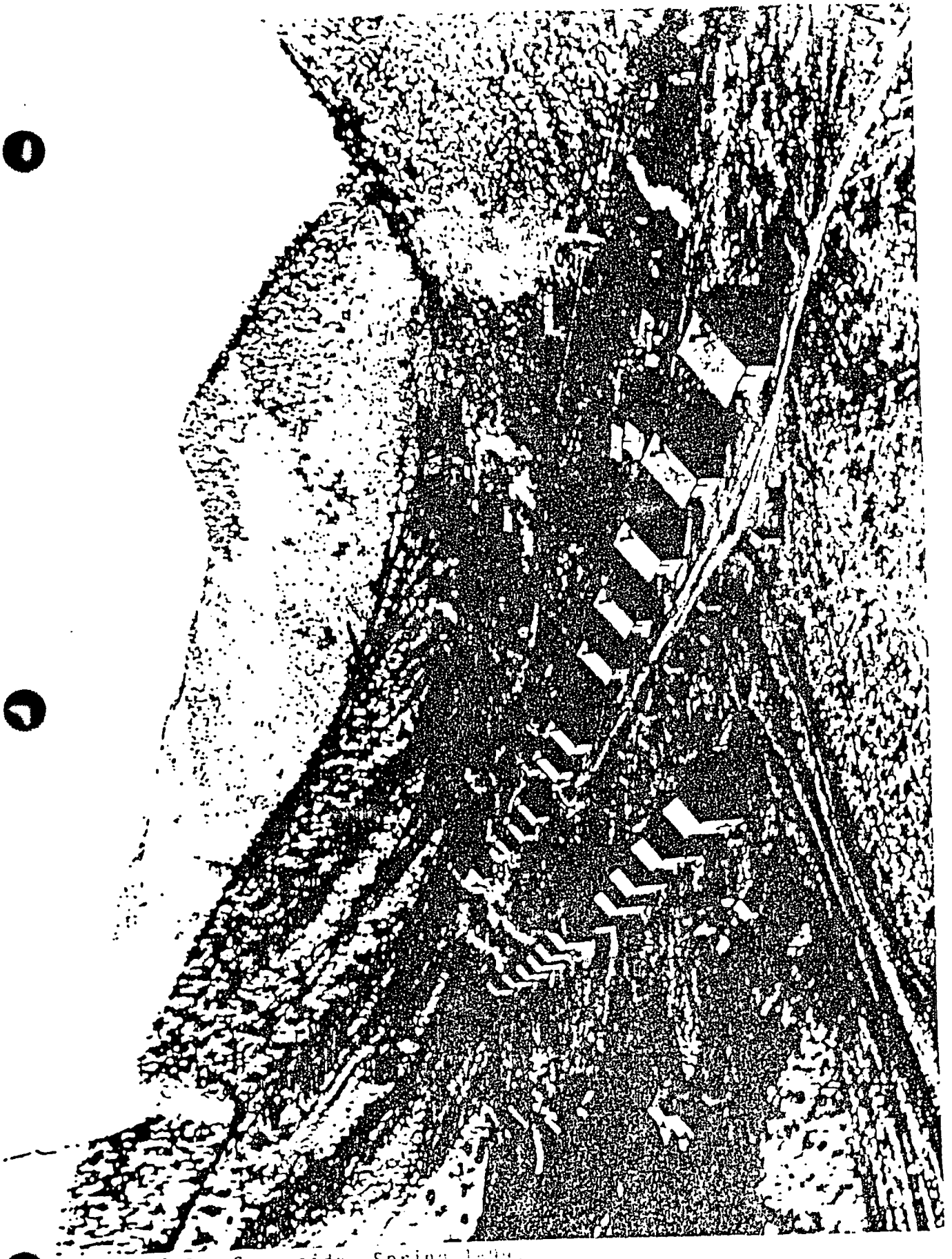


Figure 4-6. Sunnyside, Spring 1999.

