

# **Billings Landfill: A Class III Cultural Resource Inventory of a Proposed Landfill Expansion in Section 29, T1S 26E of Yellowstone County**

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## Table of Contents

1.0 Introduction.....	1
2.0 Physical Setting.....	1
3.0 Methods .....	4
4.0 Previous Investigations.....	5
5.0 Results.....	5
6.0 Conclusion .....	8
7.0 Bibliography .....	9

## Figures

Figure 1. Map of project area.....	2
Figure 2. Aerial photo of project area.....	3
Figure 3. Sketchmap of 24YL1868.....	6
Figure 4. Overview of site 24YL1868, view to the northwest. ....	7
Figure 5. Overview of isolate found near 24YL1868, the remains of a car, view to the west. ....	8

Appendix A Files Search

Appendix B Site Form

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## **1.0 INTRODUCTION**

The city of Billings, Montana, proposes to expand their landfill operations into the southeast half of Section 29 of T1S R26E (Figure 1). Activities associated with the landfill will lead to extensive ground disturbing activities. As part of the permitting process, the Department of Environmental Quality (DEQ) is required to take into consideration the affect these operations will have on significant cultural resources. HDR Engineering contracted Ethnoscience to conduct a Class III cultural resource inventory of the expansion area to identify and provide preliminary National Register of Historic Places (NRHP) eligibility evaluations of sites located within the study area for the DEQ's review.

## **2.0 PHYSICAL SETTING**

The study area is located immediately to the east of the existing Billings landfill (Figure 2). Topographically, the project area consists of an upland plain, dissected with drainages. A large secondary drainage crosses through the project area in a northeasterly direction and eventually flows into the Yellowstone River. Tertiary drainages extend out to incorporate a large portion of the rest of the project area. There is a seep near the top of the secondary drainage. There are also two stock dams along the secondary drainage that provide permanent water.

The uplands are currently used as horse pastures and are sparsely vegetated with grasses, cactus and sage. Based on the aerial photograph, portions of the project area were cultivated in the past, but this was not discernable during the inventory. Three areas of the project area are developed. One area contains a corral and a watering tank for horses, one contains a watering tank and several pipes, and one is a power station. Other impacts include a power line and several undeveloped roads and two-tracks.

