

**ARCHAEOLOGICAL OVERVIEW ASSESSMENT OF
GOLDEN LANDSCAPE UNITS G4, G6, G7, G8, G9, G10,
G11, G12, G13, G14, G15, G16, G17, G18, G19, G22,
GOLDEN TIMBER SUPPLY AREA, AND
R5 AND R17, REVELSTOKE TIMBER SUPPLY AREA**

FINAL REPORT



ARCAS
CONSULTING ARCHEOLOGISTS

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FINAL REPORT

Prepared for:

BCTS Okanagan–Columbia Business Area and Louisiana-Pacific Canada Ltd.

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MANAGEMENT SUMMARY

This report summarizes the methodology used during the archaeological overview assessment undertaken by Arcas Consulting Archeologists Ltd. in 2007 and 2008. The assessment was conducted on behalf of BC Timber Sales Okanagan-Columbia Business Area and Louisiana-Pacific Ltd., for sixteen Landscape Units within the Golden Timber Supply Area and two within the Revelstoke Timber Supply Area. The Landscape Units are located within the asserted traditional territory of the Ktunaxa Kinbasket Tribal Council, Shuswap Band, Akisqnuq First Nation, Shuswap Nation Tribal Council, Okanagan Nation Alliance (for Landscape Units R5, R17, G4, G6 through G18) and Okanagan Band (for Landscape Units R5, R17, G4, G6 through G18).

The assessment of the eighteen Landscape Units (G4, G6 through G19, G22, R5 and R17) was undertaken in 2007 and 2008. Polygons of moderate and high archaeological potential were plotted onto 1:20,000 scale TRIM-Orthomosaic maps accompanied by a database of criteria defining the scoring and ranking of polygons. The polygons were then digitized into a GIS based format for ease during future resource management planning. As a result of the assessment, 617 polygons of moderate or high archaeological potential were identified within these Landscape Units.

As this study was funded by the Forest Investment Account, Section 3.4 and Appendix A of the AIA Guidelines (Archaeology Branch 1998) were followed in their entirety as required by the Forest Investment Account.

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The professional opinions expressed in this report are those of the author, and not necessarily those of any other individuals, groups, or institutions involved in the study. Arcas is solely responsible for the content of this report, including any errors, omissions, or other shortcomings.

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1.0 INTRODUCTION

This is the final report for an archaeological overview assessment (AOA) for eighteen landscape units within the Golden Timber Supply Area and the Revelstoke Timber Supply Area, undertaken by Arcas Consulting Archeologists Ltd (Arcas) in 2007 and 2008. This AOA was carried out on behalf of BC Timber Sales Okanagan-Columbia Business Area (BCTS) for sixteen Landscape Units within the Golden Timber Supply Area and Louisiana-Pacific Ltd. (LP) for two Landscape Units within the Revelstoke Timber Supply Area. Funding for the study was through the Forest Investment Account (FIA) administered by the British Columbia Provincial Government.

The Golden AOA project consisted of the archaeological overview assessment of eighteen Landscape Units (LUs: G4, G6 through G19, G22, R5 and R17). The assessed LUs are located along the southeastern corner of BC (Figure 1), within the asserted traditional territories of the Ktunaxa Kinbasket Tribal Council, Shuswap Band, Akisqnuq First Nation, Shuswap Nation Tribal Council, Okanagan Nation Alliance for LUs R5, R17, G4, G6 through G18 and the Okanagan Band for LUs R5, R17, G4, and G6 through G18.

An interim report was produced in March 2008 for seventeen Landscape Units at the request of BCTS due to the large scope of the project and its extension over two fiscal years. This final AOA report includes all eighteen Landscape Units that were assessed in both 2007 and 2008. As this study was funded by the Forest Investment Account (FIA), Section 3.4 and Appendix A of the AIA Guidelines (Archaeology Branch 1998) were followed in their entirety as required by FIA.

1.1 Objectives

To assist with the management of archaeological sites, the Archaeology Branch has issued the *British Columbia Archaeological Impact Assessment Guidelines* (Archaeology Branch 1998). These *Guidelines* identify several kinds of archaeological assessments that can be undertaken in response to proposed developments, with the kind of assessment dependent on the stage of development design and the types of archaeological information required. The assessment described in this report consists of an archaeological overview assessment (AOA), as described in the *Guidelines*.

