

Hiland 1B Pipeline: A Class III Cultural Resources Inventory in McKenzie County, North Dakota

Prepared for: Hiland Operating, LLC

Prepared by: Bill Suess and Wade Burns

Beaver Creek Archaeology, Inc.
Mandan, North Dakota

BCA Project #: 2011 - 113

June, 2011



Beaver Creek
ARCHAEOLOGY

WHERE PROGRESS MEETS PRESERVATION

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Manuscript Date Record Form

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6. Number of Pages (Including front matter, references cited and appendices): **9**
7. Type – I = Inventory (Class 3 CRI), T – Test, E= Excavation, O = Other: **Type I**
8. Acres – Class 3 inventory only; project description specified only in report: **326**
9. Legal Location(s) (no quarter sections) with Historic Context Study Unit(s): Consult township tables in The North Dakota Comprehensive Plan for Historic Preservation: Archaeological Component, (SHSND 1990) for Study Unit Assignments. Study Units: LM, CB, KN, HE, SM, GA, JA, GR, NR, SR, SO, SH, YE

COUNTY	TWP	R	SEC	SU
McKenzie	151	103	4-6	YE
		104	1-5	YE
	152	103	29, 31-33	GA
		104	33-36	YE

Inventory Report

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Report Title: Hiland 1B Pipeline: A Class III Cultural Resource Inventory in McKenzie County, North Dakota.

Author: Bill Suess and Wade Burns

Report Date: June, 2011

Acreage: 326

Land Status: Private

Survey Date: May 23, 2011

Project Sponsor: Hiland Operating, LLC

Historic Context: Yellowstone River Study Unit (#13) and Garrison Study Unit (#6)

Legal Description/Location of Project Area: The proposed project is located in Sections 1-5 of T151N R104W and Sections 4-6 of T151N R103W and Sections 33-36 of T152N R104W and Sections 29, 31-33 of T152N R103W, McKenzie County, North Dakota as depicted on the USGS 7.5' Buford (ND) and Dore (MT) quadrangle maps. The proposed project is located on private land.

Description of Proposed Project: The proposed project consists of the construction of a proposed pipeline for Hiland Operating, LLC. The Area of Potential Effect (APE) consists of a pipeline corridor measuring approximately 8,846 feet long by 250 feet wide. Beaver Creek Archaeology inventoried a total of 326 acres for cultural resources.

Result of File Search: Gwen Jakel conducted a literature search at the North Dakota State Historic Preservation Office (NDSHPO) on May 17, 2011. The search revealed eleven sites, two site leads, four isolated finds within a one mile radius and 24 Manuscript(s) on file within Sections 1- 5 of T151N R104W, Sections 4-6 of T151N R103W, Sections 33-36 of T152N R104W and Sections 29, 31-33 of T152N R103W of the APE (see tables).

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Table 1: Manuscripts on File at the Archaeology and Historic Preservation Division, State Historical Society of North Dakota in or near the APE