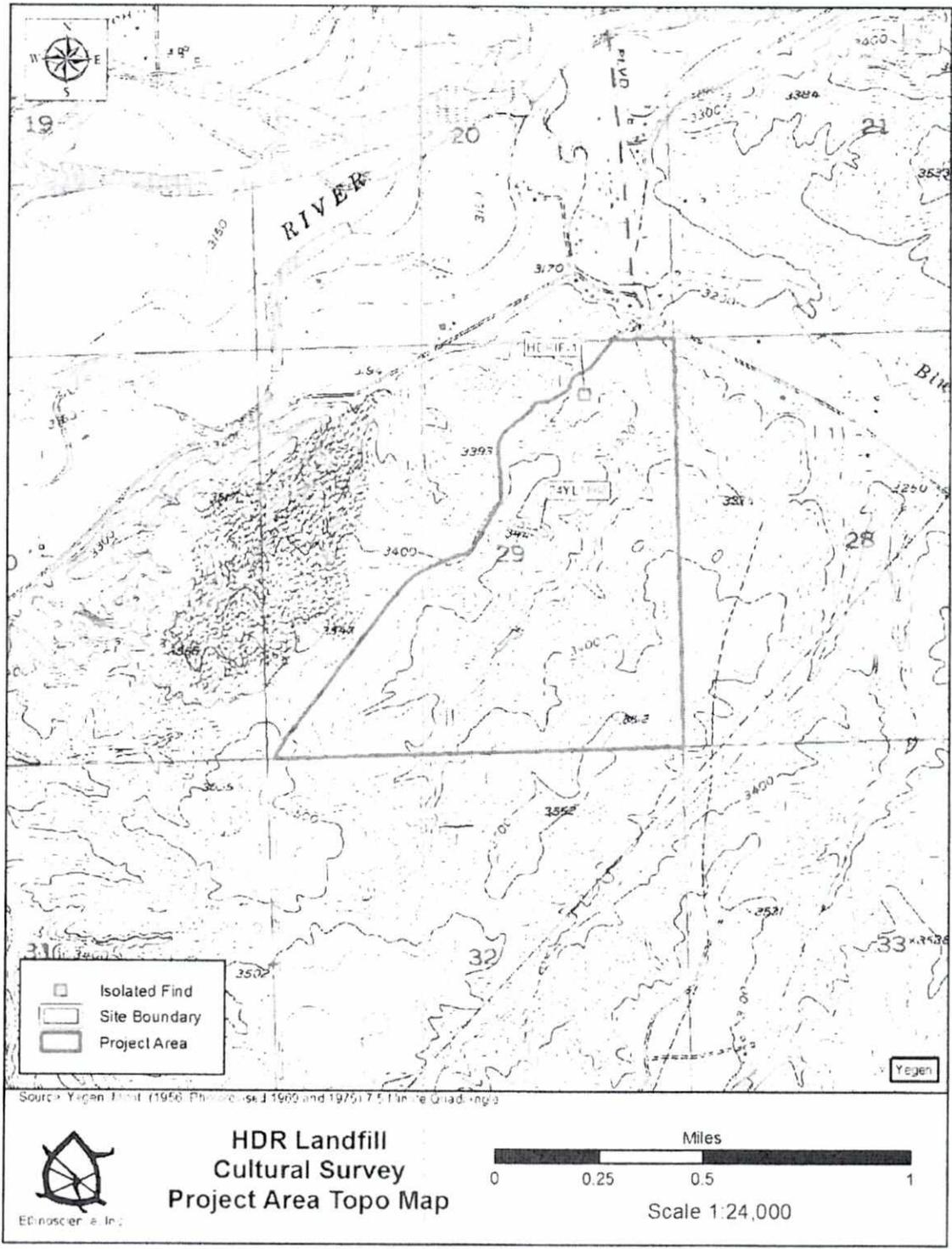
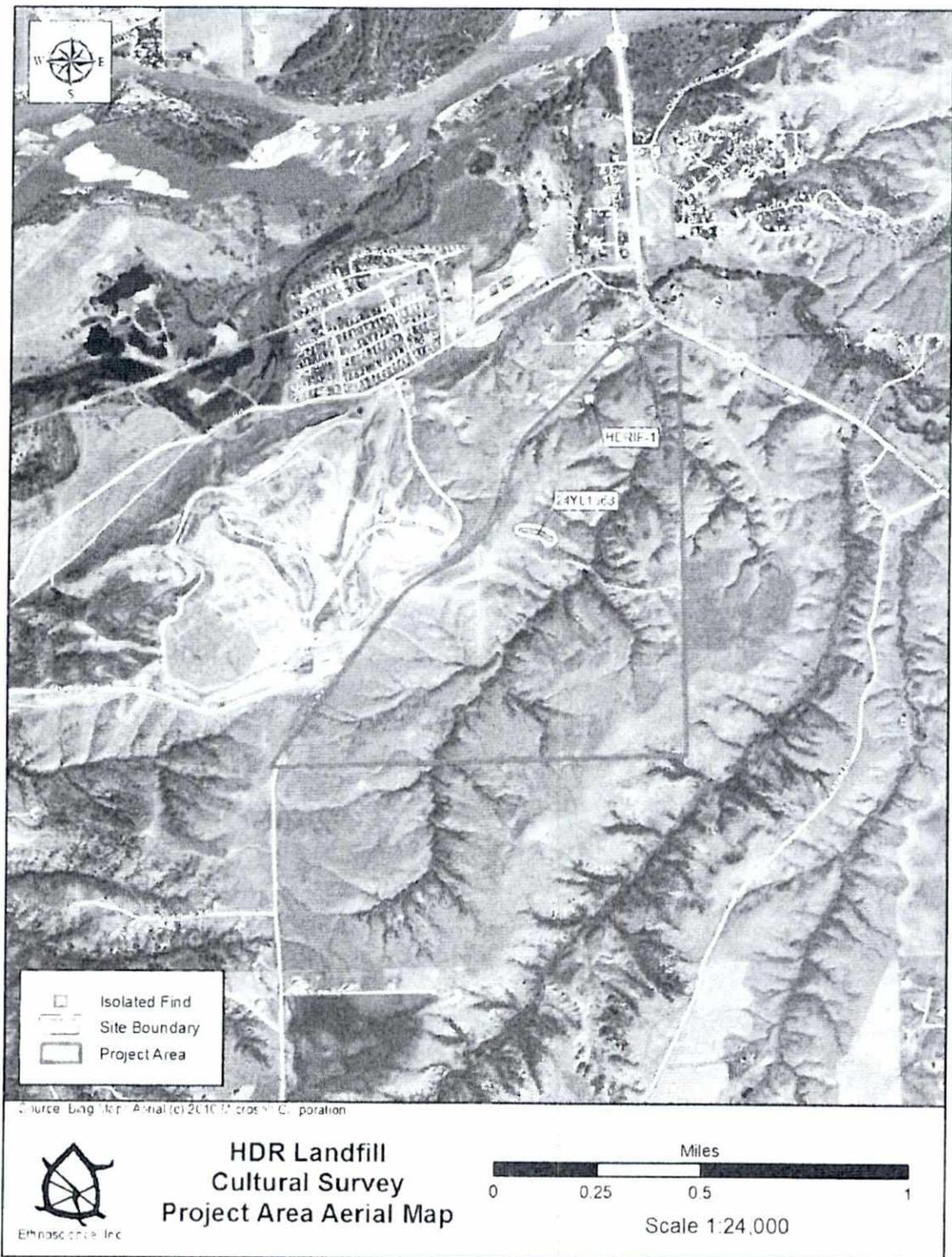


