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Abbreviations

ASA ............................................................... Archaeological Survey of Alberta
ACCS .......................................................... Alberta Culture and Community Spirit
AENV ............................................................. Alberta Environment
HRIA ............................................................. Historical Resources Impact Assessment
TOTAL .................................................................. TOTAL E&P Canada Ltd.
K1 Introduction

This appendix provides supporting information for the response to SIR 216b.

An historical resources assessment for the TOTAL Upgrader Project was completed and submitted to Alberta Culture and Community Spirit (ACCS) in January 2008.

The historical resources assessment addressed potential impacts on historical resources as a result of the proposed upgrader. The historical resources assessment addressed the information requirements of the Alberta Environment Terms of Reference (ToR) issued to TOTAL (AENV 2007).

Historical resources are nonrenewable resources that are sensitive to land surface disturbances. Altering the landscape can result in the damage or complete destruction of all or portions of historical resource sites. The alterations often involve:

- displacement of artifacts, resulting in the loss of valuable contextual information
- destruction of artifacts and features, resulting in complete information loss

These losses are permanent and irreversible, and are possible for all historical resources as the result of any new development.

Under Section 31 of the Historical Resources Act (Alberta Legislature 2000), ACCS assesses construction and operations impacts on historical resources during their review of the Historical Resources Impact Assessment (HRIA) for a project.

K1.1 Background

The HRIA for the TOTAL Upgrader was completed under ASA Permit 07-038 and the final report was submitted to ACCS in January 2008. Of the 346 shovel tests excavated during the survey, none were positive for cultural material. Three new historical resources sites were recorded – FkPg 148, FkPg 149 and FkPg 150 – and three previously recorded sites – FkPg 61, FkPg 62 and FkPg 106 – were revisited. Based on the results of the HRIA it was recommended that the proposed TOTAL Upgrader be granted Alberta Historical Resources Act clearance, with the exception of the immediate area of FkPg 150. Due to the diversity of the cultural assemblage and number of positive shovel tests, FkPg 150 was thought to be of high significance and it was recommended that any impacts on this site be avoided. If avoidance was not possible, then Stage 1 mitigation studies should precede any developments that might affect the site.

These recommendations were accepted by ACCS in a Schedule B Historical Resources Act requirements letter dated February 15, 2008 (see Attachment K1).

Requirements included complete avoidance by all TOTAL activities or the site would be subject to the appropriate level of mitigation study. Stage I mitigation must consist of 8 m² of excavation in high-density areas with an additional 2 m² excavated if results warrant. Depending on the results of Stage I mitigation, further investigation might be required.
K1.2  **Focus of Mitigation Study**

The focus of the current study is Stage I mitigation studies at Site FkPg 150. Site FkPg 150 is a buried campsite on top of a sand hill overlooking a slough in 10-19-55-21-W4M. FkPg 150 was recorded during the HRIA of the TOTAL Upgrader completed in 2007 under ASA Permit 07-038. The Stage I mitigation studies at FkPg 150 were carried out under ASA Permit 08-179 in June 2008.

K2  **Methods**

Mitigation studies of FkPg 150 were carried out in accordance with Schedule B (Project File 4668-088) released on February 15, 2008 (see Attachment K1). As per Schedule B, if Site FkPg 150 could not be avoided by all project activities, it was subject to the appropriate level of mitigation study. Schedule B stated that Stage I mitigation must consist of 8 m² of excavation in high-density areas with an additional 2 m² excavated if results warrant. Depending on the results of Stage I mitigation, further investigation might be required.

Excavation and subsequent artifact cataloguing and analysis were completed in accordance with the standards in the *Guidelines for Archaeological Permit Holders in Alberta* (ASA 1989).

K2.1  **Quality Assurance and Quality Control**

Infield data collection/recording QA/QC procedures were completed by senior archaeologists at the close of each field day. Data sheets were checked to ensure quality control and accuracy. A senior archaeologist with experience on large-scale energy projects and EIA preparation reviewed all reports before submission to ACCS.

K3  **Results**

Stage I mitigation was completed between June 16th and 18th, 2008. The initial 8 m² of excavation occurred between positive Shovel Tests 2 and 3, 2 and 4, and 6 and 7. The 4 m² of excavation around positive Shovel Test 1 was expanded into a 1 x 1 m unit during the initial HRIA (now Unit 110N 99E). Because of the size and diversity of the cultural assemblage, an additional 2 m² of excavation occurred around positive Shovel Test 1. Standard excavation methods were used during excavation of FkPg 150, including shovel shaving, and screening all matrix through quarter-inch mesh.