The objectives of the AOA are to:

- Conduct a background library and records search of ethnographic, archaeological and historical documents pertinent to the study area;
- Identify archaeological resource potential and distribution in the study area;
- Recommend further studies including archaeological impact assessments or preliminary field reconnaissances.

This study is concerned with assessing archaeological potential for the Landscape Units indicated above. It does not address potential for traditional use activities and sites. As such, this report does not comprehensively document all First Nations' interest in the land. The study was conducted without prejudice to First Nations' treaty negotiations, Aboriginal rights, or Aboriginal title.

1.2 Definitions

The archaeological overview assessment described in this report is concerned with the prediction of potential for archaeological sites. An archaeological site is a location containing physical evidence of past human activity in the form of artifacts or features. Artifacts are human-made or modified objects, such as stone and bone tools, ceremonial objects, and fire-altered rocks. Features are modifications to the landscape or objects which cannot be moved without altering them, such as burials, culturally modified trees (CMTs), rock art, cabins and structures, trails and roads, and the remains of industrial activities.

The age at which artifacts and features become an “archaeological site” is arbitrary, and can be defined according to particular research or management objectives. Although artifacts and features that have been made recently could be considered to be archaeological remains, many archaeologists only record sites considered to be of archaeological or historical significance and believed to be more than 50 years old. Archaeological sites may have been formed as a result of Aboriginal, Euro-Canadian, or Asian-Canadian activities. Those sites that clearly post-date the arrival of Europeans or are documented by written records are sometimes called “historic archaeological sites”.

Archaeological sites are the result of certain human activities occurring at a specific location. An archaeological site may contain more than one type of archaeological evidence because more than one type of cultural activity can take place at a single location. In mapping and recording archaeological sites, archaeologists use site boundaries to indicate the known extent of physical remains at a particular location. These boundaries are necessary to delineate the physical remains or archaeological sites to ensure their protection from proposed development activities. While boundaries are placed around archaeological sites for management purposes, it should be recognized that traditional Aboriginal use of the landscape associated with these sites may extend beyond archaeological site boundaries.

While archaeological sites are recorded as discrete locations on the landscape, the material remains present at archaeological sites are related to land-use activities which took place over a much wider area, including travel between sites and resource-gathering areas. As such, site boundaries should not be considered to define the extent of traditional activities associated with those sites. Traditional use activities that leave no archaeological evidence, such as berry gathering, medicinal plant collecting, and spiritual practices, are more appropriately addressed through a Traditional Use Study and are not considered in this report.

1.3 Site Protection

In British Columbia, most archaeological sites are attributable to settlement and resource use by First Nations’ people, and if they pre-date AD 1846, are automatically protected from damage, desecration, alteration, or excavation by the *Heritage Conservation Act (HCA)*. Sites are protected whether located on public or private land. Some sites are protected through designation as “Provincial Heritage Sites” under Section 11 of the *HCA*, or through automatic protection under Section 13 by virtue of their particular historic or archaeological value. Sites automatically protected under Section 13 include:

- archaeological sites occupied or used before AD 1846;
- rock art with historical or archaeological value;
- burial places with historical or archaeological value;

- heritage shipwrecks or aircraft wrecks; and
- heritage sites of unknown age with a reasonable possibility of having been occupied or used before AD 1846.

Protected sites may be located on public or private land, and may not be altered (changed in any manner) without a permit issued under Sections 12 or 14 of the *HCA*. Additionally, cultural heritage resources (defined as objects, sites, or the locations of traditional societal practices that are of historical, cultural, or archaeological significance to the Province, a community, or an Aboriginal people) require assessment and management under the *Forest and Range Practices Act*. Further archaeological sites of Aboriginal origin not automatically protected by the *HCA* or the *Forest and Range Practices Act* may be subject to legal decisions stemming from *Delgamuukw vs. British Columbia* (1997) regarding the fiduciary responsibility of provincial governments for protecting cultural heritage.

CMTs and other evidence of Aboriginal use not automatically protected under the *HCA* may constitute evidence of the practice of an Aboriginal right. Proposals to remove or impact this evidence should be reviewed with the First Nations in whose traditional territories the evidence is located. Consultation with First Nations should be made in order to determine if a proposed development constitutes an infringement of an Aboriginal right. Consultation should follow the Ministry of Forests Protection of Aboriginal Rights Policy.

