



Report Title: BC Hydro Peace Site C Project Heritage Resources Assessment – Status Report

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During Stage 2 of the Site C Project, studies are underway to update many of the historical studies and information known about the project.

The potential Site C project, as originally conceived, will be updated to reflect current information and to incorporate new ideas brought forward by communities, First Nations, regulatory agencies and stakeholders. Today's approach to Site C will consider environmental concerns, impacts to land, and opportunities for community benefits, and will update design, financial and technical work.

**B.C. HYDRO PEACE SITE C PROJECT
HERITAGE RESOURCES ASSESSMENT
STATUS REPORT**

**A REPORT TO B.C. HYDRO
ENVIRONMENTAL RESOURCES
VANCOUVER, B.C.**

**PREPARED BY ARCAS CONSULTING
ARCHEOLOGISTS LTD
COQUITLAM, B.C.**

June 5, 1991

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1.0 INTRODUCTION AND PURPOSE OF ASSESSMENT

In June of 1990 B.C. Hydro retained Arcas Consulting Archeologists Ltd ("Arcas Ltd") to undertake a Heritage Resources Assessment for the proposed Peace River Site C Hydroelectric Project (the "Project"). The purpose of this Assessment was to provide background data for B.C. Hydro's ongoing planning requirements for the Project. An initial heritage resources impact assessment had been prepared for the Project by Brian Spurling of Simon Fraser University in the 1970s; the present Assessment is intended to bring the heritage resources component of the environmental studies for the Project to "shelf-ready" status. In particular, the Assessment is to define changes which have occurred in the heritage baseline information since B.C. Hydro's 1980 Energy Project Certificate ("EPC") application for the Project, and to collect the data needed to meet or exceed the requirements for a new EPC application and for a possible review of the Project under the Federal Government's Environmental Assessment and Review Process ("EARP").

The present Heritage Resources Assessment was deferred in January of 1991, but further work will be necessary if the heritage assessment for the Project is to be brought to "shelf-ready" or EPC application form. The present report is a status report which defines the objectives of the Heritage Resources Assessment, summarizes the work completed to date (March 30, 1991), and identifies additional work which will be required. References have been kept to a minimum in this report; a comprehensive Project bibliography is available from Arcas Ltd.

2.0 SCOPE OF HERITAGE RESOURCES

For the purposes of this Assessment, four basic kinds of heritage resources were identified:

(a) **Prehistoric Resources** -- archaeological sites and objects dating to the period prior to the arrival of Europeans in the Peace River region in the late 18th century. These include seasonal villages, short and long term camps, tool production locations, animal kill sites, rock cairns, etc. Prehistoric sites dating back 10,500 years have been found in the region.

(b) **Historic Resources** -- buildings, archaeological sites, and objects dating to the period following the arrival of Europeans in the Peace River region. These include fur trade "forts," homesteads, old wagon roads, missions, etc. Historic resources from two periods are present in the region: early Fur Trade period forts, and settlement period sites. The former include forts and small posts such as Rocky Mountain Fort and Rocky Mountain Portage House located along the river dating between 1794 and the 1860s; the latter consist mainly of log structures of various types dating between the 1860s and about World War II.

(c) **Paleontologic Resources** -- fossils and places which contain fossils (paleontological sites).

(d) **Ethnographic Resources** -- places of traditional social, religious, and other importance to native people which, because they do not contain any physical remains, do not qualify as archaeological heritage sites. Information about the existence and nature of ethnographic sites is usually obtained through interviews of native people, although archival and literature research is another source of such information. Ethnographic sites, and their contemporary use, are usually the main focus of the heritage concerns of native people for projects such as Peace Site C.

3.0 PHASING AND OBJECTIVES

The draft Terms of Reference prepared by B.C. Hydro for the Assessment identified more than a dozen objectives, and divided the Assessment into four sequential phases. Phase terminology was revised somewhat by Arcas Ltd, and each of the objectives was assigned to one of the phases. The four phases are:

Phase I -- Terms of Reference

Phase II -- Overview

Phase III -- Impact Assessment

Phase IV -- Follow-up

The objectives of the Assessment are discussed below by phase.

3.1 TERMS OF REFERENCE (Phase I)

The objectives of this phase are:

3.1.1 To identify regulatory and other requirements for an EPC application and EARP review;

3.1.2 To define a heritage resources assessment plan; and

3.1.3 To establish final Terms of Reference for the Assessment.

3.2 OVERVIEW (Phase II)

The objectives of this phase are:

3.2.1 To review previous and current heritage studies in the Project area;

3.2.2 To undertake a preliminary assessment of heritage site significance and Project impacts;

3.2.3 To identify additional data requirements for an EPC application and EARP review; and

3.2.4 To prepare a report on existing conditions, potential Project impacts and data requirements.

3.3 IMPACT ASSESSMENT (Phase III)

The objectives of this phase are:

3.3.1 To collect additional data needed for an EPC application and EARP review;

3.3.2 To evaluate the significance of known heritage sites in Project area;

3.3.3 To assess adverse and beneficial Project impacts on heritage sites and plans;

3.3.4 To make recommendations for Project impact management, including mitigation, and heritage resource enhancement; and

3.3.5 To prepare a heritage assessment report with final results

3.4 FOLLOW-UP (Phase IV)

The objectives of this phase are:

3.4.1 To monitor developments and maintain baseline data; and

3.4.2 To testify before EPC hearings and an EARP review, if necessary.

4.0 WORK UNDERTAKEN AND METHODS

This section summarizes by phase the work undertaken to date (July 16, 1990 to March 30, 1991). Where appropriate, the methods used in the assessment are outlined.