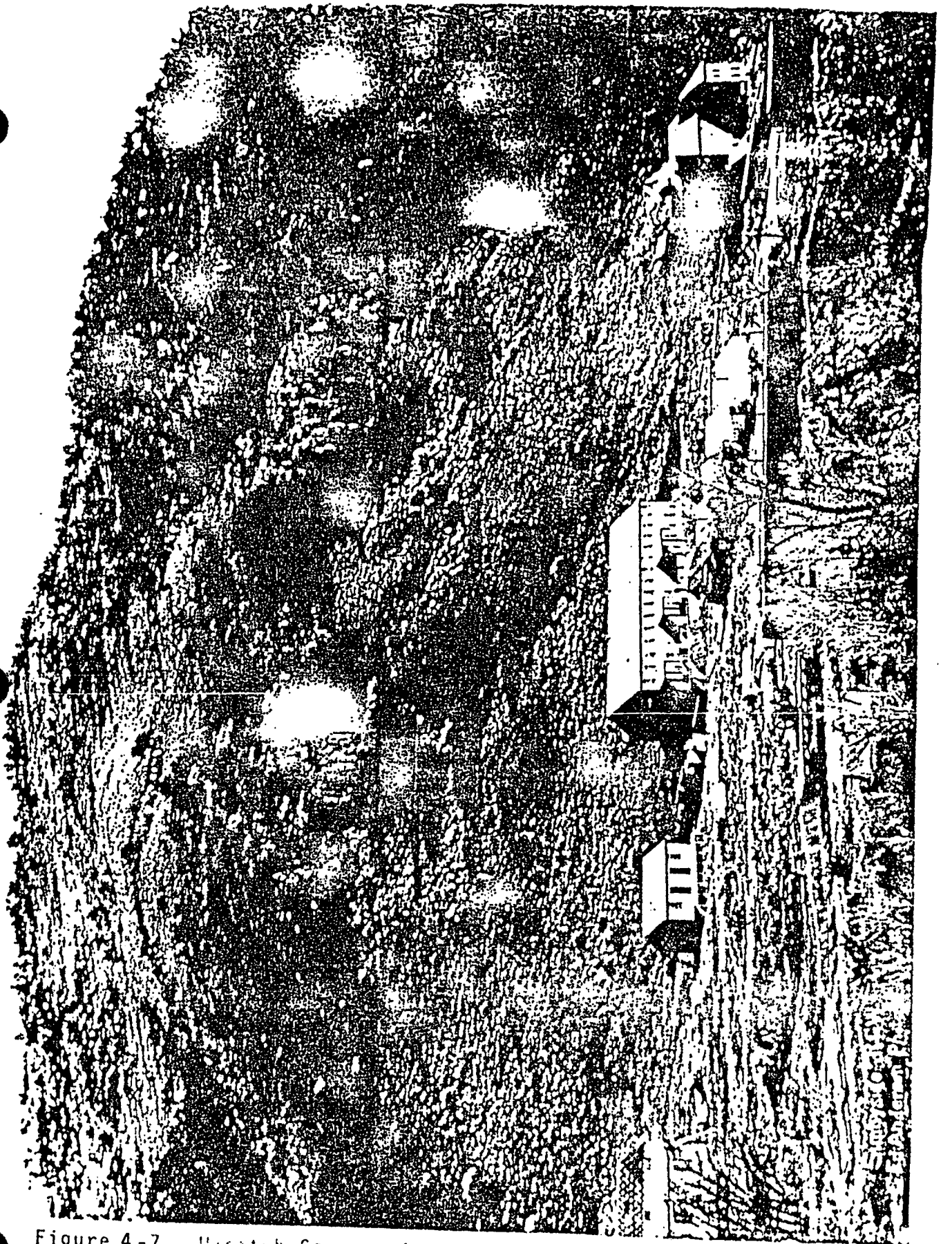


Figure 4-7. Wasatch Company Store Construction

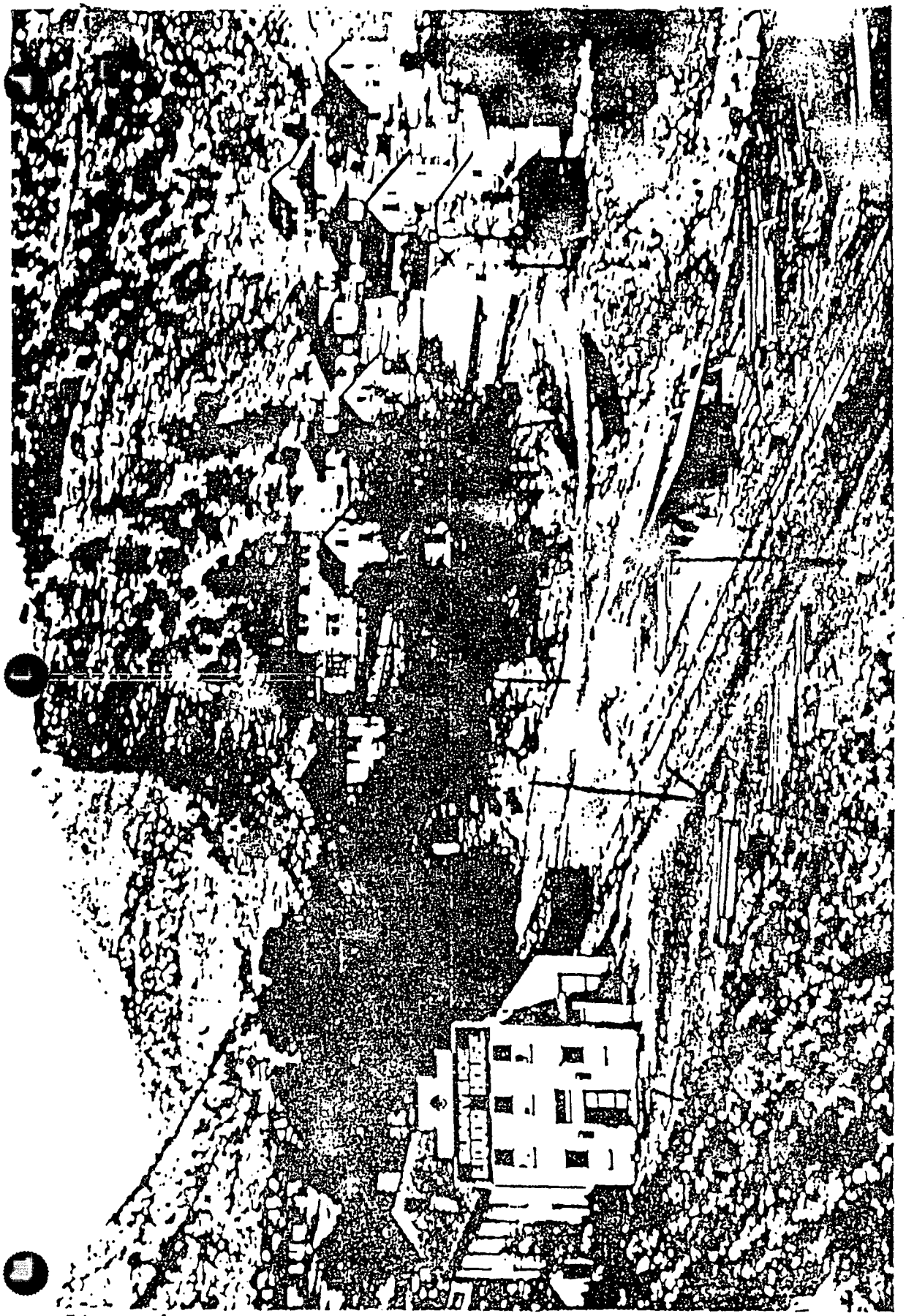


Figure 4-8. Sunnyside Liquor Store and School.