1.4 Personnel

The AOA described in this report was conducted by archaeologist Ian Cameron (Arcas), with GIS assistance provided by Ann O’Sullivan, Ewan Anderson (Arcas) and Jose Galdamez (Land and Resources Agency, Ktunaxa Kinbasket Tribal Council). Geordie Howe (Arcas) served as project manager and Richard Brolly (Arcas) conducted quality assurance.

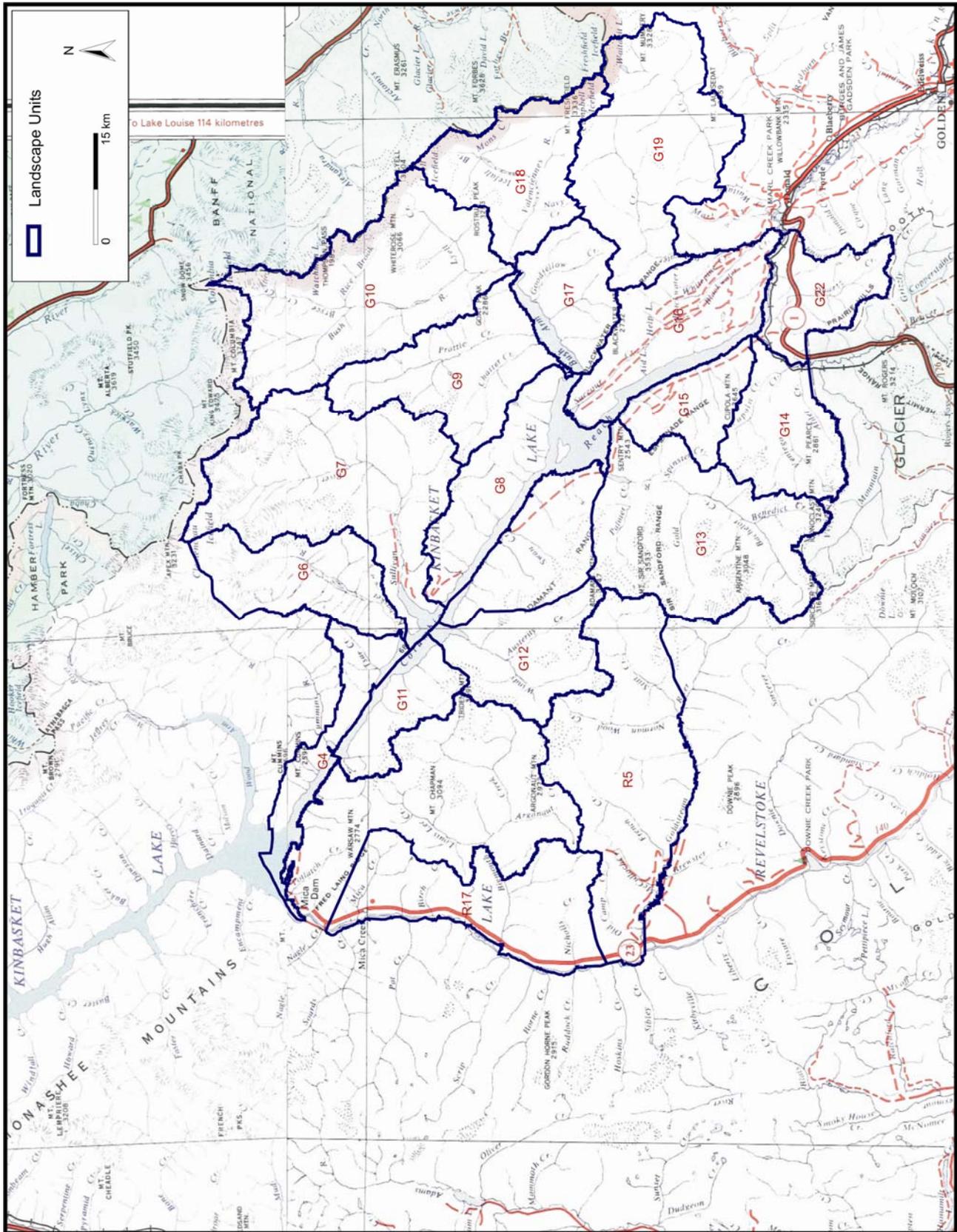


Figure 1. Location of Golden AOA Landscape Units (1: 750,000; North Eastern BC, Map No 1D; Ministry of Environment, 1992).