4.1 TERMS OF REFERENCE (Phase I)

4.1.1 Identification of regulatory and other requirements

(a) Interest Groups: Draft Terms of Reference were sent to a number of local interest groups by ARA Group for review as part of the public consultation program. These groups were identified before the heritage assessment was initiated, and this activity was not part of the heritage assessment. Additional interest groups were identified by Arcas Ltd and their names forwarded to ARA Group.

Public and interest group meetings were held by ARA Group and BC Hydro in the region as part of the Project's public consultation program. Heritage concerns were raised at a few meetings. These meetings took place prior to the initiation of the heritage assessment, and are not part of this study. The results of these meetings were forwarded to Arcas Ltd.

As part of this study Arcas Ltd held consultations in person, by telephone, or by mail with the following interest groups and individuals to identify heritage concerns about the Project:

- North Peace Historical Society
- Dr. Finola Finlay, Campus Principal, Northern Lights College, Fort St. John
- Mr. Keary Walde, archaeologist, Heritage North Consulting Services, Fort St. John
- Mrs. Myrna Gething, Chairperson "Rendezvous '92", Hudson's Hope
- Ms. Donna Kylo, Curator, Fort St. John - North Peace Museum, Fort St. John
- Ms. Janice McCarthy, Curator, Hudson's Hope Museum, Hudson's Hope
- Mr. Frank Koop, resident, Fort St. John

The study also identified a number of provincial and national interest groups with a potential interest in the Project. Others still need to be identified.

(b) Regulatory Agencies: As part of this assessment, Arcas Ltd held consultations in person or by mail with the following agencies to identify regulatory and other requirements pertaining to heritage resources for an EPC application and EARP review:

- Archaeology Branch, B.C. Ministry of Municipal Affairs, Recreation and Culture, Victoria
- B.C. Ministry of Native Affairs, Victoria
- Ministry of Communications, Ottawa

The Ministry of Native Affairs is a new provincial regulatory agency established since the last EPC application. Similarly, the Ministry of Communications is a new federal regulatory agency as is the Federal Environmental Assessment Review Office which had not been consulted at the time completion of the assessment was deferred.

(c) Native Heritage Concerns: Initial attempts were made to contact local native Indian groups as a prerequisite to identifying their heritage resource concerns about the Project. Robin Ridington, the anthropologist/ethnographer on the study team, made initial telephone and written contact with the Halfway River Indian Band, the Doig Indian Band, and the Treaty 8 Tribal Association. Subsequently Arnoud Stryd, the Study Director, was contacted by Harry Slade, counsel for the Treaty 8 Tribal Association regarding participation by the Association and its member bands in the Heritage Resources Assessment.

(d) Other EARP Experiences: Three individuals familiar with heritage studies for recent large-scale hydroelectric developments outside of British Columbia were briefly consulted by Arcas Ltd to determine their experience with federal regulatory requirements. They were: (1) Dr. Marty Magne, Director of Research, Archaeological Survey of Alberta, who participated in designing the heritage studies for the Oldman Project; Dr. Jim Finnigan, Archaeology Section, Saskatchewan Research Council, who directed a number of the heritage studies for the Rafferty-Alameda Project; and (3) Dr. David Burley, Simon Fraser University, who co-directed the heritage studies for Nipawin Project in Saskatchewan.

4.1.2 Definition of a Heritage Assessment Plan

No heritage assessment plan was prepared because the Terms of Reference for the assessment had not been finalized.

4.1.3 Establishment of Final Terms of Reference

Even though a number of possible changes to the Terms of Reference were identified during the review of the draft terms, no attempt was made to prepare final Terms of Reference for the assessment because consultations with regulatory agencies, native people, and interest groups had not yet been completed.

4.2 OVERVIEW (Phase II)

4.2.1 Review of Previous and Current Heritage Studies

This task consisted of three main activities.

(a) Review of previous heritage studies. This review included the identification and review of the following:

- identification and review of heritage documentation from the 1980 EPC application
- identification and review of publications and reports dealing with previous heritage studies in the region
- identification and review of the documentation (field notes, excavation records, catalogues, etc.) from previous Peace Site C heritage studies by Fladmark, Alexander, and Spurling stored at Simon Fraser University
- identification and review of the documentation for non-Peace Site C heritage studies in the area
- discussion of previous studies in the region with the archaeologists and others who had conducted or participated in these studies.

(b) Search of B.C. Archaeological Site Inventory. As part of the review of previous heritage studies, a search of the B.C. Archaeological Site inventory in Victoria was undertaken for registration forms of archaeological sites already recorded in the area.

(c) Review of current heritage studies and plans. This task consisted of:

- discussions with heritage specialists and interest groups resident in the Project area as to their current and future heritage study plans
- discussions with heritage specialists presently conducting research in the area, or who have recently carried out research in the area, to determine their current and future research plans
- discussions with the Archaeology Branch.