Figure 1. Map of project area



*Figure 2. Aerial photo of project area*

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The base of the drainages are densely vegetated, primarily with living and fallen junipers, as well as grasses; however, the slopes of the drainages are often eroded and provide up to 70 percent ground surface visibility. Ground surface visibility on the uplands average approximately 50 percent, but the ground surface visibility within the drainages averaged less than five percent.

### **3.0 METHODS**

Prior to the inventory, Ethnoscience obtained a files search and accompanying report and site records of Sections 28, 31, and 33 of T1S R26E in Yellowstone County, Montana. The files search indicates two previous surveys and two previously recorded sites are near the project area (Appendix A). An examination of the U.S. Geological Survey (USGS) 7.5-minute quadrangle maps, aerial photographs of the project area, and General Land Office (GLO) maps were examined to identify the presence of site leads. These examinations identified no site leads.

Ethnoscience archaeologists Lynelle A. Peterson, Jennifer L. Thomas and Gabriel Kenton conducted the inventory on October 8, 2012. To identify the locations of cultural resources within the project area, a 100 percent pedestrian survey was conducted using parallel transects spaced 30 m apart. All evidence of cultural activity over 50 years of age were recorded except for fence lines, unnamed two-tracks and roads, and stock dams. Because of the project's proximity to a landfill, isolated pieces of trash of unknown age were also left unrecorded.

The site was recorded on the appropriate Montana site forms. Complete legal descriptions (1/4, 1/4, section, township, range, county and Universal Transverse Mercator [UTM] coordinates) were determined along with the USGS topographic map reference. General information such as landform, vegetation and topographic setting was recorded. Information concerning the site type, site dimensions, site integrity (description of disturbances, if present), site attributes (features and materials), artifact description, and a detailed description of site contents, setting, and other pertinent

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observations were also recorded. A detailed site map showing all feature locations, artifact concentrations, diagnostic artifact locations, and the site boundary was produced. A color photograph was also taken as a site overview.

## **4.0 PREVIOUS INVESTIGATIONS**

The files search identified two previously sites within sections adjacent to the project area. These sites include 24YL35 and 24YL117.

