Interim Cultural Resources Management Report

Phase II Investigation Results and Recommendations for Prehistoric and Historic Sites within the Keystone Pipeline Project Corridor, Madison, Bond, and Fayette Counties, Illinois

Prepared for
ENSR
Fort Collins, Colorado

Prepared By
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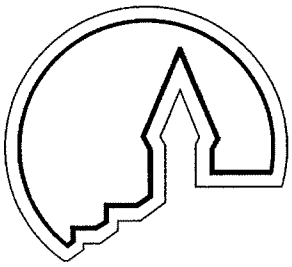

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January 2007

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Introduction

This report describes the results of eight Phase II archaeological investigations conducted along the Illinois segment of the Keystone pipeline project corridor. The proposed pipeline-construction corridor passes through four counties in its nearly 56-mile transect of central Illinois (Figure 1). This investigation was conducted by American Resources Group, Ltd. (ARG), Carbondale, Illinois, under the terms of a contract with ENSR International, Fort Collins, Colorado.

Project Description

The Keystone pipeline will ultimately be capable of transporting 435,000 barrels of crude oil per day from Alberta, Canada to markets in the United States. The total length of the proposed pipeline is 1,845 miles (2,969 km) before it terminates near Patoka, Illinois. The Illinois segment of the Keystone pipeline project passes through the southwestern Illinois counties of Madison, Bond, Fayette, and Marion. Local communities along the route will also be able to access the oil supplies carried by the pipeline. The project sponsor is TransCanada of Calgary, Alberta. The U.S. Department of State (DOS) is the lead federal agency and will coordinate the participation of the other state and federal agencies that must also review parts of the project.

Construction activities related to the excavation and installation of the crude oil pipeline to a minimum depth of 4 feet constitute potential adverse impacts to archaeological resources. The Illinois segment of the Keystone project corridor is 200 feet (60.96 m) wide in all places and bounded on the northern edge by a previously placed pipeline.

The primary objectives of the Phase II survey were to investigate eight cultural resource locations within the proposed Keystone pipeline route that were concluded to contain potentially significant remains as part of a previous Phase I survey (Myers et al. 2007), and to provide further data to assess their eligibility for listing to the National Register of Historic Places (NRHP). These objectives were achieved through substantial subsurface investigations which involved either the hand excavation of test units, the machine excavation of trenches, or a combination of both methods. The data derived from the subsequent analysis of the investigated resources and their respective assemblages were used to evaluate those resources against the NRHP criteria of significance (36CFR60.6, *Federal Register* 1976).

Authority for identifying and evaluating archaeological resources before construction begins is provided by the National Historic Preservation Act of 1966 (amended 1980) and the Archaeological Conservation Act of 1974. All work conformed to professional standards and guidelines in accordance with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (Federal Register 1983).