4.2.2 Preliminary Assessment of Site Significance and Project Impacts

A preliminary assessment of site significance and potential Project impacts was initiated using procedures outlined in the British Columbia Archaeological Impact Assessment Guidelines (1989) (see Section 5.1.1.).

4.2.3 Identification of Additional Data Requirements and Studies

A considerable effort was made to identify data and studies which would still be required for an EPC application and EARP review. The emphasis on this task occurred because this information was needed in the preparation of a timetable for completion of the heritage study, and in the preparation of a workplan for fiscal 1991-92. Three approaches were used:

(a) Consultation with Heritage Experts: heritage experts familiar with the Project area and the requirements of an AIARP Impact Assessment (see Section 5.1.1.) were asked their professional opinions on (i) the current state of heritage information for the area, and (ii) what still needed to be known or done in order to meet the requirements of an AIARP Impact Assessment;

(b) Review Heritage Literature: the heritage literature was examined for critical assessments of the Peace Site C studies that have been conducted, and for suggestions or recommendations as to further data and assessment needs; and

(c) Consultation with Interest Groups: interest groups and other individuals were asked to identify what they thought still needed to be done in order to address their heritage concerns for the Project. These were then divided into Impact Assessment and Mitigation actions/information needs. Only those concerned with the Impact Assessment are included in this study since mitigation concerns are beyond the scope of the present Assessment.

Consulted heritage experts and interest groups/individuals include:

- Ms. Diana Alexander, archaeologist, Simon Fraser University, Burnaby
- Dr. David Burley, archaeologist, Simon Fraser University, Burnaby
- Dr. Finola Finlay, historic archaeologist (currently Campus Principal, Northern Lights College, Fort St. John)
- Dr. Knut Fladmark, archaeologist, Simon Fraser University, Burnaby
- Mrs. Myrna Gething, Chairperson "Rendezvous '92", Hudson's Hope
- Dr. Scott Hamilton, historic archaeologist, Lakehead University
- Mr. Geordie Howe, archaeologist, Arcas Ltd
- Ms. Donna Kylo, Curator, Ft. St. John - North Peace Museum, Fort St. John
- Dr. Marty Magne, Director of Research, Archaeological Survey of Alberta, Edmonton
- Ms. Janice McCarthy, Curator, Hudson's Hope Museum, Hudson's Hope
- Dr. Jack Nance, archaeologist, Simon Fraser University
- North Peace Historical Society, Ft. St. John
- Dr. Robin Ridington, anthropologist, University of British Columbia, Vancouver
- Mr. Bjorn Simonsen, archaeologist, Bastion Group Heritage Consultants, Victoria
- Mr. Brian Spurling, archaeologist, Saskatchewan Culture, Multiculturalism & Recreation, Saskatoon

- Mr. Keary Walde, archaeologist, Heritage North Consulting Services, Fort St. John

4.2.4 Overview Report

Because the Overview was not completed at the time the Heritage Assessment was deferred no Overview report was prepared.

4.3 IMPACT ASSESSMENT (Phase III)

This phase had not been started at the time the Heritage Assessment was deferred because the prior Overview had not been completed.

4.4 FOLLOW-UP (Phase IV)

Monitoring of developments following the Impact Assessment was not possible because the prior Impact Assessment was not started.

5.0 RESULTS

The results of the Assessment completed to date are discussed in this section by phase.

5.1 TERMS OF REFERENCE (Phase I)

5.1.1 Identification of Regulatory and Other Requirements

(a) Interest Groups: As a result of consultations by ARA Group and Arcas Ltd with local interest groups and individuals, two Project related heritage concerns were identified:

- the heritage study should include non-human heritage resources such as fossils, dinosaur trackways, views, and unusual land forms
- the original fort site of Fort St. John should be considered a major heritage resource with tourism potential and should be included in the study

Other unidentified concerns may, of course, exist.

(b) Regulatory Agencies: Based on the consultations undertaken so far, it appears that the major regulatory requirements for the Peace Site C Project will come from the Archaeology Branch of the B.C. Ministry of Municipal Affairs, Recreation and Culture. Most of the other concerns expressed by interest groups and individuals seem to be encompassed by the Archaeology Branch requirements, and the Branch director thinks that EARP requirements will probably be encompassed by the Branch requirements as long as there is an opportunity for public involvement in the heritage study. Branch personnel think that proposed changes to the Heritage Conservation Act, if enacted, will not alter the Branch's requirements for the Peace Site C Project.

The Archaeology Branch thinks that the Project is subject to the provincial Archaeological Impact Assessment and Review Process ("AIARP") through the Branch's participation on the Energy Project Coordinating Committee. The AIARP typically includes up to three formal reviews: Overview, Impact Assessment (including inventory), and Impact Management (which can include mitigation, surveillance, monitoring, and compensation). Guidelines for the AIARP are contained in a document entitled British Columbia Archaeological Impact Assessment Guidelines (1989) issued by the Archaeology Branch. In the opinion of Archaeology Branch personnel, an AIARP Impact Assessment needs to be completed for the Project prior to an EPC application.