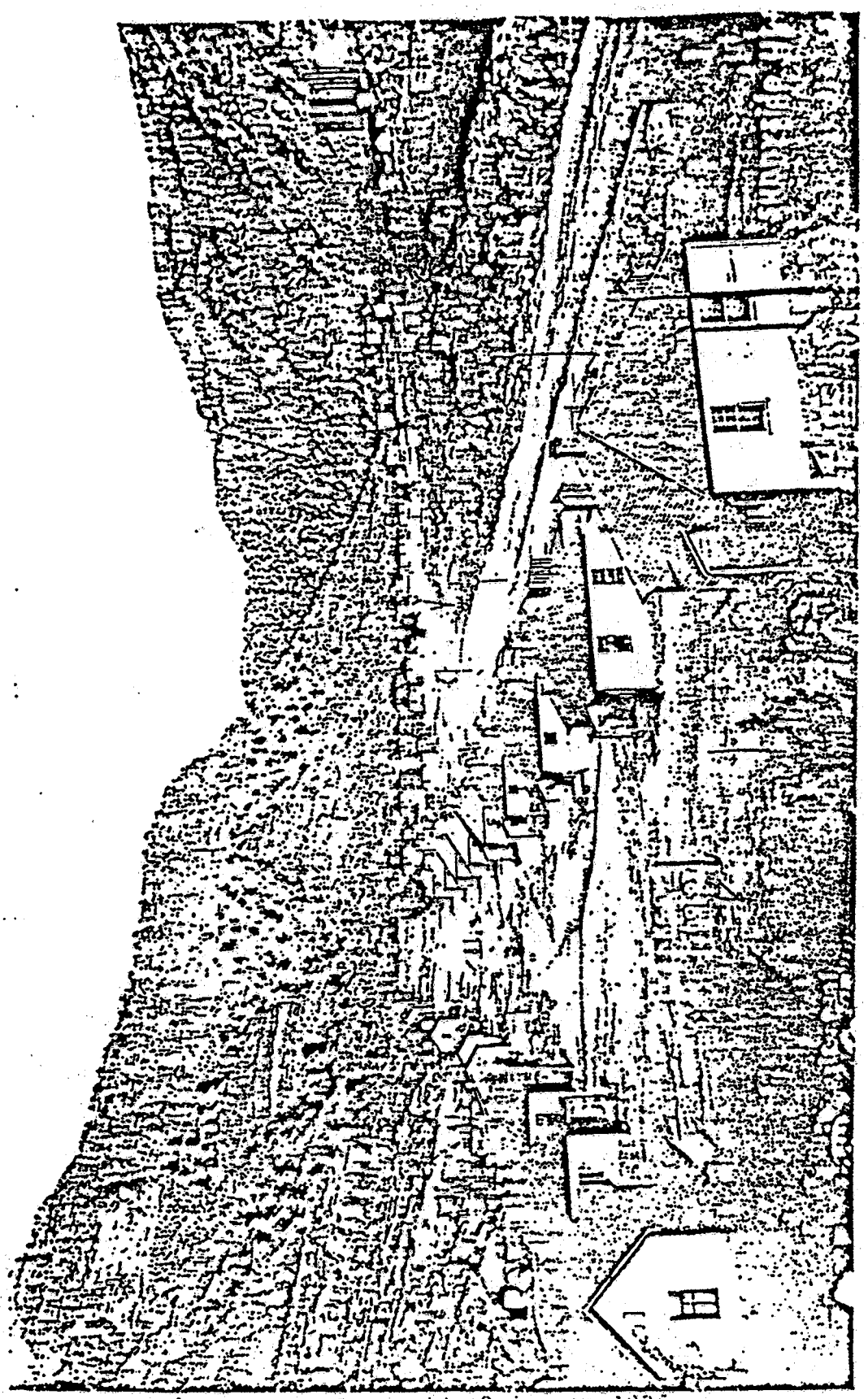


Figure 4-9. West Sunnyside Prior to 1935.

COMPLEXITY OF LOGISTICAL ORGANIZATION

least complex

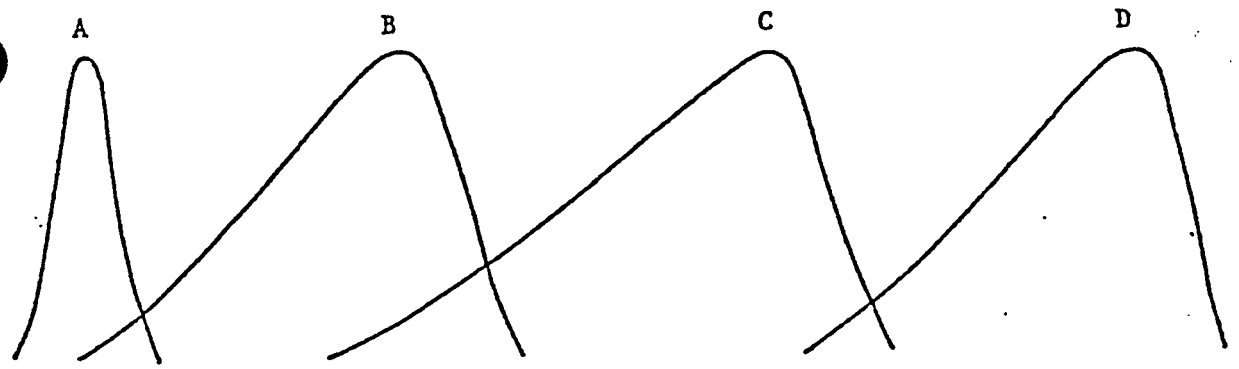
Organized to move residential groups to resources

most complex

Organized to move resources to residential groups

Forager — Collector — Harvester — Agriculturalist

THEORETICAL DISTRIBUTIONS OF LOGISTICAL ORGANIZATION BY GROUP



Forager — Collector — Harvester — Agriculturalist

Figure 4-10 The Continumn of Logistical Organization (After Fowler et al 1980).