2.0 ASSESSED LANDSCAPE UNITS

Eighteen Landscape Units were assessed. Table 1 summarizes the 16 assessed Landscape Units in the Golden Timber Supply Area (G) and the 2 assessed for the Revelstoke Timber Supply Area (R).

Landscape Unit	Area (ha)	General Location	First Nation(s)	Archaeological Site Identified
G4	17,172	Tsar Creek	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G6	26,313	Kinbasket River	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G7	64,017	Sullivan River	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G8	31,245	Foster-Garrett	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G9	34,193	Chatter-Prattle	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G10	59,949	Bush River	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G11	15,618	Goosegrass	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	ElQm-1
G12	26,179	Windy Creek	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G13	56,029	Bachelor Creek	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G14	23,815	Ventego Creek	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G15	15,911	Esplanade	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G16	34,292	Sue Fire/Blackwater Ridge	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G17	20,172	Hope Creek	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G18	31,428	Valenciennes River	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
G19	51,389	Blue Water/Waitabit	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq	--
G22	18,632	Quartz	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq	--
R5	60,766	Goldstream	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--
R17	39,180	Mica	Ktunaxa Kinbasket Tribal Council, Shuswap, Akisqnuq, Okanagan	--

3.0 BACKGROUND INFORMATION

3.1 Study Area and Natural Setting

The study area includes sixteen Landscape Units in the Golden Timber Supply Area and two Landscape Units in the Revelstoke Timber Supply Area between the northern Purcell Mountains and the western Rocky Mountains in the southeastern corner of BC (Figure 1).

The study area is within the Southern Interior Mountains Ecoprovince and ranges over three ecoregions including the Northern Columbia Mountains Ecoregion, Western Continental Ranges Ecoregion and the Southern Rocky Mountain Trench Ecoregion (Demarich 1996). The Southern Interior Mountains Ecoprovince is characterized by two distinct climate regimes, one in the valley bottoms of the southern Rocky Mountain Trench and the other in the alpine areas of the Purcell Mountains and Rocky Mountains (Demarich 1996). This area is situated within three biogeoclimatic zones (Meidinger and Pojar 1991): the Interior – Cedar Hemlock zone (Ketcheson et. al. 1991), Englemann Spruce – Subalpine Fir zone (Coupe et.al. 1991), and the Alpine Tundra zone (Pojar and Stewart 1991). The ecological conditions, vegetation, and wildlife habitats of these biogeoclimatic zones are described in these sources.

3.2 Previous Archaeological Studies

The Golden AOA project area is situated on the eastern periphery of the Interior Plateau as defined by several archaeological authorities (e.g., Pokotylo and Mitchell 1998; Roll and Hackenburger 1998). Other authorities have referred the East Kootenays as the “Central Plateau” (Roll 1982) or the “Northern Rocky Mountain cultural region” (e.g. Choquette 1987a). Ktunaxa Nation archaeologist Wayne Choquette has developed a cultural sequence (Choquette 1984) based on his research throughout Ktunaxa traditional lands, but especially in the Rocky Mountain Trench. Tom Roll (1982) has developed a parallel sequence, narrowly focused on the middle reaches of the Kootenai River in northern Idaho and northwestern Montana, and based primarily on variations in projectile point styles through time.

The initial human occupation of the Upper Columbia basin probably commenced between ca. 11,000 and 10,000 BP¹, with people moving into a recently-deglaciated environment from the south (Choquette 1993b). These migrations appear to have involved peoples belonging to at least two different archaeological traditions (Chance and Chance 1985; Choquette 1993b). During the Early Period (11,000 to 7500 BP), the cold, wet climatic conditions prevailing during the latest glacial period were replaced by hot and dry conditions, resulting in the development of xeric grasslands in the southern river valleys and subxeric forests throughout much of the remainder of the Kootenays. All of the post-glacial lakes in the region were probably drained by about 10,000 BP (Choquette 1985, 1987b). Choquette (1985, 1987b, 1993b) asserts that this period was accompanied by the maximum recession of alpine glaciers in the Columbia River basin and expansion of alpine-subalpine grasslands, a habitat type unique to rounded mountain summits of the southern Purcell Mountains. During this period, a reliance on hunting and a subsistence pattern characterized by an ever-broadening foraging spectrum involving greater and more efficient exploitation of small plants and animals is inferred (Choquette 1993b).