The Guidelines outline an assessment process, but do not define the precise "level of effort" needed to meet Archaeology Branch requirements. Instead, the Branch will respond to levels of effort proposed by the Project proponent. The Branch noted that they

no longer necessarily adhere to the position expressed by the Branch (then the Heritage Conservation Branch) at the 1981-82 BCUC hearings in the so-called "Blue Paper" (Ministry of Provincial Secretary and Government Services 1981). They did indicate, however, that any assessment should address all aspects and phases of the Project, and that the full spatial extent of all permanent and temporary Project facilities (damsite, reservoir, transmission line, access roads, construction camps, etc.) should be included.

A major determinant of the scope of work still needed for an AIARP impact assessment will be the location of the assessment area boundary around the Project reservoir. This boundary will demarcate the area to be inventoried and assessed in terms of Project related impacts. In the preliminary heritage studies for the Project, Spurling (1978, 1980a, 1980b) used the reservoir "safeline" as the assessment area boundary. A "safeline" is a conservatively located line beyond which the security of residents and their belongings can be reasonably assured (in this case from the effects of the reservoir). Initially, Arcas Ltd (Stryd 1990) proposed that for the present Heritage Assessment the assessment area be redefined to correspond to the so-called "breakline" rather than the safeline employed by Spurling, with a "breakline" being a conservatively located line which marks the predicted extent of shoreline regression (mainly slides in this case). This proposed redefinition was based on the belief that safelines are more of a planning and legal tool than an indicator of probable Project-related impacts, and that probable impacts are better marked by the breaklines. Furthermore, B.C. Hydro is not planning to establish a safeline for the south bank of the Peace River since there is no residential activity on this side of the river (L. Russel, pers. comm., 1990).

In response to the proposal by Arcas Ltd, the Archaeology Branch (Kenny 1990) agreed that the inventory and impact assessment area around the reservoir should be restricted to the area defined by the proposed breaklines. However, "in order to provide for the management of impacts beyond this line [breakline]," the Branch noted that they also wanted an overview study of the area between the reservoir breakline and "takeline" (the line used to designate land which is to be purchased or restricted in future use as a direct result of the creation of the reservoir). The overview would consist of the assessment and mapping of heritage site potential between these two lines.

The Ministry of Native Affairs (McNichol 1990) expressed its concern about any adverse effects which the Project may have on native heritage concerns, and suggested that the Terms of Reference for the study be strengthened by: (a) adding specifically the requirement that native consultation and input be employed in addressing native heritage resources and issues; and (b) specifying the Tribal Councils and Bands to be contacted.

(c) Native Heritage Concerns: Initial attempts were made to identify native Indian heritage concerns about the Project. Preliminary contact with several of the local Indian bands and the Treaty 8 Tribal Association indicated that the leadership of at least some of the bands favoured participation in the Heritage Assessment by Arcas Ltd.

Further contacts with the local Indian bands and organizations were placed on hold in early August, 1990, at the instruction of the Senior Environmental Coordinator for the Project to allow for the establishment of a comprehensive agreement with local Indian groups as to their participation in all Peace Site C studies, including the Heritage Resources Assessment. Subsequently Arcas Ltd was contacted by Harry Slade, counsel for the Treaty 8 Tribal Association, for clarification of the terms of reference for the heritage study, and to inform Arcas Ltd that the Association was reevaluating its position regarding participation by the Association and its member bands in the heritage assessment. No further developments regarding native participation in the assessment took place which involved Arcas Ltd.

(d) Other EARP Experiences: Discussions were held with three senior archaeologists involved in the management of heritage studies for recent large-scale hydroelectric developments outside of British Columbia. They indicated that the heritage resources components of the environmental studies for the Oldman Project in Alberta, the Rafferty-Alameda Project in Saskatchewan, and the Nipawin Project in Saskatchewan were not subjected to an EARP review, and that no other federal heritage requirements were placed on these projects. Apparently the archaeological impact assessment requirements outlined in the proposed Federal Archaeological Heritage Protection Act will not apply to the Project since this Act only applies to Indian lands, northern lands, and public lands (Federal Crown lands). Nevertheless, one can speculate, given the Federal Department of Communications recent White Paper on archaeological heritage, the creation of the Office for Archaeological Resource Management, and the proposed Act, that it is likely that there will be a Federal intervention in the heritage resource studies for the Project.

5.1.2 Definition of a Heritage Assessment Plan

No heritage assessment plan was prepared because the Terms of Reference for the assessment had not been finalized.

5.1.3 Establishment of Final Terms of Reference

A few minor revisions to the draft Terms of Reference are proposed at this time to take into account comments received to date. In addition, some changes in wording are proposed to make the terminology more consistent with that used in the AIARP. Only the following substantive changes are proposed:

- the evaluation of the costs of losses of heritage resources due to Project activities should be deleted. This deletion is consistent with B.C. Hydro's current policy on mitigation and compensation.
- in our opinion, there is no need for a preliminary assessment of site significance and Project impacts during the Overview phase of the study.

It is more cost effective if such an assessment is only carried out once; if so, it should take place during the Impact Assessment phase of the study (see Section 6.2.2).

Additional changes to the draft Terms of Reference may be needed once the heritage concerns of native peoples and interest groups, as well as the requirements of an EARP review and of the Ministry of Communications, are known.