The cultural assemblage recovered from Stage I mitigation of FkPg 150 included a diversity of cultural material, including prehistoric ceramic sherds, faunal material and large amounts of lithic debitage. The cultural assemblage recovered from FkPg 150 is also similar to that recovered from FkPg 61 and FkPg 62 located nearby. Because of the diversity of the assemblage recovered during Stage I mitigation studies, FkPg 150 is thought to be of high significance and it is recommended that any impacts on this site be avoided.

If avoidance is not possible, then Stage II mitigation studies should precede any development that might affect the site. It is recommended that Stage II mitigation studies be undertaken at FkPg 150, including 24 m² of controlled excavation. Initially, this would include placement of units around the main excavation block, concentrating on the east side, as well as additional excavation surrounding Unit 115N 91E, Unit 105N 100E and Unit 104N 98E.
If Stage II mitigation results do not warrant continuation of the program, the project archaeologist might recommend to ACCS that the program be terminated. All recommendations are subject to ACCS approval.

**K4 Summary**

Stage I mitigation was undertaken between June 16 and 18th, 2008. The diverse cultural assemblage recovered during Stage I mitigation of FkPg 150 included prehistoric ceramic sherds, faunal material and large amounts of lithic debitage. It is recommended that Stage II mitigation studies be undertaken at FkPg 150, including 24 m² of controlled excavation. All recommendations are subject to ACCS approval.

**K5 References**


Attachment K1  *Historical Resources Act*

Requirements
February 15, 2008

Mr. Ben Kampala
Total E & P Canada Ltd.
Suite 1900, 333 - 7th Avenue SW
Calgary, Alberta
T2P 3T1

Dear Mr. Kampala:

SUBJECT: TOTAL E & P CANADA LTD.
TOTAL E & P CANADA STRATHCONA COUNTY PROPERTIES
WITHIN SECTIONS 18, 19 & 20, TOWNSHIP 55, RANGE 21, W4M
HISTORICAL RESOURCES ACT REQUIREMENTS

Golder Associates Ltd. has provided Alberta Tourism, Parks, Recreation and Culture with a final report discussing the results of the Historic Resources Impact Assessment (HRIA) for the Total E & P Canada Strathcona County Properties. This HRIA was undertaken as a preliminary assessment prior to the Environmental Impact Assessment for an Oil Sands Bitumen Upgrader Project. Three archaeological sites (FkPg-61, 62 & 106) were revisited and three archaeological sites were newly recorded (FkPg-148, 149 & 150) during the conduct of this impact assessment. Archaeological site FkPg-150 requires avoidance or further investigation as outlined in the attached Schedule B.

Should you require additional information or have any questions concerning the above, please contact Margret Ingibergsson at (780) 431-2374, (Historic Resources Management Branch, Old St. Stephen’s College, 8820 - 112 Street, Edmonton, Alberta, T6G 2P8), fax (780) 422-3106 or by e-mail at margret.ingibergsson@gov.ab.ca.

On behalf of Alberta Tourism, Parks, Recreation and Culture, I would like to thank representatives of Total E & P Canada Ltd. for their cooperation in our endeavour to conserve Alberta's past.

Sincerely,

David Link, PhD
Executive Director

Attachment

cc: Brent Murphy, Golder Associates Ltd. (06-1346-023)
Kate Spencer, Alberta Environment
Leah Sturgess, Strathcona County (4070-2007 A029)
SCHEDULE B

HISTORICAL RESOURCES ACT REQUIREMENTS

TOTAL E & P CANADA LTD.
TOTAL E & P CANADA STRATHCONA COUNTY PROPERTIES
WITHIN SECTIONS 18, 19 & 20, TOWNSHIP 55, RANGE 21, W4M

(PROJECT FILE: 4668-088)

1.0 FURTHER INVESTIGATION OF SITE FkPg-150

Legal Description: W4 R21 T055 S19 L10

Site Class: Prehistoric
Site Type: Campsite
Description: FkPg-150 is a buried campsite on top of a sand hill overlooking a slough.
Comments: Development footprint has not yet been determined.
Requirements: Site FkPg-150 requires complete avoidance by all of Total E & P Canada Ltd.'s activities or is to be the subject of the appropriate level of mitigative study. Stage I mitigation must consist of eight square meters of excavation in high density areas with an additional two square meters excavated if results warrant it. Depending upon the results of Stage I mitigation, further investigation may be required.

These conditions shall be considered directions of the Minister of Alberta Tourism, Parks, Recreation and Culture under the Historical Resources Act. Representatives of Total E & P Canada Ltd. are required to become knowledgeable of the conditions attached to this schedule.