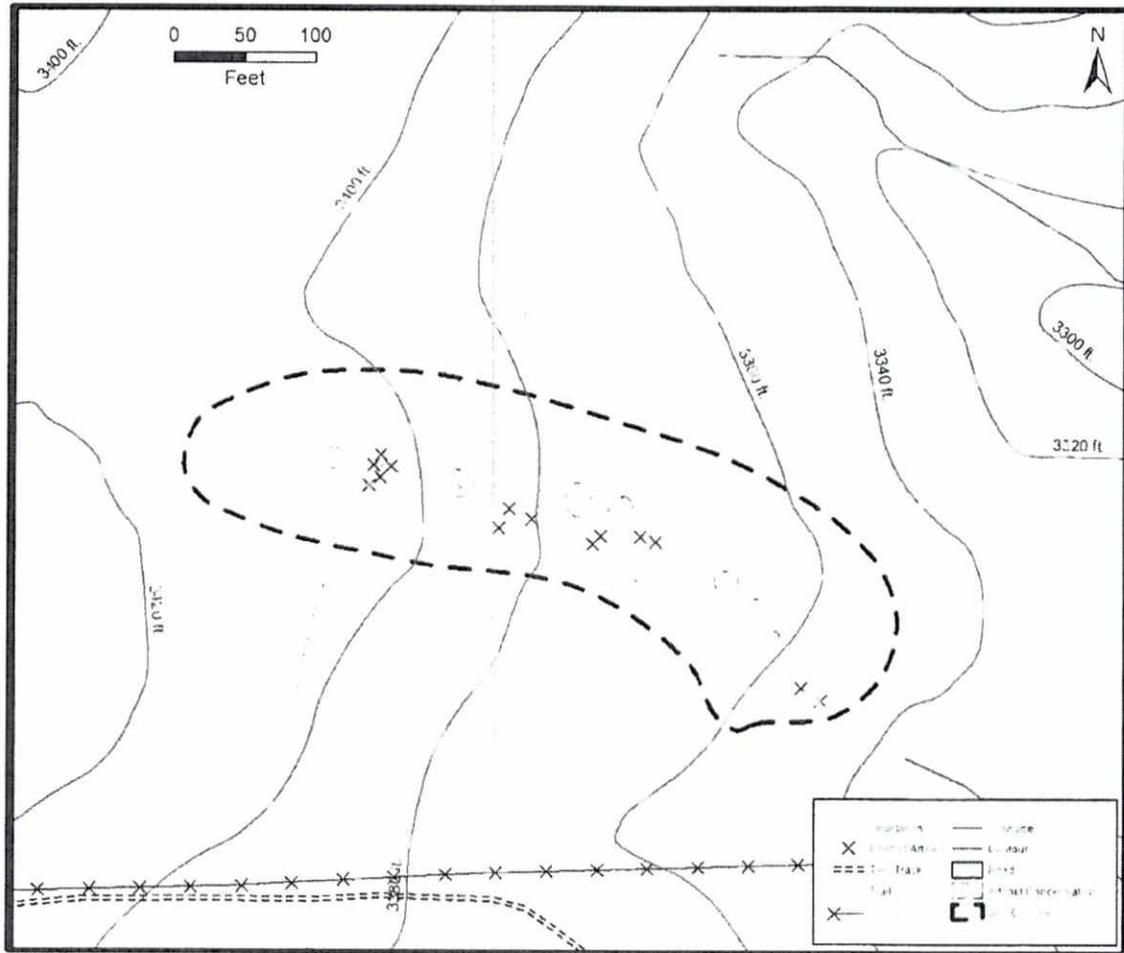
Site 24YL35 is located approximately a half mile to the east along a cut bank of Blue Creek (the exact location is unknown). This site consists of a natural burn lens. Vincent (1979) determined the feature was not associated with cultural activities.

Site 24YL117 is a sparse culture material scatter located over a mile to the west of the project area. It consisted of fire-cracked rock and 20 quartzite, agate, chert and igneous materials that Clark (1984) speculated was derived from river gravels and fire-cracked rock.