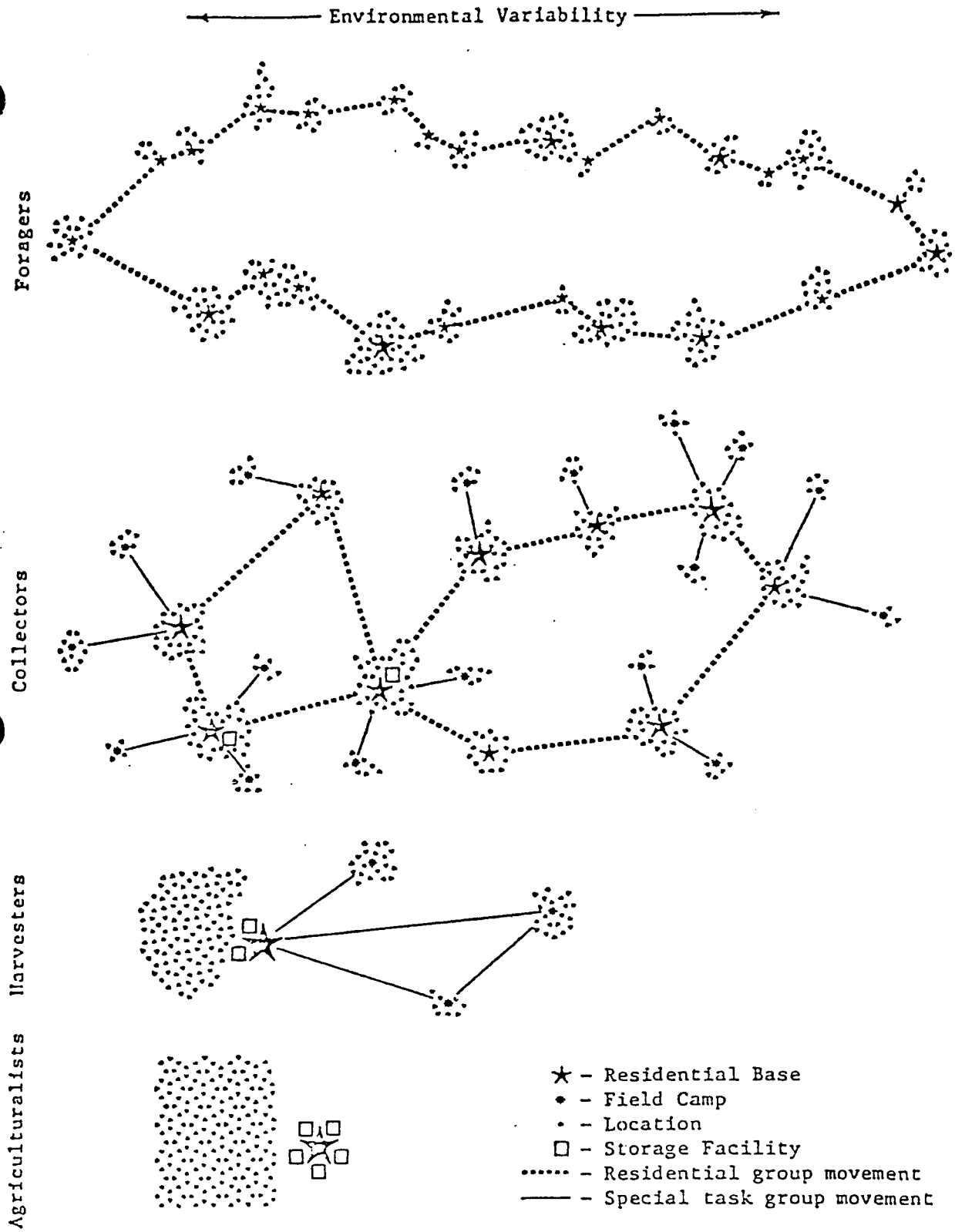


Figure 4-11 Characterization of Subsistence-Settlement Systems (After Fowler et al 1980).

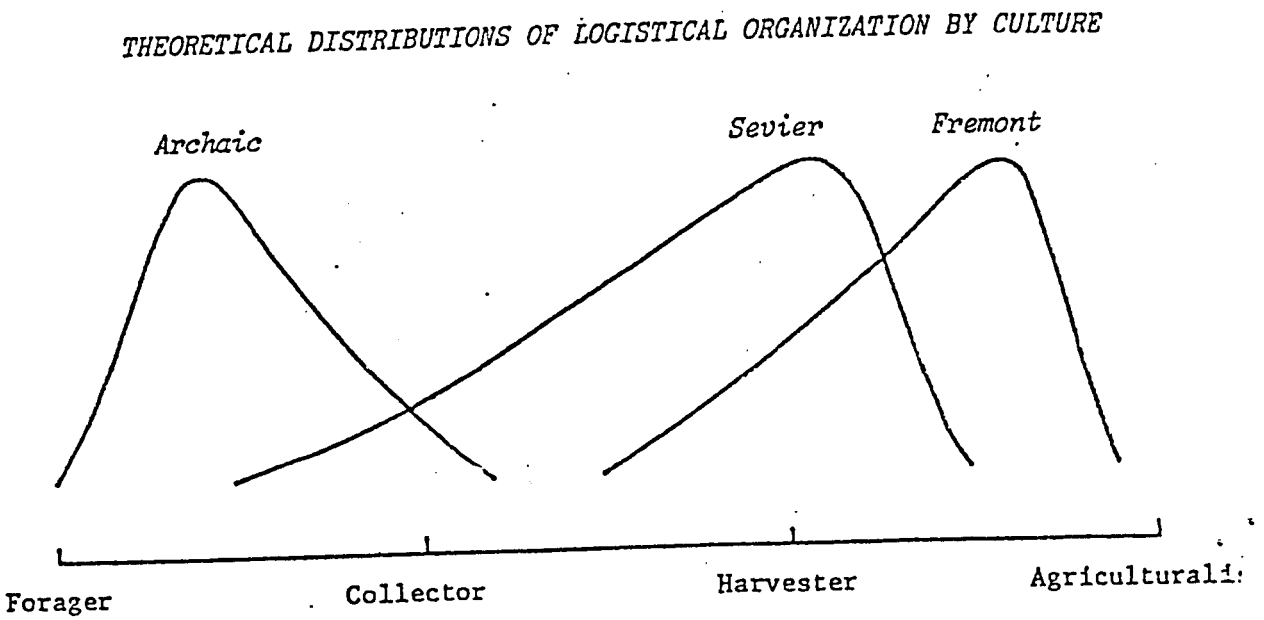


Figure 4-12 Levels of Logistical Organization for Archaic Sevier and Fremont Cultures (After Fowler et al 1980).