The Goatfell Complex is employed to describe the subsistence and settlement patterns of the earliest inhabitants in Ktunaxa traditional territory (Choquette 1993b). Choquette contends that

¹ “BP” is the shorthand version for “Radiocarbon Years Before Present”, where present = AD 1950.

the Goatfell Complex survived in parts of the East Kootenay as late as about 5500 BP. A distinguishing attribute of the Goatfell Complex is the predominance of Aldridge Formation tourmalinite in artifact assemblages (Choquette 1981). Increasing aridity toward the end of this interval favoured the expansion of high-elevation grasslands and increased ungulate carrying capacity in the Purcell Mountains (Choquette 1993b).

At the beginning of the Middle Prehistoric Period, between 8000 and 6000 BP in Ktunaxa territory and around 7500 BP further west, the development of distinctive western and eastern cultural traditions becomes evident. The Bristow Complex represents a long-lived interval in Ktunaxa territory, ranging from 2200 to 2800 years in duration (Choquette 1984, 1993b). Subsistence was again based primarily on hunting, although people undoubtedly engaged in gathering and some fishing. Climatic conditions more moderate than the post-glacial xeric interval (also referred to as the “Hypsithermal”, “Altithermal” or “Mid-Atlantic Climatic Optimum” of various authorities) commenced around 6700 BP, by which time all of the rivers in this region stabilized at or near their present-day configurations (Choquette 1985, 1987b). At the same time, cooler, moister conditions resulted in expansion of montane forests in the region and brought about an end to the upland-oriented subsistence pattern of the Early Prehistoric Period (Choquette 1993b).

The Late Prehistoric Period commenced between about 5000 and 4000 BP, and climatically is marked by an interval of warming around 2000 BP, followed by continuation of overall post-Hypsithermal cooling, a trend which culminated in a short-lived period of glacial advances (called the Neoglacial) around 400 BP (Choquette 1993a, 1993b). Cultural developments are considerably more complex than in earlier periods, doubtless reflecting increasing human populations and perfection of adaptations to East Kootenay environments. The Kettle Lakes and Kikomun Complexes of the Rocky Mountain Trench appear between 5000 and 2500 BP (Choquette 1993b), and these complexes seem to represent specialized land use patterns that were coeval with the more widespread Inissimi Complex also dating between 5000 and 2500 BP (Choquette 1984, 1987b, 1993b). The Inissimi Complex is succeeded by the Akanohonek Complex, which begins around 1500 BP and which probably represents the archaeological expression of people who are the direct ancestors of the contemporary Ktunaxa (Choquette 1984, 1993b, 2002, Choquette and Yip 1997).

3.3 Ethnographic Studies

It is important to note that not all aspects of traditional First Nations' cultures are recorded in the anthropological and ethnohistoric literature. Additional knowledge of traditional culture and lifeways still exists in many contemporary First Nations communities. Furthermore, Aboriginal societies underwent significant changes as a result of their contact with Europeans, and some cultural aspects reported in the literature may not accurately reflect that culture prior to contact.

The Golden AOA project area is situated at the eastern periphery of the Plateau culture area. A generalized summary of traditional Plateau cultures is found in Ray (1939). Prior to the arrival of Euro-Canadian settlers to East Kootenays in the 1860s, this region was occupied by the Ktunaxa Nation, who speak a unique language related to no other language family in the Pacific Northwest. Chamberlain (1892) published an early summary of Ktunaxa culture, and the first modern ethnography for these people was published by Turney-High (1941), while Brunton (1998) is a recent summary. Specialized Ktunaxa subsistence studies were published by Schaeffer (1940) and Smith (1984).