## **5.0 RESULTS**

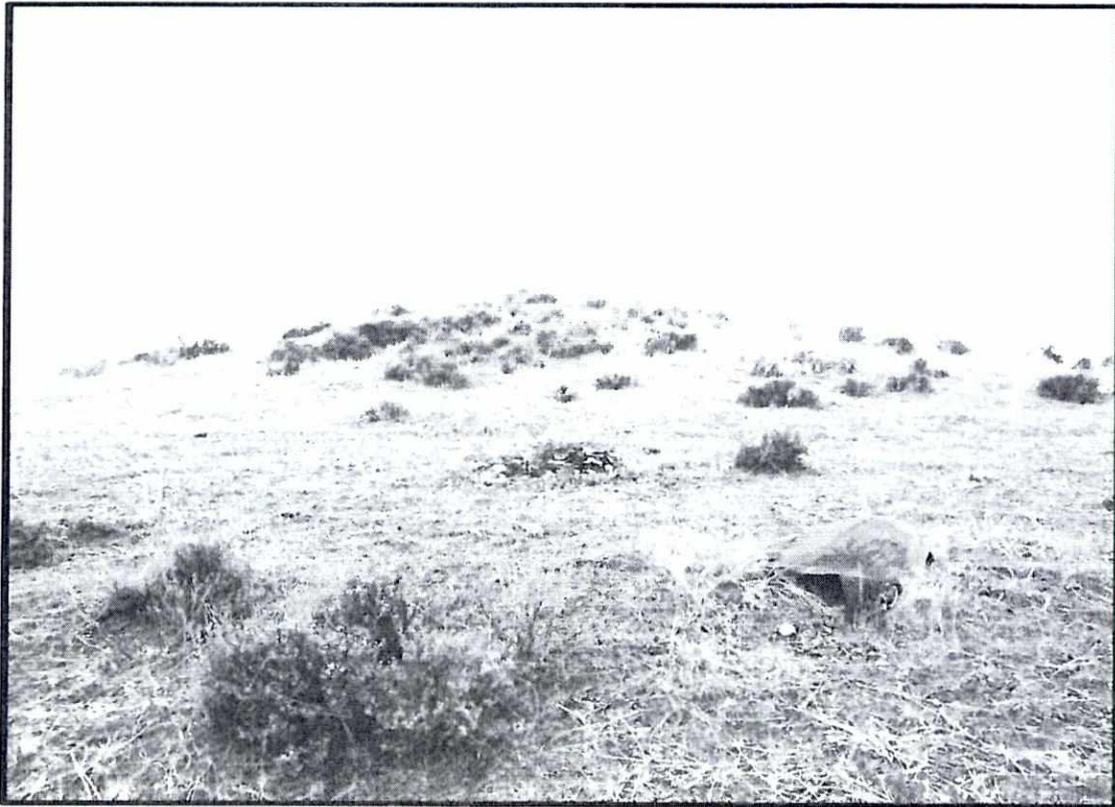
The conditions were generally favorable to identify surface visible features and artifacts. The Class III inventory identified one site and one isolate. Not recorded are individual cans and glass of undetermined age, oilcans used for target practice, and a modern dog burial with associated monument.

Site 24YL1868 is a historic cultural material scatter that occupies a 60 m north-south by 170 m east-west area along on the spine and slope of a ridge that overlooks a secondary drainage to the south and west (Figure 3 and Figure 4). The site is vegetated with short grasses, sagebrush and nearby junipers. The overall ground surface visibility of the site was 60 percent. Although the site is heavily grazed, and a cattle trail crosses through the northern portion of the site, no significant modern impacts were noted.



*Figure 3. Sketchmap of 24YL1868*

The site consists of 60 green and 50 brown beer glass shards; over 100 clear bottle glass shards including five fragments of a pop bottle with a painted label; 10 shards of cobalt blue glass; a whiteware ceramic bowl sherd with "Pat. Pend." on the bottom; two pull-tabs, a birdcage; and numerous asphalt and wood boards associated with a roof; and the engine hood of a circa 1940s Ford vehicle. The dominance of beer bottles and the presence of pull-tabs initially suggested a possible party location dating to the 1970s. However, the presence of wood, a birdcage, and other items likely indicates this is a local secondary trash jump. All materials appear on the surface and it is unlikely a significant buried component exists at the site.



*Figure 4. Overview of site 24YL1868, view to the northwest.*

This site is not recommended NRHP eligible under Criteria A-D. The site lacks sufficient integrity of association to be associated with an important event (Criterion A) or person (Criterion B). The site lacks structures and is therefore not eligible under Criterion C. Finally, the site does not demonstrate the potential to address pertinent archaeological or research questions (Criterion D).

The isolate consists of the remains of a 1940s era blue car (Figure 5), and a pull-tab beer can located at the bottom of an very steep drainage near the road to the current landfill. The engine hood is missing from this vehicle. As this isolate has the same blue paint as the engine hood found at 24YL1868, it is assumed, that at some point, it was removed from this location and carried to the site.