5.2 OVERVIEW (Phase II)

5.2.1 Review of Previous and Current Heritage Studies

Considerable effort was expended in identifying previous heritage studies in the region, and in obtaining reports of those studies. Emphasis was placed on archaeological studies which have taken place since the completion of the Peace Site C assessments in the early 1980s. Approximately 100 references have been identified for the Peace River region of British Columbia, and another 120 references for the Peace River region of Alberta. Most pertain to archaeological resources, but paleontological, historic, and ethnographic references are included. It is estimated that about 95% of all archaeological studies, as well as a number of studies in other heritage disciplines, in the Peace River region of British Columbia have been identified. Copies were obtained of reports from the studies in British Columbia, and these were reviewed, annotated, keyworded, and entered into a computerized bibliography using a bibliographic software called Pro-Cite. A copy of the bibliography will eventually be forwarded to B.C. Hydro.

Because the present assessment did not address either ethnographic or paleontological resources, only a few ethnographic and paleontological studies are included in the computerized heritage bibliography. Similarly, because the assessment focused primarily on British Columbia, only a few heritage studies carried out in the Peace River region in Alberta are included in the bibliography. It will be important to identify the Alberta studies since they provide the larger context within which the significance of a heritage resource should be evaluated.

Copies of the heritage documentation from the previous EPC application were obtained, reviewed, and entered into the computerized bibliography. In addition, the documentation (field notes, excavation records, catalogues, etc.) from previous Peace Site C heritage studies by Fladmark, Alexander, and Spurling presently stored at Simon Fraser University were examined, and an inventory made. Similarly, the artifacts and other archaeological material currently stored at Simon Fraser University from previous Peace Site C studies was also briefly examined and inventoried.

Documentation for non-Peace Site C heritage studies in the area was not obtained due to deferral of the study, but an initial listing of these documents and their locations was prepared.

The B.C. Archaeological Site Inventory in Victoria was searched for registration forms of archaeological sites already recorded in the area. The Archaeology Branch kindly provided us with copies of 322 site forms in electronic ASCII format; hard (paper) copies were then printed out using Wordperfect (version 5.1.) software.

In addition, previous, current, and future heritage studies in the region were discussed with the archaeologists and others involved with these studies. These discussions failed to identify any current or future heritage studies within the Project area specifically, although some research is either on-going or planned for the region outside the Project area.

5.2.2 Preliminary Assessment of Site Significance and Project Impacts

A preliminary assessment of site significance and Project impacts on sites was initiated as part of a review of a draft EPC application dated January 31, 1990. The review noted that a total of 328 prehistoric and historic archaeological sites are presently recorded in or in close proximity to the Project area. It is not clear how many of these actually lie within the inventory and impact assessment area because no formal boundaries have been established yet for this area. No paleontological sites or ethnographic sites are presently recorded in the area, although several of these are known to researchers in the region.

In the early 1980s, approximately 80% of these sites had been previously disturbed, primarily by agricultural activities, road construction, and natural erosion. It is probable that site disturbance in the area will have increased in the 10 years since this assessment. It is reported, for example, that a number of recorded historic log structures have been razed since they were recorded.

In the early 1980s it was predicted that about 65% of all recorded archaeological heritage sites in the area would be impacted by the Project. This count cannot be confirmed or revised because the assessment area has not yet been defined.

A preliminary site significance evaluation was undertaken in the early 1980s of the recorded archaeological sites in the Project area. In 1981 the Heritage Conservation Branch (now the Archaeology Branch) stated that it had "reviewed the preliminary site evaluation and considers it appropriate for first-order site-selection purposes." It is not clear, however, if this still is the position of the Archaeology Branch. In the present Heritage Assessment, a review of the data on which the preliminary site significance was based, as well as discussions with archaeologists who have worked in the area (and who recorded a number of the sites in the area), has led us to the conclusion that there is, in many cases, insufficient data for a reliable evaluation of site significance. Therefore, no attempt was made to confirm or revise the earlier preliminary site significance evaluation.

5.2.3 Identification of Additional Data Requirements and Studies

The study identified a number of significant data deficiencies in the existing Peace Site C heritage studies if these studies are to meet the requirements of an AIARP Impact Assessment. These deficiencies are largely due to changes in (a) field work standards and procedures, (b) resource management requirements, and (c) the attitudes towards heritage resources by interest groups, native people, and the public at large. Some of these deficiencies have been mitigated by archaeological studies carried out subsequently in the region for purposes other than the Peace Site C Project.

In general, it was observed that the existing heritage studies for the Project focused primarily on prehistoric archaeological resources. Historic resources received moderate attention, but were mainly concerned with early Fur Trade sites at the expense of later historic remains. Paleontologic resources are mentioned, but not included in these studies, and ethnographic resources are not even mentioned. Paleontologic and ethnographic resources also were not included in the present overview for funding and other reasons.

Paleontologic Resources

Completion of an AIARP Impact Assessment will require an inventory, significance evaluation, and impact assessment for paleontologic resources in the Project area. This will involve a literature review, field survey, resource evaluation, and impact assessment.

