

H-2

Memorandum on Archaeological Survey

Technical Memorandum

January 30, 2006

To: Scott Miller, Golder Associates Inc.

From: Christopher Bergman, BHE Environmental

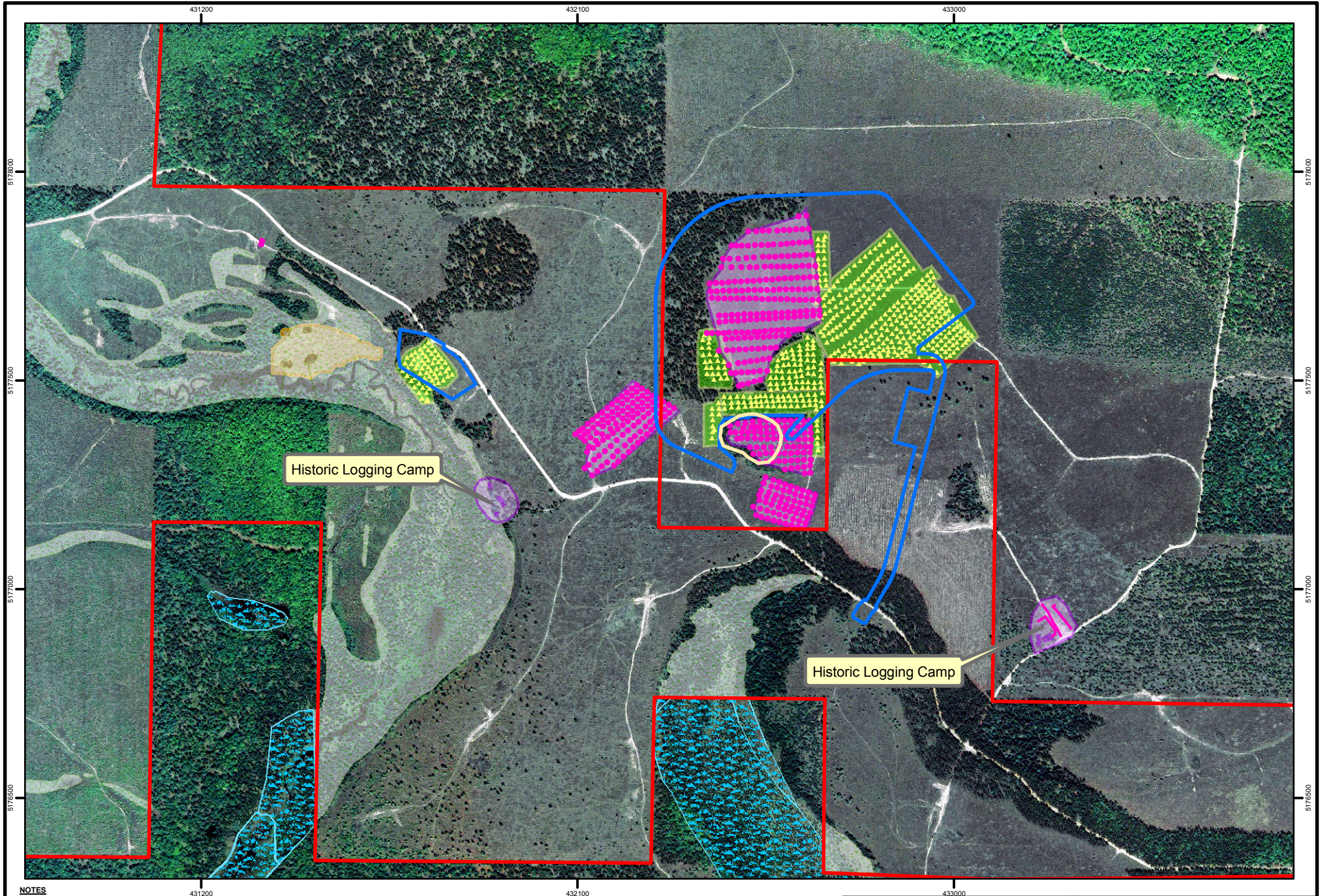
RE: Comparison of Expanded Mine Footprint with Archaeological Surveys

This memo represents further consultation related to Section 106 of the National Historic Preservation Act as a result of additional land requirements for the proposed Kennecott Minerals Company Eagle Project in Marquette County, Michigan. The attached map, Figure 3-13, shows a slightly expanded area of proposed ground disturbance (Area of Potential Effect or APE) when compared to the contiguous areas previously investigated during two separate Phase I surveys conducted in 2004 and 2005. The results of those surveys are summarized in the following table (Table 1), taken from the document entitled, *"Phase I Archaeological Survey of ca. 73 acres for Kennecott Minerals Company, Eagle Project, Marquette County, Michigan."*

Table 1. Sample Loci Type, Number and Percentage for the 2004 and 2005 Phase I Site Detection Surveys.

Sample Loci Type	2004 Number	2004 Percentage	2005 Number	2005 Percentage	2004/2005 Number	2004/2005 Percentage
Disturbed	59	12.6	68	12.0	127	12.3
Negative Shovel Test	361	77.0	448	78.9	809	78.0
Negative Pedestrian Survey	33	7.0	40	7.0	73	7.1
Negative Slope (>13 percent grade)	16	3.4	12	2.1	28	2.7
Total	469	100.0	568	100.0	1037	100.1

As can be seen from the above table, investigations across the originally proposed ca. 73 acre APE resulted in 1037 negative sampling locations of which 809 were shovel tests. The shovel tests were hand excavated with all soils screened through a ¼-inch mesh hardware cloth. It is suggested that similar negative results are likely to be recorded within the immediately adjacent, expanded APE indicated on the attached map. Based on our analysis and understanding of the area, additional Phase I survey work is expected to yield redundant negative results in the expanded area. Therefore, we believe the proposed expanded APE has been adequately characterized, but formal approval prior to land disturbance will be required by the Michigan Historic Preservation Office.



NOTES

1. Surface Property Boundary, Ore Body, Wetland boundary (Wetland and Coastal Resources), 2004 Archeological Survey and Orthophotography supplied by Kennecott via Golder Associates Inc., August, 2005.
2. 2005 Archeological Survey supplied by Kennecott via Golder Associates Inc., October, 2005.
3. Horizontal datum based on NAD 83/94.
Horizontal coordinates based on UTM Zone 16.
4. US Fish and Wildlife Service Wetlands downloaded from USFWS website.
5. Site Location - Project Site within Sections 11 & 12, T50N, R29W, Town of Michigamme, Marquette County, Michigan.

LEGEND

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|--|---|
| Eagle Ore Body | 2004 Archeological Survey and Test Sites |
| Location of Surface Facilities | 2005 Archeological Survey and Test Sites |
| Kennecott Surface Ownership | |
| WCR Wetland Boundary | |
| Wetlands adapted from US Fish and Wildlife Service Wetlands Inventory Map | |
| Outcrop | |



Foth & Van Dyke			
REVISED	DATE	BY	DESCRIPTION
CHECKED BY: JOS1		DATE: FEB. '06	
APPROVED BY: SVD1		DATE: FEB. '06	
APPROVED BY:		DATE:	



FIGURE 3-13
ARCHEOLOGICAL SURVEY AREAS

Scale: 0 75 150 Meters Date: FEBRUARY, 2006
Prepared by: Foth & Van Dyke By: DAT 04W018