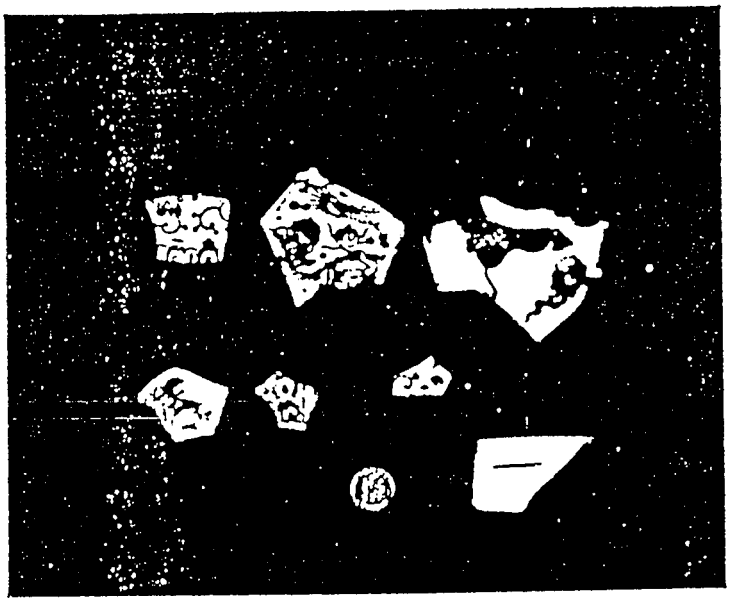


Figure 4-13 Ceramics from 42Cb239.

Top row left to right: Japanese porcelain (1) small plate or saucer (2) unidentified vessel (3) unidentified vessel.

Bottom row left to right: (1) painted porcelain plate (2) Japanese porcelain, unidentified vessel (3) Japanese porcelain unidentified vessel (4) porcelain cup with purple band.

Dime is for scale.

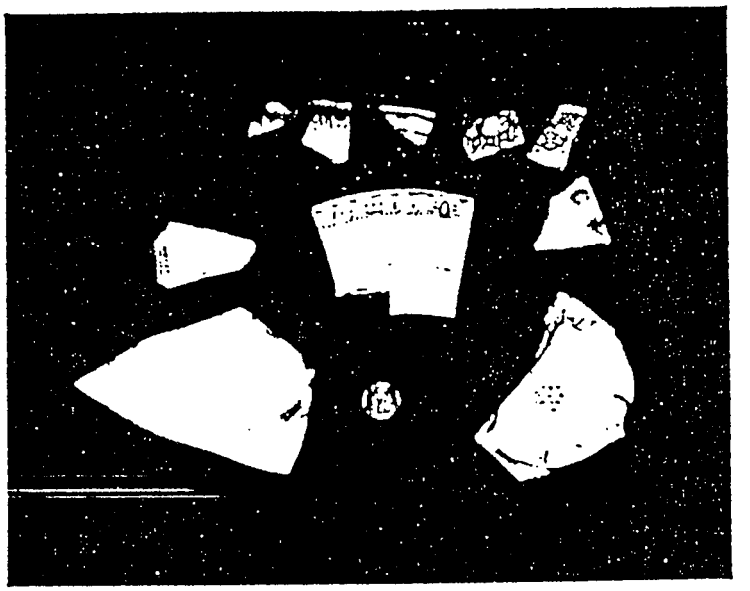


Figure 4-14 Ceramics from 42Cb239.

Top row, left to right:	Ironstone/White Granite, (1) Flown blue decoration (2) decorated with flown blue, molded edge, and gilding (3) flown blue decoration (4) & (5) transfer printed.
Center row, left to right:	Ironstone/White Granite, (1) trademark: "The..." (2) & (3) decal decoration.
Bottom row, left to right:	Ironstone/White Granite (1) trademark: "Iris" (2) dime for scale (3) manufactured by Taylor, Smith and Taylor.

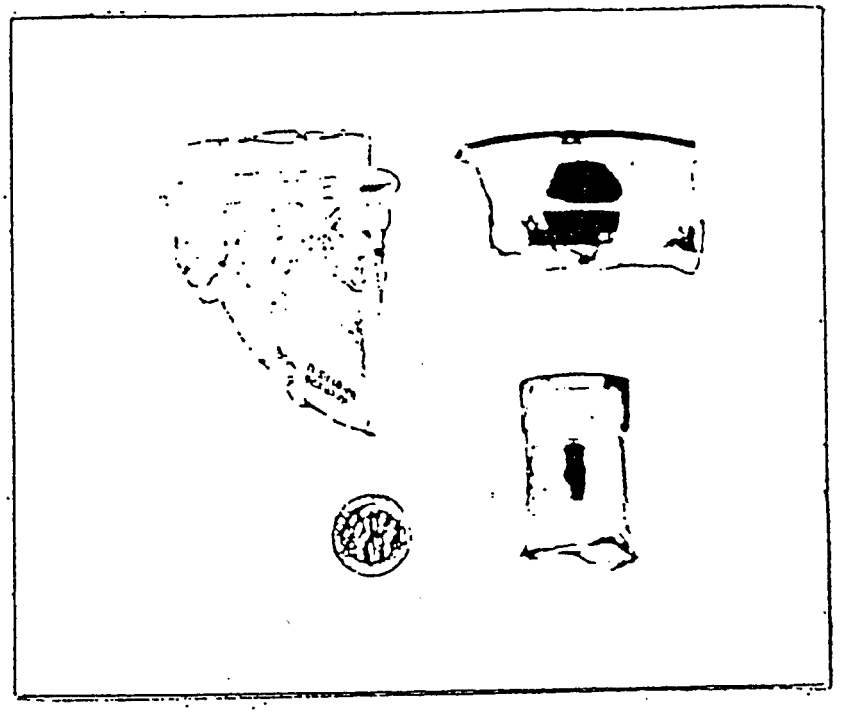


Figure 4-15 Glass from 42Cb239.
Top row, left to right: (1) pressed glass vessel (2) preserve bottle finish.
Bottom row, left to right: (1) dime for scale (2) unidentified bottle finish.