*Figure 5. Overview of isolate found near 24YL1868, the remains of a car, view to the west.*

## 6.0 CONCLUSION

The Class III cultural resource inventory identified one site and one isolated find. Neither demonstrates the potential to be listed on the National Register of Historic Places. Based on this observation, Ethnoscience recommends the proposed project as having **No Adverse Effect** upon significant cultural resources.

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## 7.0 BIBLIOGRAPHY

Clark, J.

1984        Yellowstone County Landfill Expansion, Department of the Interior  
              Bureau of Land Management Class III Inventory Report, Prepared By the Bureau of  
              Land Management, Billings

Vincent, W.

1979        Testing of Yellowstone County Site #24YL35. Prepared by the Society of  
              Professional Archaeologists for Cumin Associates.

# **APPENDIX A**

## **Files Search**

Site #	Twp	Rng	Sec	Qs	Site Type 1	Site Type 2	Time Period	Owner	NR Status
24YL017	1 S	2 E	31	NE	Lithic Material Concentration	Mill	No Indication of Time	BLM	undetermined
24YL0753	1 S	20 E	33	SW	Archaeological District	Cultural Timbered Lodge	Combination	Combination	NR Listed

Township: 1 S Range: 26E Section: 28

VINCENT WILLIAM B.

5 / 27 / 1979 TESTING OF YELLOWSTONE COUNTY SITE # 24YL35

CRABS Document Number: YL 6 10720

Agency Document Number:

Township: 1 S Range: 26E Section: 31

FRALEY DAVID

2 / 10 / 1984 YELLOWSTONE CO. LANDFILL EXPANSION

CRABS Document Number: YL 2 10652

Agency Document Number: 1185

# **APPENDIX B**

## **Site Form**

## MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

## 1. IDENTIFICATION

1.1 Smithsonian Number: 24YL1868

1.2 Field Designation: HDRH-1

1.3 Project Name:

1.4 Agency Project Number:

1.5 Consultant Project Number:

## 2. LOCATION

2.1 Township/Range: T1 S, R26 E, Section 29; ¼ Section(s): SWSWNE, SESWNE

2.2 County: Yellowstone

2.3 UTM Coordinates: Zone 12 E 691513m; N 5065756m, Additional UTM's Datum used:  NAD 83 conus

2.4 Administrative/Surface Ownership: City of Billings

2.5 7.5' USGS Map Name, Date: Yegen, Mont. 1956, Photorevised 1969 and 1975

2.6 Narrative of access: From I-90 take exit 447 to South Billings Boulevard. Turn onto South Billings Boulevard and follow the road south across the Yellowstone River. South Billings Boulevard will turn into Blue Creek Road. Turn right onto Hillcrest Road, approximately 3 kilometers south of I-90. Follow Hillcrest Road west for 1 kilometer. The site is 150m southeast of the road on top of a ridge bordered to the south and west by a drainage.

2.7 Vicinity of (city/town): Billings, Mt.

## 3. DESCRIPTION

3.1 Site Type: Historic Trash Dump

3.2 Site Time Period  
(use dropdowns):

Prehistoric:

Historic: Historic More Than One Decade

Paleontological:

Combination: Unknown: 

3.3 Narrative Description of Site: The site is a historic trash scatter occupying a 170 meter by 60 meter area on the spine and slope of a ridge that overlooks a secondary drainage to the south and west. The northern portion of the site consists mainly of glass bottle fragments while the south consists of whole bottles, asphalt, and wood. A cattle trail bisects the northern section of the site. Vegetation consists of short grasses, sagebrush and juniper.

3.4 Site Dimensions: 60m N-S by 170m E-W

Surface visibility: 5-60%

3.5 Feature Descriptions: N/A

3.6 Artifacts: (✓ all that apply)  Chipped Stone  Wood  Ground Stone  Ceramics  Bone  Trade  Other

Description: Please see section 6.3

3.7 Diagnostic Artifacts:

3.8 Subsurface Testing: N/A

3.9 Site function/interpretation: Secondary trash dump

**4: ENVIRONMENTAL SETTING**

4.1 **Geographic Setting:** Ridgeline overlooking the Blue Creek Drainage.