Ethnographic Resources

Completion of an AIARP Impact Assessment will require an inventory, significance evaluation, and impact assessment for ethnographic resources in the Project area. This will involve a literature and research review, interviews of native people to determine their heritage concerns, field visits to ethnographic resource areas and sites, recording and mapping of resource areas and sites, evaluation of these areas and sites, and impact assessment. The interviews may identify additional concerns not anticipated at this time which would have to be addressed.

Historic Resources

Two kinds of historic resources are present in the Project area: early Fur Trade period forts, and settlement period sites (see Section 2).

Fur Trade period historic resources have been the main focus of historic resources assessments in existing heritage studies for the area. Most of the sites from this period have been examined in sufficient detail to provide the information needed for an impact assessment. However, Rocky Mountain Portage House, a non-standing trading post of high provincial heritage significance located opposite Hudson's Hope, needs additional work for impact assessment purposes, but the relationship of this site to the reservoir is at

present not clear. Should the site lie within the Project assessment area, it is our opinion that:

- a detailed assessment of Rocky Mountain Portage House be undertaken, including test excavations of site features, to verify the presence of each of the site's occupation periods (1805-14; 1823-24; 1860s-99), to evaluate site disturbances by later occupations, and to identify future research potential; and
- the terraces adjacent to Rocky Mountain Portage House be closely examined for related native encampments.

Settlement period historic resources are poorly documented in existing heritage studies. These sites are of particular heritage significance to the non-native residents of the area, especially people related to the pioneer families of the region. These types of sites are a legitimate focus of archaeological research, and have been part of heritage impact assessments in both the United States (e.g., Lower Granite Reservoir, Idaho) and Canada. Homestead remains dating from the late 1800s and early 1900s have been a major focus of work in the heritage assessments for the Oldman River, Nipawin, and Rafferty-Alameda Projects.

For the Peace Site C Project, only limited survey has been carried out for the purpose of locating sites from this period. The survey which was undertaken focused on sites with standing log architecture. Furthermore, none of the approximately 30 recorded historic sites from the settlement period have been documented in detail or assessed in terms of significance or research potential for mitigation. Consequently, it is our opinion that the following activities pertaining to historic resources need to be undertaken for a completion of an AIARP Impact Assessment:

- archival and oral history research should be undertaken with the aim of identifying additional sites such that a complete documentation of land-use in the settlement period is gained;
- all potential settlement period site locations within the assessment area should be examined and assessed;
- all historic structures still standing should be revisited, recorded or rerecorded, and assessed; and
- all inventoried sites should be evaluated for mitigation purposes, taking into account the kinds of significance values important to local people. These incorporate ethnic, public, historic, and research values.

Prehistoric Resources

Prehistoric heritage resources received the greatest emphases in previous heritage studies for the Peace Site C Project. Eleven archaeological surveys spanning 27 years were carried out for the Project, or for ancillary components such as the Site 1 to

Site C transmission line corridor. Most of these surveys were directly sponsored by B.C. Hydro. Over 200 sites of various types spanning the last 9-8,000 years have been located within the Project area as defined in the late 1970s. Some of these sites were tested, and somewhat more substantial excavations were undertaken at one site.

In spite of this effort, significant gaps and deficiencies still exist in the data on prehistoric resources needed for an AIARP Impact Assessment. Some of these gaps were recognized by the researchers who undertook these studies. Spurling, for example, noted that "continued survey is warranted" (Spurling 1980b:20; 173), and a number of activities recommended by Spurling (1980b:172-173; 180-181; 190) as part of a Mitigation program (such as test excavations, some archival research, completion of backlogged research, further site assessment) should properly belong in an Impact Assessment since the purpose of these activities is to identify heritage site locations and to evaluate site content and significance. Alexander (1982:130), who carried out additional site inventory and assessment in the proposed Project damsite, reported substantial changes in site significance evaluations and, therefore, mitigation status, over those initially proposed by Spurling as a result of her more detailed work in the damsite area, indicating a need for additional site evaluation before reliable mitigative needs can be identified.

In its 1981 review of the initial heritage assessment for the Project, the Heritage Conservation Branch recognized the need for a considerable program of inventory survey and site evaluation before the impact assessment for the Project could be considered complete (Ministry of Provincial Secretary and Government Services 1981). Academics and others familiar with the prehistoric resources work (including Dr. K. Fladmark, Dr. F. Finlay, Dr. D. Burley, Dr. S. Hamilton) all seem to be in agreement that there still are significant shortcomings in the information needed for a completed Project impact assessment. Based on the opinions of these individuals, as well as on our review of the existing data, it is our opinion that the following activities are needed in order to complete the prehistoric resources part of the Impact Assessment:

- most of the recorded prehistoric sites were not evaluated as to integrity (amount of disturbance), depth of deposits, site boundaries, and site content, and on many site registration forms information is sketchy and site maps are absent. This information is essential for site significance assessment which is a key part of any impact assessment. Consequently, all recorded prehistoric sites should be revisited, evaluated using evaluative shovel testing, and rerecorded.
 - although large tracts on the intermediate terraces and floodplain of the north bank were surveyed archaeologically, certain areas received no or only minimal attention. These include the edge of the plateau at the top of the valley wall (the valley lip), the deep alluvial fans at the backs of many of the intermediate
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terraces, selected non-hummocky areas back from the fronts of the intermediate terraces, old stream channels and other kinds of erosional gulleys on the backs of the intermediate terraces, and selected areas on the floodplain. In our opinion, these should be examined, and will require deep testing with a backhoe in quite a few cases.