Year	MS #	Author	Location			Title
			Tw p	R	S	
1981	2564	Root, M.	152	103	29, 32	Archeological Site Survey and Testing Along the Northern Border Pipeline, North Dakota: Annual Progress Report, 1980, McKenzie, Mercer, Dunn, Stark, Morton, Emmons, McIntosh, & Williams Counties
1981	2565	Toom, D.	152	103	29	Archeological Investigations at the Mondrian Tree Site (32MZ58), McKenzie County, North Dakota: Annual Progress Report, 1980
1980	1475	Roberson, W	152	103	29	Archeological Test Excavations Investigations at the Mondrian Tree Site (32MZ58), McKenzie County, North Dakota
1983	3455	Root, M. & Gregg, M.	152	103	29, 32, 33	Archeology of the Northern Border Pipeline, North Dakota: Vol. 2, Pts. 1-3 Survey and Background Information, McIntosh, Emmons, Morton, Stark, Mercer, Dunn, McKenzie, & Williams Co., ND
			151	103	4	
2010	12079	Jakel, G. & Burns, W.	152	103	32	Lassey Material Source Area: A Class III Cultural Resource Inventory McKenzie Co., ND
1983	3456	Root, M. & Gregg, M.	152	103	29, 32	Archeology of the Northern Border Pipeline, North Dakota: Vol. 3, Test Excavations, McIntosh, Emmons, Morton, Stark, Mercer, Dunn, McKenzie, & Williams Co., ND
2001	7829	Morrison, J.	152	103	33	Lassey Gravel Pit: A Class III Cultural Resource Inventory McKenzie County, ND
2005	9466	Klinner, D. & Heiner, P.	152	103	33	Cabin Creek to Williston Pipeline Replacement: A Class III Cultural Resource Inventory McKenzie Co., ND
			151	103	4,5	
1983	3454	Toom, D. & Gregg, M.	152	103	29	Archeology of the Northern Border Pipeline, North Dakota: Vol. 1 Pts. 1-3 Archeology of the Mondrian Tree Site 32MZ58
2008	10381	Springer, K.	152	104	35	05-053-012 Wetland Restoration Project, 2007 Addendum, Cultural Resource Inventory McKenzie Co., ND
2005	10128	Hufstetler, M. & Goff, J.	152	104	33	Historic Bridges in North Dakota 2004 Revision
			151	104	4	
2007	9998	Klinner, D.	152	104	34	Frazier 1-34H Well Pad: A Class III Cultural Resource Inventory McKenzie Co., ND
2007	9991	Klinner, D.	152	104	33, 34	Druillard 1-33H Well Pads: A Class III Cultural Resource Inventory McKenzie Co., ND
1988	4483	Vinson, E.	152	104	31	Lower Yellowstone Project Main Canal Bridge, McKenzie Co., ND United States Reclamation Service 1907-1908
1951	109	Mattison, R.	152	104	32	Report on Historical Aspects of the Garrison Reservoir Area, Missouri River
2010	11818	Burns, W. & Jakel, G.	151	103	4	Highland Partners 8 Inch Natural Gas Pipeline: A Class III Cultural Resource Inventory McKenzie Co., ND

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Year	MS #	Author	Location			Title
			Twp	R	S	
2010	11755	Bielakowski, A.	151	103	4	Class I Literature Search & Class III Intensive Archaeological Investigation for the Hiland and Saddle Butte Interconnect and Meter Station Projects, McKenzie Co., ND
2005	9286	Klinner, D.	151	103	4	Fort Buford Compressor Station and Pipe Storage Area for the Cabin Creek to Williston Pipeline Replacement Project: A Class III Cultural Resource Inventory McKenzie Co., ND
1991	5628	Olson, B.	151	103	4	Koch Industries, Inc. AFE 39999 10-inch Natural Gas Pipeline; Northern Border Connection Pipeline Reroute Cultural Resource Inventory McKenzie County, North Dakota
1991	5556	Olson, B.	151	103	4	Cultural Resource Inventory of the Proposed McKenzie Gas Plant to Fort Buford Compressor Station Northern Border Connection Pipeline McKenzie County, North Dakota
1984	3766	Metcalf, M.	151	103	4, 5	Pipeline Survey for Energy Resource Transportation, Getty Oil Company's WESCO Pipeline, McKenzie Co., ND
1982	2706	Keim, K., et al	151	103	4	The Class III Cultural Resource Inventory for the Proposed MDU Fort Buford Compressor Station, McKenzie Co., ND
2007	10031	Klinner, D.	151	104	4	Pvt. Shannon 1-4H Well Pad: A Class III Cultural Resource Inventory McKenzie Co., ND
2000	7714	Kordecki, C., et al	151	104	2	Lower Yellowstone Irrigation Project, 1996 and 1997 Cultural Resource Inventory, Dawson and Richland Counties, Montana, and McKenzie Co., ND