4.2 **Contour:**  Known  Approximate  Unknown

4.3 **Elevation:** 3362 ft

4.4 **View/Aspect:** 1-2 miles, Open

4.5 **Sediments:** Grayish brown sandy clay

**Deposition:**  Surface Only  Buried Only  Surface and Buried  Redeposited  Other

4.6 **Available Water Source:** Stream/River/Creek

4.7 **Major River Drainage:** Blue Creek, 1.1km, 3270 ft

4.8 **Minor Drainage:** Unnamed Intermittent Drainage, 175m, 3159 ft

4.9 **Local Vegetation:** Short Grass Prarie  
Short grasses, sagebrush, juniper

**Regional Vegetation:** Short Grass Prarie  
Prairie grasses, sagebrush, prickly pear

**5. ASSESSMENT, RECORDING & MANAGEMENT**

5.1 **Significance:** The site is a historic trash scatter with no depth. It is unlikely to contribute to answering pertinent archaeological research questions.

5.2 **Condition/Integrity:** The site is in good condition and retains integrity of location and setting.

5.3 **Possible impacts to site:** Cattle grazing, erosion.

5.4 **Evaluation:** Does this property meet National Register criteria for eligibility?  Yes  No  Unevaluated

**Evaluation Procedures/Justification:** This site is not recommended NRHP eligible under Criteria A-D. The site lacks sufficient integrity of association to be associated with an important event (Criteria A) or person (Criterion B). The site lacks structures and is therefore not eligible under Criterion C. Finally, the site does not demonstrate the potential to address pertinent archaeological or research questions (Criterion D).

5.5 **Recording status:**  surface examination  photo  map  subsurface tested

5.6 **Recommendations** (use dropdown): No Further Work

**Comments:** The site has been adequately documented, photographed, and mapped.

5.7 **Site Located by:** Jennifer Thomas

**Date Located:** October 8, 2012

5.8 **Site Recorded by:** Jennifer Thomas

**Date Recorded:** October 8, 2012

5.9 **Site form update and revisions by:**

**Date Updated:**

5.10 **Federal/State Permit No:**

5.11 **Publication(s)/Report(s) where site is described:**

**5.12 Artifact Repository:****5.13 Field notes/maps/photos repository:** Ethnoscience, Inc., Billings, MT.**6. DESCRIPTION OF HISTORIC SITES****6.1 Property boundaries:**

: estimated

: measured

**Boundary justification:****6.2 Physical description of buildings/ structures/ features; dates of construction and major alterations; contribution of building/ structure to property significance:** N/A**6.3 Artifacts observed, collected:** The site consists of 60 green and 50 brown beer glass shards; over 100 clear bottle glass shards including five fragments of a pop bottle with a painted label; 10 shards of cobalt blue glass; several complete brown beer bottles; a whiteware ceramic bowl sherd with "Pat. Pend." on the bottom; two pull-tabs, a bird cage; and numerous asphalt and wood boards associated with a roof; and the engine hood of a circa 1940s Ford vehicle. No artifacts were collected.**6.4 Subsurface Testing Methods and Results:** N/A**6.5 Historical Information and Context (footnote sources):** The maker's mark on the intact stubby brown bottles, an embossed I within an oval, indicates that they were manufactured by Owens-Illinois Inc. (Toulous 1969). To the left of the marker's mark the number 21 represents that the bottle was manufactured at Owens' Portland, Oregon plant; which opened in 1960. The number 2, located to the right of the marker's mark indicates the last digit of the year in which the bottle was manufactured (Toulous 1969). Due to the fact that pull tabs and stubby beer bottles lose popularity in the United States during the 1970s, the dumping episode most likely occurred between 1962 and 1972 (SHA 2012).**6.6 Sources, files, people consulted:**