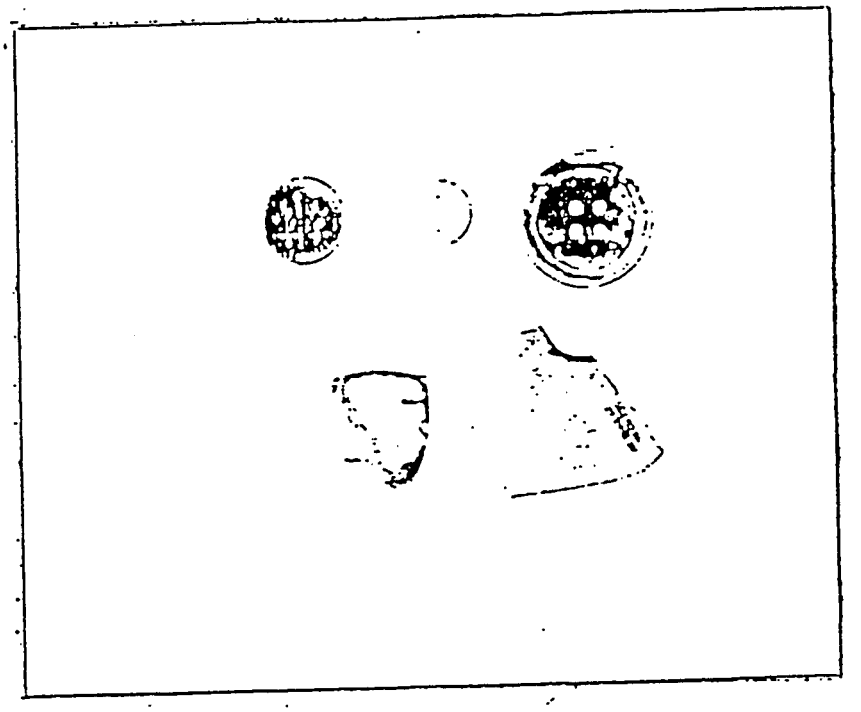


Figure 4 -16 Buttons & Doll Parts from 42Cb239.

Top row, left to right: (1) dime for scale (2) 2 hole glass button (3) 4 hole shell button.

Bottom row, Doll parts.

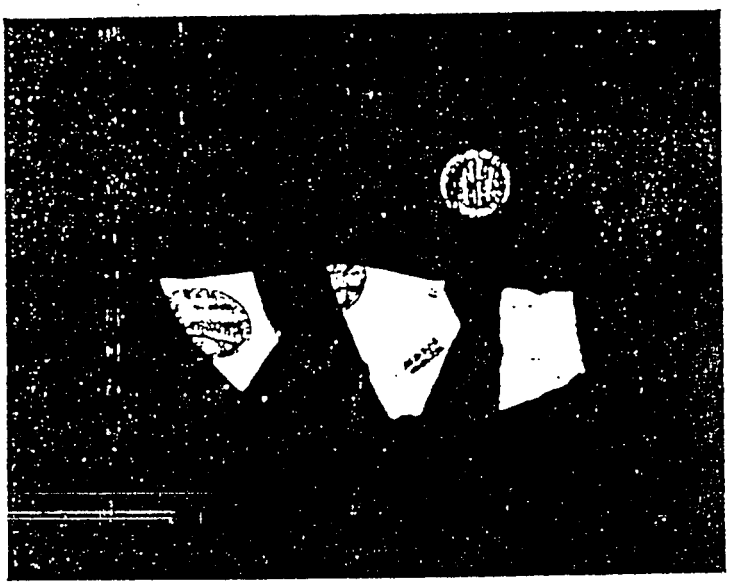


Figure 4-17
Ceramics from 42Cb236
Left to right: Ironstone/White Granite (1) & (2) "Homer Laughlin Sunrise Dinnerware" (3) salt glazed gray earthenware.

Dimension scale.

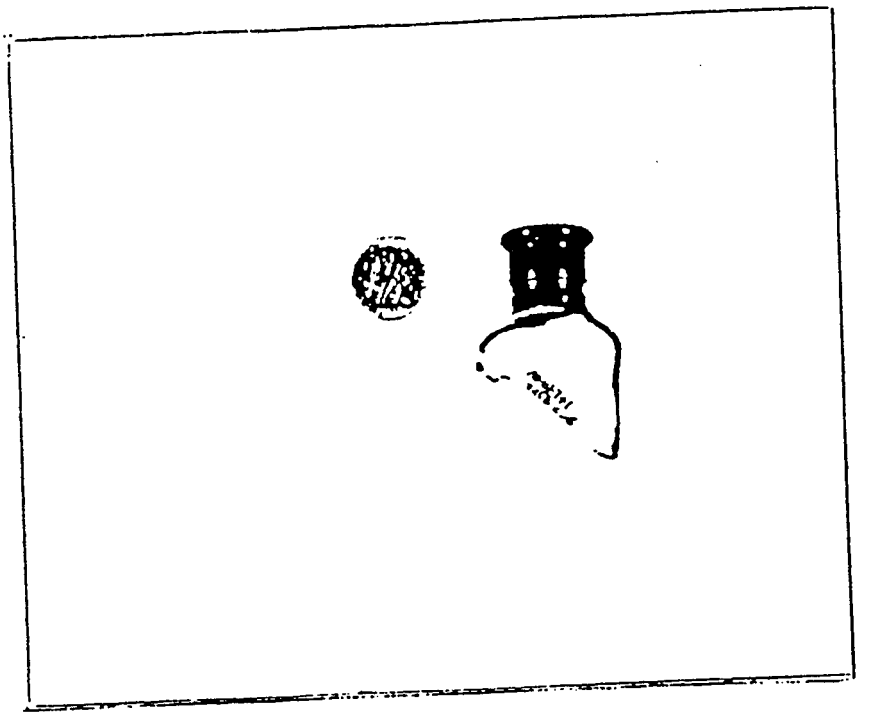
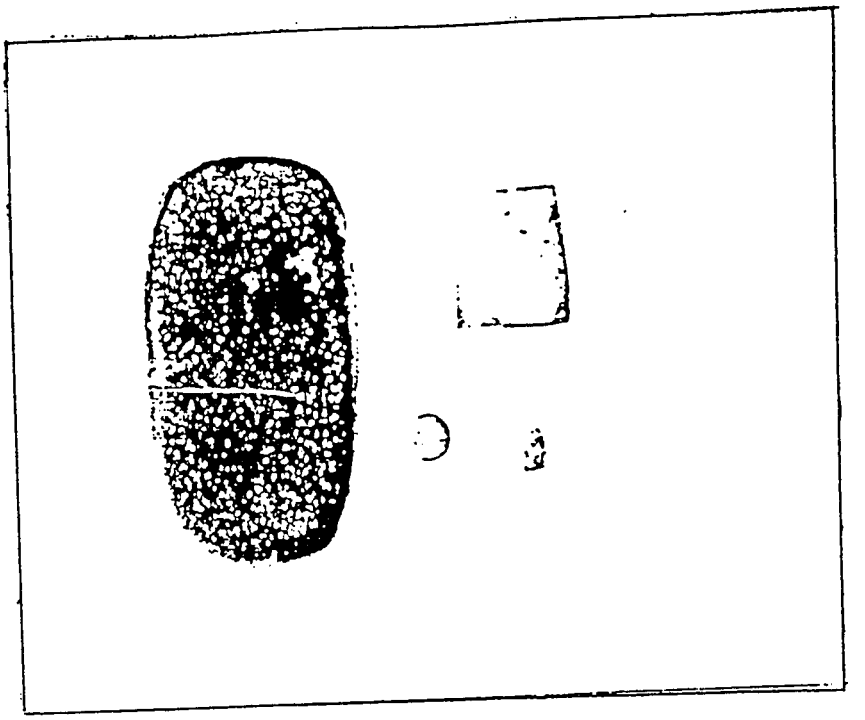