Table 2: Summary Information on Archaeological Sites Recorded near the APE

SITS #	Location			Affiliation	Description	Recorder	NRHP Status
	Twp	R	S				
32MZ559	152	103	32	Unknown	CM Scatter, Ceramics, Faunal Remains, Fire Cracked Rock	Volk	Unevaluated
32MZ369	152	103	29	Unknown	CM Scatter, Projectile Point, Ground Stone	Volk	Unevaluated
32MZ561	152	103	29	Unknown	Stone Circle	Kordecki, C.	Unevaluated
32MZ58	152	103	30	Unknown	CM Scatter, Chipped Stone	Peterson, L.	Unevaluated
32MZ566	152	103	29	Historical	Tilp Homestead, Foundation, CM Scatter	Unknown	Unevaluated
32MZ1591	152	104	33	Architectural	Bridge	Hufstetler, M.	Ineligible
	151	104	4				

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SITS #	Location			Affiliation	Description	Recorder	NRHP Status
	Twp	R	S				
32MZ1416	152	104	33	Historic	CM Scatter, Ceramics, Faunal Remains, Glass	Kordecki, C.	Ineligible
32MZ1843	152	104	35	Historical	Dump, Machinery, Ceramics	Springer, K.	Ineligible
32MZ2189	151	103	6	Unknown	Two Stone Circles	Messerli, T.	Unevaluated
32MZ1174	151	104	3-10	Historical	Lower Yellowstone Irrigation System	G. Jakel	Unevaluated
	152	104	31-35				
32MZ1556	151	104	5	Historical	Northern Pacific Railroad	G. Jakel	Unevaluated

Table 3: Summary Information on Archaeological Site Leads/Isolated Finds near the APE

SITS #	Location			Affiliation	Description	Recorder	NRHP Status
	Twp	R	S				
32MZx899	152	104	33	Unknown	Isolated Find, Chipped Stone	Kordecki, C.	Ineligible
32MZx120	152	104	32	Historical	Fort Henry	Kordecki, C.	Unevaluated
32MZx994	151	103	4	Unknown	Isolated Find, Chipped Stone	Klinner, D.	Ineligible
32MZx257	152	103	29	Unknown	Isolated Find, Chipped Stone	Hitland, M.	Ineligible
32MZx338	152	103	29	Unknown	Isolated Find, Chipped Stone	Hitland, M.	Ineligible
32MZx390	152	104	29, 32	Historical	Lewis and Clark, April 26, 1805	LCT	Unevaluated

Project Personnel: Wade Burns (PI) and Christina Burns, Bill Suess, Gwen Jakel, and Mary Mortensen (Staff Archaeologist).

Field Methods: The proposed project area was inventoried on May 23, 2011 by Beaver Creek Archaeology. Weather conditions were good with sunny skies and approximately 65°F. The proposed pipeline was inventoried by the archaeologists walking parallel pedestrian transects 15 - 20 meters apart to cover the APE. During the survey, field notes and overview pictures were taken.

The APE is located within the Yellowstone River Study Unit (#13) and Garrison Study Unit (#6) as found in the *North Dakota Comprehensive Plan for Historic Preservation: Archaeological*

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Component. The APE was comprised of plowed wheat fields, pasture which has been plowed in the past and native prairie rangeland. Vegetation in the area consists of native and non-native grasses, plants and forbs. Ground Surface Visibility (GSV) ranged from 95% in plowed fields to 30% in rangeland. Areas of higher visibility, such as erosion features, areas of sparse vegetation and rodent burrows were closely examined for cultural material.

Results and Recommendations: The investigation of the APE revealed three new cultural resources and three previous sites which fall within the APE. Of the three new sites, the first newly recorded site consists of one stone circle (32MZ2206) which was identified within the inventoried area. The pipeline has been rerouted and the corridor tightened up to a 25ft width so that it is situated on the downward side of the opposing slope from the stone circle thus avoiding the feature by approximately 100ft. The pipeline route is limited to any further movement to the north due to the terrain drops off steeply. The opposing side slope where the proposed pipeline will be constructed offered good subsurface visibility showing no likelihood of subsurface deposits.