Julian Toulous

1969 Bottle Makers and Their Marks. Thomas Nelson Inc., New York, NY.

Bill Lindsey

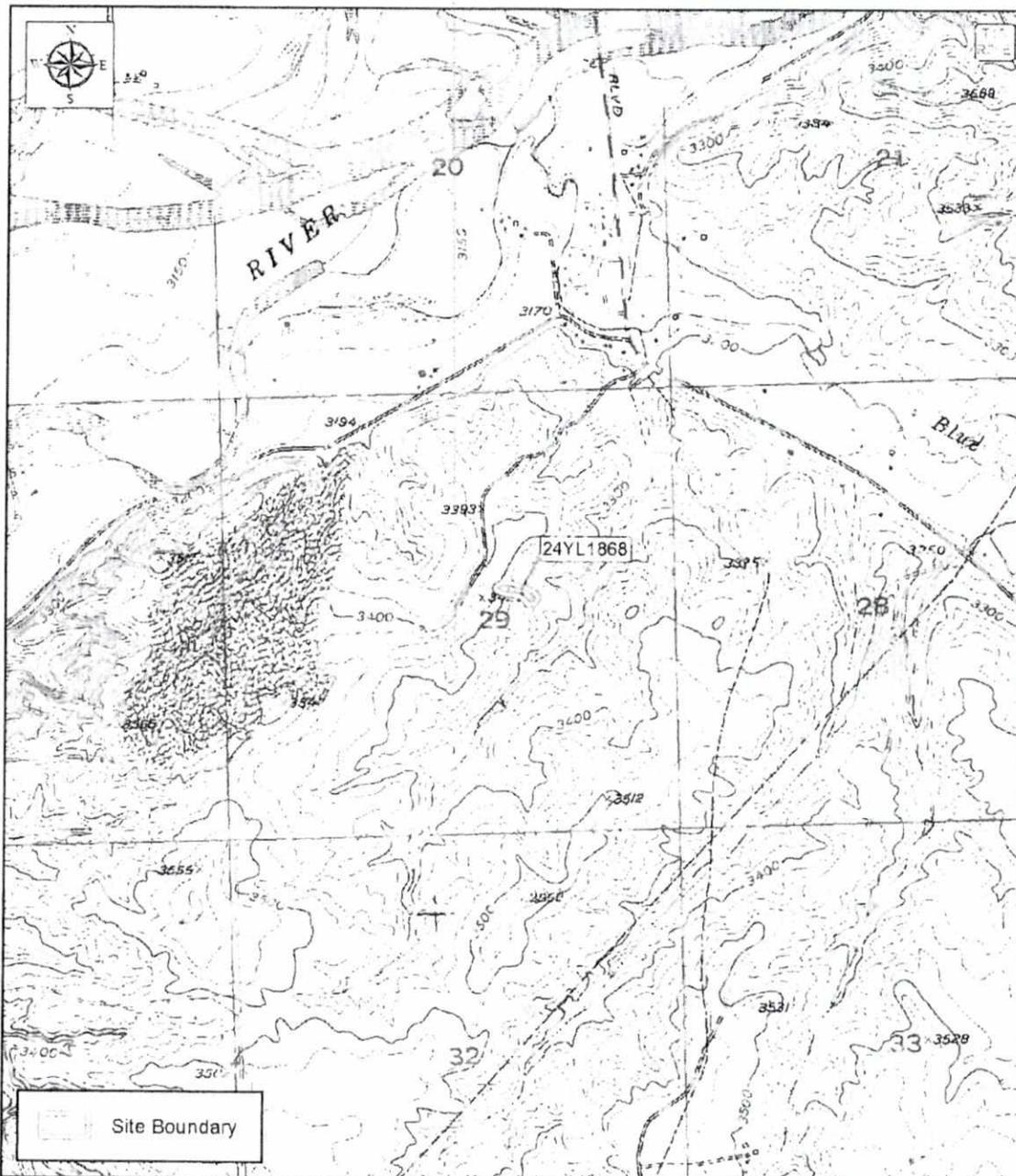
2012 Beer & Ale Bottles. <http://www.sha.org/bottle/beer.htm>.**7. ADDITIONAL INFORMATION**



Site Overview, View Northwest (Vehicle hood and roofing material in foreground).



Owens Illinois Inc. bottle base showing maker's mark, manufacturing plant, and date.



Source: Yegen, Mont. (1956) Photorevised 1969 and 1975) 7.5 Minute Quadrangle



**HDR Landfill  
Cultural Survey  
Site 24YL1868 Topo Map**