Prior to Contact with European people, Ktunaxa people were hunters, gatherers, and fishers who, from early spring to late autumn, lived a nomadic existence in small family groups followed by winter residency in villages in major river valleys or along lakes. In contrast to most other First Nations in the Plateau, the Ktunaxa never resided in the characteristic semi-subterranean pithouse of this region, and as far as anthropologists have been able to determine, always lived in matlodges or teepees (a later introduction from the Plains cultural area).

Rivers and lakes were navigated in distinctive pine-bark canoes for seasonally available fish, game, and plant resources. Unlike most Plateau communities, many Ktunaxa bands did not have permanent or reliable access to high-quality anadromous salmon runs. This is reflected by a greater reliance upon land mammals for sustenance, in particular yearly bison hunts on the eastern slope of the Rocky Mountains.

4.0 STUDY METHODOLOGY

This study involved the assessment of archaeological potential of provincial forest lands in Landscape Units G4, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G22, of the Golden Timber Supply Area and R5 and R17 of the Revelstoke Timber Supply Area. Polygons of moderate and high archaeological potential were plotted onto 1:20,000 scale TRIM-Orthomosaic maps accompanied by a database of criteria defining the scoring and ranking of polygons. Section 3.4 and Appendix A of the AIA Guidelines (Archaeology Branch 1998) were followed in their entirety as required by the Forest Investment Account (the funding agency for this study).

Background research for this AOA consisted of a review of literature pertaining to local archaeological, ethnographic, environmental and geological studies. The Remote Access Archaeological Database (RAAD) available online through the Archaeology Branch was also queried for recorded archaeological sites in the project area. First Nations' communities whose asserted traditional territory overlaps with the Golden TSA were contacted regarding their knowledge of archaeological site distribution with the study area.

Individual polygons were created to demarcate archaeological potential for landforms and/or landscapes identified through visual analysis of TRIM-Orthomosaic maps. Where TRIM-Orthomosaic maps were unavailable, Google™ Earth imagery was utilized in tandem with TRIM data. Google™ Earth imagery proved to be very useful for evaluation of archaeological potential, especially where relief was an issue (see Figure 2 for an example). The criteria used to identify polygons of moderate or high archaeological potential have been divided into macrosite and microsite. Macrosite criteria apply to the determination of archaeological potential in a more regional context while microsite criteria refine the shape, location and degree of potential for a polygon.

Macrosite and microsite criteria for the establishment of potential polygons are described in Sections 4.1 and Section 4.2. The criteria used are reflective of the 2006 AOA model created by Wayne Choquette and were chosen due to their suitability and to facilitate compatibility between this AOA and the 2006 AOA (Choquette 2006).

Each criterion was assigned values between 0 and 3 with a score of 0 indicating that the criterion hardly affected the archaeological potential of the polygon while a score of 3 indicates that the criterion strongly affected the archaeological potential of the polygon. Polygons are deemed to have high archaeological potential if they had a cumulative score of 15 and above and moderate potential if they had a cumulative score between 5 and 14 when all the criteria values were totaled.

4.1 Macrosite Criteria

Macrosite criteria apply to the determination of archaeological potential in a more regional context. The Macrosite criteria include: known archaeological sites, travel/transportation corridors, bedrock geology, ungulate range and solar aspect. Each of these criteria will be discussed briefly below.

Known Archaeological Sites

The distribution of known sites throughout a region may give some indication as to where these sites may generally be located. As only one recorded archaeological site is located within the Landscape Units in this study, this category was not as useful as other criteria in determining archaeological potential. Only one archaeological site, ElQm-1 has been identified and recorded in the study area. The lack of recorded archaeological sites within the study area is inferred to be due mostly to a paucity of archaeological investigation in the Golden and Revelstoke Timber Supply Areas and not a reflection of actual archaeological site distribution.

ElQm-1, identified within Landscape Unit G11, is the only archaeological site identified in the project area (at the time of the study). The archaeological site consists of a lithic scatter, identified on the shoreline of the north end of Kinbasket Lake on the west side of 21 Mile Rapids.