- the south bank of the valley within the reservoir received relatively little coverage during previous archaeological surveys. In part this is acceptable, given the apparently lower density of prehistoric sites on the south bank. Nevertheless, survey coverage of the south bank is not adequate, and a program of prehistoric site survey is considered essential for this side of the river.

- a proper evaluation of the significance of the prehistoric heritage sites, and of the impact which the Project will have on prehistoric sites, requires a good understanding of the geomorphic history of the valley. That information will be critical to the proper assessment, prediction, and understanding of the distribution of prehistoric aboriginal sites (and early historic sites) within the proposed reservoir, and it will be important to the construction of any Mitigation research designs. At present there is no reliable information pertaining to the sequence and dating of river incision and aggradation; the exact ages and history of the crucial intermediate terrace complex on which most prehistoric sites occur, and whether some portion of the late prehistoric cultural sequence in the valley may have been lost by late sedimentary aggradation on the floodplain. For these reasons, it is our opinion that completion of the Impact Assessment should involve at least a preliminary study of the geomorphic history of the valley in this area.

These activities would be restricted to the Project inventory and impact assessment area except, possibly, the geomorphic research which probably would require some field work outside the immediate impact area.

5.2.4 Overview Report

Because the Overview was not completed at the time the assessment was deferred no Overview report was prepared.

5.3 IMPACT ASSESSMENT (Phase III)

This phase had not been started at the time of deferral because the prior Overview had not been completed.

5.4 FOLLOW-UP (Phase IV)

Monitoring of developments following the Impact Assessment was not needed because the prior Impact Assessment was not started.

6.0 RECOMMENDATIONS FOR COMPLETION OF ASSESSMENT

This section identifies those activities which still need to be carried out in order to complete the present Heritage Resources Assessment. Once completed, this assessment should meet or exceed all the requirements identified for both a new EPC application and a possible EARP review for the Project.

6.1 TERMS OF REFERENCE (Phase I)

6.1.1 Identification of Regulatory and Other Requirements

This task is almost completed. However, some consultation is still needed in order to complete the review of the Terms of Reference and to finalize the identification of regulatory and other requirements.

(a) Interest Groups: No provincial and national interest groups have yet been consulted. Since these groups are likely to make presentations before any BCUC hearings, it is important that the concerns of these groups be identified prior to the finalization of the Terms of Reference. It is recommended, therefore, that **(1) the following non-local interest groups be contacted in order to determine their concerns pertaining to the Project:**

- Heritage Society of British Columbia, Vancouver
- Archaeological Society of British Columbia, Vancouver
- Canadian Archaeological Association, Victoria
- other groups as identified

A comprehensive list of local interest groups was sent to ARA Group for contacting as part of the public consultation program. It is unclear, however, how many of these groups were actually contacted by ARA Group. Presumably a number of these groups still need to receive copies of the draft Terms of Reference for review, or need to be contacted for their response. It is recommended, therefore, that **(2) all local interest groups not yet contacted be given copies of the draft Terms of Reference for the Heritage Resources Assessment, and that they be given ample opportunity to review and respond to the draft Terms of Reference.**

(b) Regulatory Agencies: Both provincial regulatory agencies were consulted, but the requirements of the two federal agencies still need to be determined. It is recommended, therefore, that **(3) the Ministry of Communications and the Federal Environmental Assessment Review Office be contacted to determine their regulatory requirements for heritage resources component of the Project.**

(c) **Native Concerns**: It is already known that native groups in the region have heritage concerns about the Site C Project, and that they expect these concerns to be addressed in a manner acceptable to them. A similar need to address these concerns was expressed by the Ministry of Native Affairs. It is strongly recommended that **(4) the heritage concerns of native Indian groups be addressed either as part of the present Heritage Resources Assessment or as a separate study.**

(d) **General**: In order to ensure that changing perceptions, concerns, expectations, and requirements for the heritage resources component of the Project are identified and dealt with as they arise, it is recommended that **(5) B.C. Hydro maintain contact with both interest groups and regulatory agencies on an on-going and informal basis for the duration of the Impact Assessment.**

6.1.2 Definition of a Heritage Assessment Plan

No plan had been established for the heritage resources assessment at the time that the study was deferred. A plan will be needed if the Overview and Impact Assessment phases of the study are to be successfully completed. It is strongly recommended, therefore, that **(6) a Heritage Resources assessment plan be defined as soon as the final Terms of Reference for the assessment have been established.**

6.1.3 Establishment of Final Terms of Reference

Critical to any heritage assessment for the Peace Site C Project is a precise definition of the boundaries of the assessment area, particularly along the reservoir. Suggestions have been made as to possible boundaries in the reservoir area, but no final decision has been made. Without a final boundary it is not possible to determine the scope of additional data needed for an EPC application, or to establish final Terms of Reference for the assessment. It is strongly recommended, therefore, that **(7) the boundaries of the heritage assessment area be clearly defined and mapped prior to the completion of the Terms of Reference phase of the present study.**