Figure 4 -18 Medical/Chemical bottle from 42Cb236.



Left: rectangular mano; upper right: biface (knife?) fragment; lower right: Elko side-notch point.

Dime is for scale.

Figure 4-19. Artifacts from 42Cb241.

TABLE 4-1

PLANTS IDENTIFIED IN THE PERMIT AREA DURING THE SURVEY

ACERACEAE	Maple Family
Acer sp	maple
ASCLEPIADACEAE	Milkweed Family
Asclepias speciosa	common milkweed
BERBERIDACEAE	Barberry Family
Berberis repens	Oregon grape
BETULACEAE	Birch Family
Betula occidentalis	water birch
CACTACEAE	Cactus Family
Echinocereus sp	hedge hog cactus
Opuntia sp	prickly pear cactus
CAPRIFOLIACEAE	Honeysuckle Family
Sambucus sp	elderberry
Symphoricarpos sp	snowberry
CELASTRACEAE	Bittersweet Family
Pachystima myrsinites	mountain lover
CHENOPODIACEAE	Goosefoot Family
Atriplex canescens	four-wing saltbush
COMPOSITAE	Sunflower Family
Arctium minus	burdock
Artemisia tridentata	sagebrush
Chrysothamnus nauseosus (?)	rabbitbrush
Circium sp	thistle
CRUCIFERAE	Mustsard Family
Rorippa nasturtium-aquaticum	water cress
CYPRESSACEAE	Cypress Family
Juniperus osteosperma	Utah juniper
Juniperus scopulorum	Rocky Mountain juniper
Juniperus communis	common juniper
EPHEDRACEAE	Jointfir Family
Ephedra viridis	Mormon tea
EQUISTETACEAE	Horsetail Family
Equisetum sp	horsetail
GENTIANACEAE	Gentian Family
Swertia ratiata	deer's ear

TABLE 4-1 CONTINUED:

GRAMINEAE	Grass Family
Agropyron smithii	western wheatgrass
Agropyron cristatum	crested wheatgrass
Bouteloua gracilis	gramma grass
Bromus tectorum	cheat grass
Elymus sp	wild rye
Oryzopsis hymenoides	Indian ricegrass
Poa sp	bluegrass
Stipa scribneri (?)	Scribner needlegrass
JUNCACEAE	Rush Family
Juncus sp	rush
LEGUMINOSEAE	Pea Family
Lupinus sp.	lupine
Melilotus sp.	sweet clover
LILIACEAE	Lily Family
Yucca harrimaniae (?)	yucca
PINACEAE	Pine Family
Pinus edulis	pinyon pine
Pinus flexilis	limber pine
Psuedotsuga menziesii	Douglas fir
POLYGONACEAE	Buckwheat Family
Eriogonum sp	wild buckwheat
Eriogonum sp	sulfur flower
ROSACEAE	Rose Family
Amelanchier alnifolia	serviceberry
Cercocarpus ledifolius	curl-leaf mtn. mahogany
Cowania mexicana	cliff rose
Rosa sp	wild rose
SALICACEAE	Willow Family
Populus tremuloides	aspen
Populus angustifolia	narrowleaf cottonwood
Salix sp	willow
SAXIFRAGACEAE	Saxifrage Family
Ribes sp	currant
SCHROPHULARIACEAE	Figwort Family
Penstemon sp	beard tongue
Verbascum thapsus	mullien
TYPHACEAE	Cattail Family

TABLE 4-1 CONTINUED:

Typha latifolia	cattail
URTICACEAE	Nettle Family
Urtica gracilis	nettle

TABLE 4-2

MAMMALS AND BIRDS IDENTIFIED IN THE PERMIT AREA DURING THE SURVEY

NAME	MAMMALS	EVIDENCE
Bassariscus astutus	ringtail	skull and skeleton
Mephitis mephitis	striped skunk	skull; carcass
Canis latrans	coyote	droppings; tracks
Lynx rufus	bobcat	live trapped individual
Thomomys sp	pocket gopher	snow-tunnel fillings
Castor canacensis	beaver	ponds, cut trees, skeleton
Neotoma sp	woodrat (pack rat)	middens
Erethizon dorsatum	porcupine	evidence of feeding on Douglas fir
Lepus americanus	snowshoe hare	observation
Sylvilagus sp	cottontail rabbit	observation
Odocoileus hemionus	mule deer	tracks, droppings, antlers, carcass

SCIENTIFIC NAME	BIRDS	COMMON NAME
Aquila chrysaetos		Golden Eagle
Buteo sp		Hawk
Alectoris graeca		Chukar
Dendragapus obscurus		Blue Grouse
Colaptes auratus		Common flicker
Eremophila alpestris		Horned lark
Pica pica		Black-billed magpie