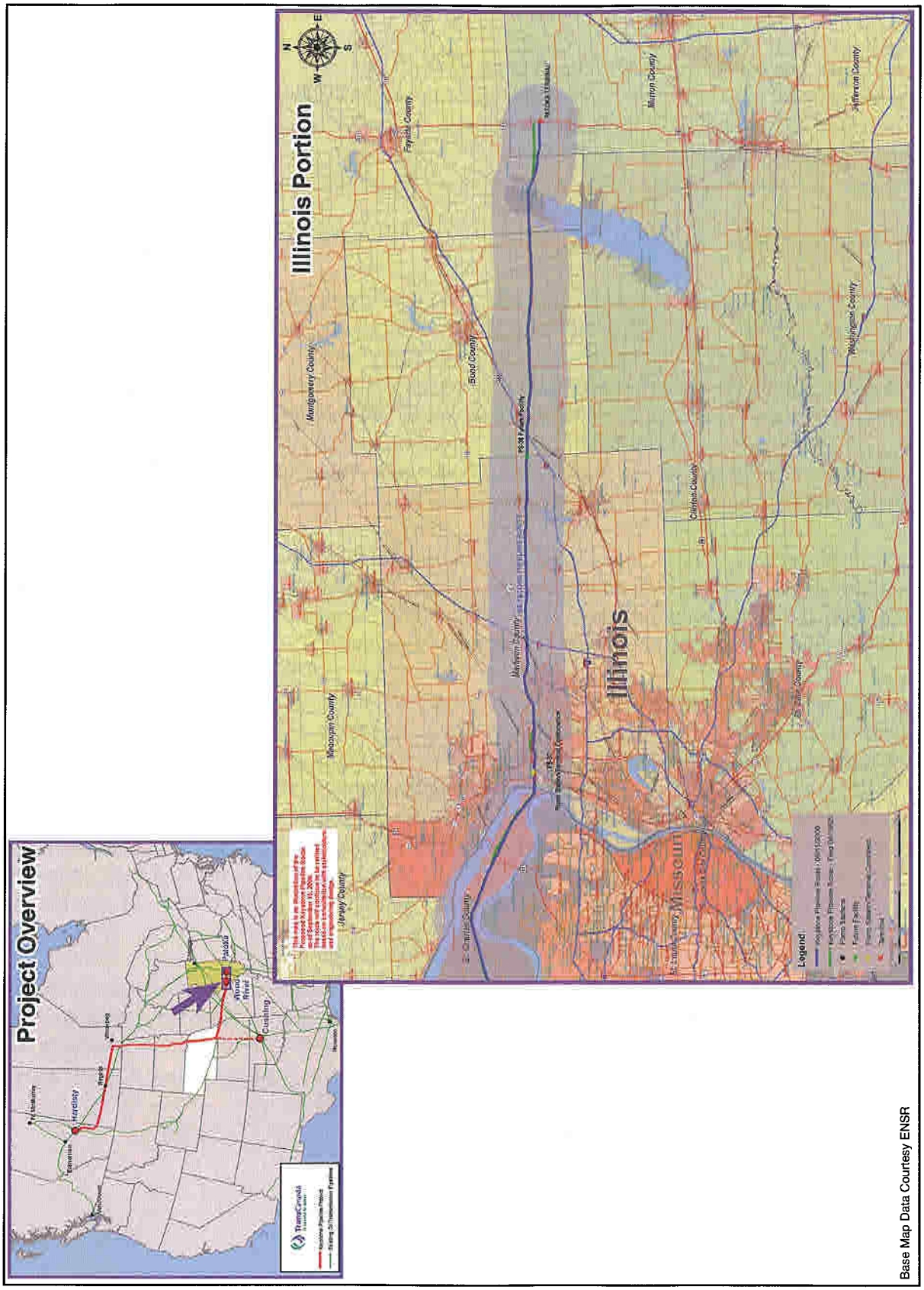

Figure 1. Keystone Illinois pipeline route map.

Archaeological Field Methods

The archaeological techniques used during the present investigation included a systematic surface collection, test unit excavation, mechanical stripping, shovel testing, feature and post mold excavation, and site mapping. These techniques are outlined below.

Systematic Surface Collection. On one site, 11MS2018, surface visibility was adequate to allow surface material to be mapped. Prior to beginning the site mapping and excavations, the ground surface in this area was visually inspected along parallel transects spaced 5 m apart. All surface finds were mapped with a total station. Information on artifact density and distribution from this procedure in conjunction with the results of the Phase I surface survey were used to infer activity areas and the possibility of subsurface cultural features in the field. All artifacts observed on the surface were collected.

Systematic Shovel Testing. With the exception of three sites—11MS2018, JM-3, and JM-2—systematic shovel testing was conducted within the defined Phase I site limits. Prior to beginning the site mapping and excavations, each area was systematically shovel tested along a grid with each test spaced 5 m apart. Each test was excavated into the subsoil and all soil was sifted through ¼-inch mesh screen. Information on artifact density and distribution from this procedure was used to infer activity areas and the possibility of subsurface cultural features in the field. All artifacts recovered using this method were collected.

Test Unit Excavation. Systematically placed test units (1 m x 2 m) were excavated at all sites in order to determine the nature, content, and vertical extent of subsurface deposits. Test units were placed in areas where surface finds, results of the Phase I systematic shovel testing, and/or topographic features indicated intact cultural deposits were most likely to be located. When present, the plow zone on each site was excavated as a single unit, with all non-cultivated soil being excavated in 10-cm levels to culturally sterile soil. All excavated soil was sifted through ¼-inch mesh screen. Cultural material was bagged and cataloged by test unit and excavation level. Brick and unmodified sandstone, limestone, cobbles, and cracked rock were counted and weighed in the field but not collected. An excavation form was completed for each level excavated, and one wall profile of each test unit was drawn and photographed.

Mechanical Excavation. Results of the systematic shovel testing conducted during the Phase I survey (Myers et al. 2007) as well as the Phase II shovel test and test units guided the mechanical excavation. The machine used for this purpose varied from site to site. This procedure involved the mechanical removal of the top soil to expose subsurface features and/or deposits. The supervising archaeologist followed the machine to collect diagnostic artifacts and examine the stripped surface for possible features exposed after every pass. All possible cultural deposits encountered during these activities were flagged and assigned a feature or post mold number. The cultural deposits were fully excavated in the manner described below.

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