The second newly recorded site which is located within the inventoried area consists of a stone circle with an associated cairn (32MZ2205). The pipeline construction corridor within the proximity of the site will be contained to a 25ft corridor when it passes the site. The pipeline has also been moved in this location so that it is on the downward slope below the site location. The features will be avoided by approximately 100ft or greater in this area. *It is recommended that both site boundaries be fenced off and monitored by an archaeologist during the construction phase of the pipeline when working in the vicinity of each of the two previously mentioned sites.*

The third newly recorded site (32MZ2209) consists of three standing structures- house, barn & windmill, which were identified within the APE. The structures are recommended ineligible. Even though the site is ineligible, and would not need to be avoided, the project will avoid the features during construction.

The proposed pipeline also crosses three previously recorded sites. The first previously recorded site is 32MZ561 which is a former stone circle site that has been destroyed by plowing (a site

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update has been performed). The area proposed to be impacted by the current project is located on the northern side of the site in an already disturbed pipeline corridor which was previously tested in 1981 by UND. At that time it was determined that this portion of the site was a noncontributing element to the site. Sometime between 1981 and the present, the site was plowed up and all of the features destroyed excluding one cairn found on the west side of the gravel road which skirts the western edge of the site. In addition to being plowed, an oil well has been constructed on a portion of the site (see map inset for aerial photo of site disturbance). During the site revisit it was noted that cultural material (KRF flakes) was visible in the central to southern extent of the site boundary. The site has been severely impacted but it is still recommended that further investigation be conducted to determine if the remaining portion of the site south of the existing pipeline corridor and west of the well location is still possibly eligible or not. Evaluative testing would need to be conducted to determine if subsurface material is still intact, before any activity is to take place south of the previously disturbed pipeline corridor. As long as the proposed pipeline corridor stays within the inventoried area north of the existing pipeline, it is the archaeologist's professional opinion that no further impact will be made to site 32MZ561.

The second previously recorded site which is located within the APE is unevaluated site 32MZ1556 (Northern Pacific Railroad) (a site update has been performed). It is recommended that the pipeline crossing of the railroad tracks should be bored under the berm to avoid impacting the site. No physical harm will come to the railroad track or berm as long as boring occurs.

The third previously recorded site within the APE is 32MZ1174 (Lower Yellowstone Irrigation Canal System) (a site update has been performed). This site consisting of a series of irrigation canals which the project crosses on multiple occasions. It is recommended that all pipeline crossings of the irrigation canal system should be bored under the canals to avoid impacting the site. No physical harm will come to the irrigation canals if boring occurs. As long as the recommendations outlined above are followed, *No Significant Historic Properties Affected* is recommended and therefore, no further archaeological investigation is needed for the APE as mapped, photographed and described herein.



Figure 1: Overview of the APE. View to the East.








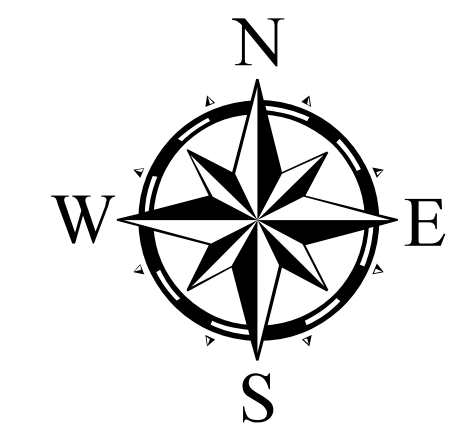
Figure 2: Overview of the APE. View to the West.

**Hiland 1B Petroleum Pipeline,
Class III Cultural Resource Survey,
McKenzie County, North Dakota**

T152N R104W, T152N R103W,
T151N R104W and T151N R103W,
Buford (ND) and Dore (MT) Quads,
McKenzie County, North Dakota

Legend

-  Route Corridor (275 acres)
-  Alternate Corridor (51 acres)
- Cultural Resources**
-  Eligible/Unevaluated Site
-  Ineligible Site/Isolated Find
-  Unevaluated Site Lead



Base Map: USGS 7.5'
Scale: 1:24,000
UTM NAD83 Zone 13