TABLE 4-2 BIRDS, CONTINUED:

SCIENTIFIC NAME	COMMON NAME
Alphelocoma coerulescens	Scrub jay
Nucifraga columbiana	Clark's nutcracker
Parus gambeli	Mountain chickadee
Sitta carolinensis	White-breasted nuthatch
Turdus migratorius	Robin
Myadestes townsendi	Townsend's Solitaire
Junco hyemalis	Slate-colored junco

QUADRAT	QUARTER	QUARTER	SECTION NUMBERS	TOWNSHIP	RANGE	MAP REFERENCE
1.	SW	NE	6	14S	14E	Mt. Bartles, Utah
2.	SE	NE	6	14S	14E	Mt. Bartles, Utah
3.	SE	SE	1	14S	13E	Sunnyside, Utah
4.	SW	NW	12	14S	13E	Sunnyside, Utah & Mt. Bartles, Utah
5.	SE	NW	7	14S	14E	Sunnyside, Utah & Mt. Bartles, Utah
6.	SW	SE	12	14S	13E	Sunnyside, Utah
7.	SW	SE	8	14S	14E	Patmos Head, Utah
8.	NE	NE	13	14S	13E	Sunnyside, Utah
9.	NW	NE	18	14S	14E	Sunnyside, Utah
10.	NE	NE	17	14S	14E	Sunnyside, Utah
11.	NE	SE	17	14S	14E	Patmos Head, Utah
12.	SE	NW	19	14S	14E	Sunnyside, Utah
13.	SE	NW	20	14S	14E	Sunnyside and Patmos Head, Utah
14.	NW	SW	20	14S	14E	Sunnyside, Utah
15.	NW	SW	21	14S	14E	Patmos Head, Utah
16.	SW	SW	20	14S	14E	Sunnyside, Utah
17.	SE	SW	20	14S	14E	Sunnyside and Patmos Head, Utah
18.	NE	NW	29	14S	14E	Sunnyside and Patmos Head, Utah
19.	SW	NE	29	14S	14E	Patmos Head, Utah
20.	NW	SW	28	14S	14E	Patmos Head, Utah
21	SW	SE	29	14S	14E	Patmos Head, Utah
22.	NW	NE	31	14S	14E	Sunnyside, Utah
23.	NE	NW	33	14S	14E	Patmos Head, Utah
24.	SW	NE	31	14S	14E	Sunnyside, Utah
25.	NE	SE	32	14S	14E	Patmos Head, Utah
26.	NE	SE	33	14S	14E	Patmos Head, Utah
27.	NW	NW	5	15S	14E	Sunnyside, Utah
28.	NW	NW	3	15S	14E	Patmos Head, Utah
29.	SW	NW	5	15S	14E	Sunnyside, Utah
30.	SE	SW	6	15S	14E	Sunnyside, Utah
31.	SE	SW	3	15S	14E	Patmos Head, Utah
32.	NW	NW	8	15S	14E	Sunnyside, Utah
33.	SW	SW	10	15S	14E	Patmos Head, Utah
34.	NW	SE	9	15S	14E	Patmos Head, Utah
35.	SE	SE	9	15S	14E	Patmos Head, Utah
36.	NE	NE	16	15S	14E	Patmos Head, Utah
37.	SE	NE	16	15S	14E	Patmos Head, Utah

Table 4-3

Quadrant Locations as They Are Plotted on Plate 4 -2.

(numbered from top to bottom [north-south] and from left to right [west to eas

SITE NUMBER	SITE TYPE-PREHISTORIC					SITE TYPE-HISTORIC				
	Open Structure	Rock Shelter	Lithic Scatter	Rock Art	Paleontological	Hunting/Herding Camp	Community	Homestead	Mining	Water Control
42Cb231					X					
42Cb232			X							
42Cb233						X				
42Cb234								X	X(?)	
42Cb235										X
42Cb236							X			
42Cb237						X				
42Cb238				X						
42Cb239							X			
42Cb240		X								
42Cb241	X									
42Cb242			X							
42Cb243									X	
42Cb244										X
42Cb245							X			
42Cb247									X	
42Cb248	Not in Mine lease area									

Table 4-4

Summary of Sites by Types and Relative Chronology

LOCATION	MAIN CANYON	SECONDARY CANYON	TALUS/CLIFF	PEDIMENT	HIGH FLATS
42Cb231					X
42Cb232					X
42Cb233					X
42Cb234	X				
42Cb235	X				
42Cb236	X				
42Cb237					X
42Cb238	X				
42Cb239	X				
42Cb240	X				
42Cb241			X		
42Cb242			X		
42Cb243				X	
42Cb244		X			
42Cb245	X				
42Cb247	X	X	X		
42Cb248			X		

Table 4-5
Site Locations Summerized on the Five Sampling Universes

SITE NUMBER	PREHISTORIC	HISTORIC	ELIGIBLE	NOT ELIGIBLE	JUSTIFICATION
42Cb231p	X			X	Not a unique paleontological site*
42Cb232	X			X	No diagnostics, depth or features
42Cb233		X		X	No diagnostics, depth or features
42Cb234		X	X		Good structure, with diagnostics and no disturbance
42Cb235		X	X		Associated with 42Cb234 intact with depth
42Cb236		X	X		Mine community, good structures/depth
42Cb237		X		X	No depth, no features
42Cb238	X			X	No diagnostics, eroded, vandalized
42Cb239		X	X		Depth, one good structure and, diagnostics
42Cb240	X		X		Diagnostics, depth, excellant rock art
42Cb241	X		X		Structures, depth and diagnostics
42Cb242	X			X	Destroyed, no depth
42Cb243		X	X		Good architecture, mine history potential
42Cb244		X		X	Historically documented, not architecturally unique
42Cb245		X	X		Structures, mine history, with depth
42Cb247		X	X		Unique-one of a kind in Utah-Mine History
42Cb248	Not in mine lease area	X	X		Mine history, some structures

*The determination of non-eligibility of 42Cb231p was made after consulting with the Utah Stae Paleontologist Mr. James H. Madsen Jr

Table 4-6

List of Eligible/Non-eligible Sites for Nomination to the National Register of Historic Places