6.2 OVERVIEW (Phase II)

6.2.1 Review of Previous and Current Heritage Studies

Considerable progress was made in the review of previous and current heritage studies in the region, particularly those conducted in the immediate Project area. However, the review did not specifically seek out ethnographic or paleontological heritage studies, and only undertook a preliminary examination of heritage studies carried out in the Peace River

region of Alberta. Because of the importance of the review of previous studies, it is recommended that **(8) the review of previous heritage studies in the Project region be completed during completion of the Overview phase of the assessment.**

Artifacts and other archaeological material currently stored at Simon Fraser University from previous Peace Site C studies were briefly examined and inventoried, but a more comprehensive inventory is needed for the evaluation of site significance. It is recommended, therefore, that **(9) the inventory of archaeological records and materials from previous Peace Site C heritage studies be completed as part of any future review of previous work or any future evaluation of site significance.**

Although a comprehensive review of current and planned heritage studies in the area was completed, current studies become past studies with the passage of time, planned studies do not occur, and new studies are started. In order to have a current record of completed, ongoing, and planned studies, it is recommended that **(10) the present list of current and planned heritage studies be updated and kept current upon recommencement of the assessment.**

6.2.2 Preliminary Assessment of Site Significance and Project Impacts

An initial attempt was made to assess site significance and Project impacts during the present study. The significance assessment was thwarted by a lack of data, whereas the impact assessment was hampered by the absence of final assessment area boundaries. Since any preliminary significance and impact assessment would be based on already available site information, the results of such an assessment would presumably not differ greatly from those presented in the 1980 report by Spurling, unless the boundaries of the assessment area around the reservoir were to change substantially. Since this is not likely, the benefits of such a preliminary assessment are dubious. The need for such a preliminary assessment is further reduced if the Overview phase -- of which the preliminary assessment would be part -- is followed shortly thereafter by the Impact Assessment phase which would collect missing data and could change substantially the results of the preliminary significance and impact assessment. Therefore, it is recommended that **(11) no preliminary assessment of site significance and Project impacts be undertaken during completion of the Overview phase of the study.**

6.2.3 Identification of Additional Data Requirements and Studies

Completion of this task means that the additional data and study requirements for an EPC application and EARP review will be fully identified. This will permit establishment of the scope of the subsequent Impact Assessment phase which is intended to collect the additional data, and to carry out the additional studies needed. The importance of this task cannot be over emphasized. It is recommended, therefore, that **(12) the**

identification of additional data and study requirements for an EPC application and EARP review be completed, and that this take place prior to the Impact Assessment.

6.2.4 Overview Report

It is recommended that (13) an Overview report be produced with the results of the Overview study.

6.3 IMPACT ASSESSMENT (Phase III)

This phase was not started and still needs to be done. The Archaeology Branch will require a completed Impact Assessment prior to an EPC application. It is, therefore, recommended that (14) an Impact Assessment be carried out for the Peace Site C Project prior to the submission of an EPC application.

6.4 FOLLOW-UP (Phase IV)

This phase was not started and still needs to be done. Because it will be important to monitor heritage developments between completion of an Impact Assessment and an EPC application, it is recommended that (15) heritage studies following the Impact Assessment be monitored for developments pertaining to the Peace Site C Project.

6.5. SUMMARY OF RECOMMENDATIONS

- (1) the following non-local interest groups be contacted in order to determine their concerns pertaining to the Project: Heritage Society of British Columbia, Archaeological Society of British Columbia, Canadian Archaeological Association, and other groups as identified.
 - (2) all local interest groups not yet contacted be given copies of the draft Terms of Reference for the Heritage Resources Assessment, and that they be given ample opportunity to review and respond to the draft Terms of Reference.
 - (3) the Ministry of Communications and the Federal Environmental Assessment Review Office be contacted to determine their regulatory requirements for heritage resources component of the Project.
 - (4) the heritage concerns of native Indian groups be addressed either as part of the present Heritage Resources Assessment or as a separate study.
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- (5) Hydro maintain contact with both interest groups and regulatory agencies on an on-going and informal basis for the duration of the Impact Assessment.
 - (6) an Heritage Resources assessment plan be defined as soon as the final Terms of Reference for the assessment have been established.
 - (7) the boundaries of the heritage assessment area be clearly defined and mapped prior to the completion of the Terms of Reference phase of the present study.
 - (8) the review of previous heritage studies in the Project region be completed during completion of the Overview phase of the assessment.
 - (9) the inventory of archaeological records and materials from previous Peace Site C heritage studies be completed as part of any future review of previous work or any future evaluation of site significance.
 - (10) the present list of current and planned heritage studies be updated and kept current upon recommencement of the assessment.
 - (11) no preliminary assessment of site significance and Project impacts be undertaken during completion of the Overview phase of the study.
 - (12) the identification of additional data and study requirements for an EPC application and EARP review be completed, and that this take place prior to the Impact Assessment.
 - (13) an Overview report be produced with the results of the Overview study.
 - (14) an Impact Assessment be carried out for the Peace Site C Project prior to the submission of an EPC application.
 - (15) heritage studies following the Impact Assessment be monitored for developments pertaining to the Peace Site C Project.
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