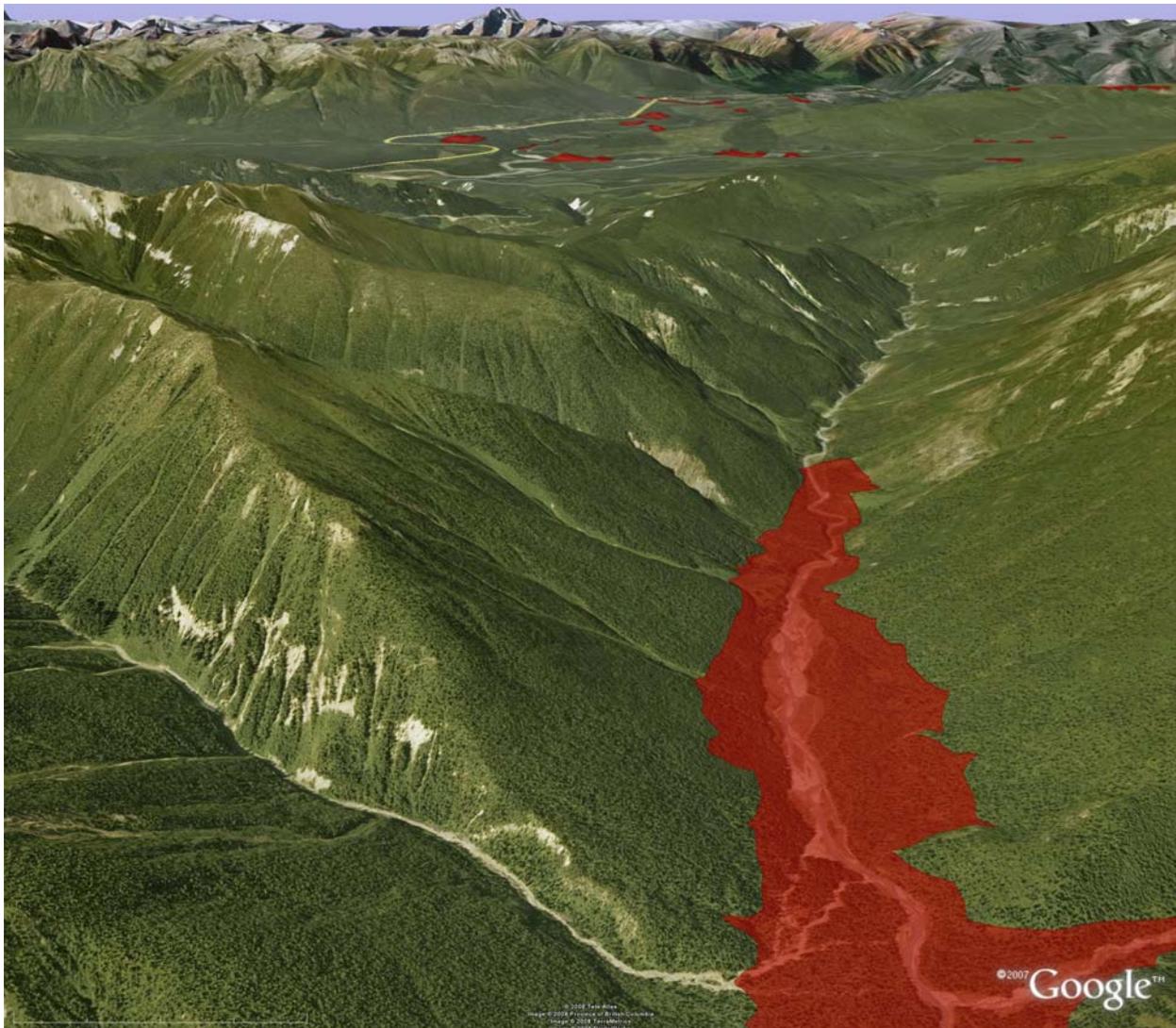


Figure 2. Snapshot of Google Earth imagery used in evaluation of archaeological potential for Golden AOA Landscape Units. The red polygons demarcate areas of high archaeological potential.

Following the parameters established for the earlier AOA undertaken by Choquette (2006), a score of 3 for the Known Archaeological Site criteria was given to polygons in proximity (1-2 km) to one or more known sites. A score of 2 was assigned to polygons further away (2-5 km) from known sites and a score of 1 indicates that the polygon is between 5 and 10 km from known sites. A score of 0 was assigned to polygons which demonstrated a lack of previously identified archaeological sites in the area (within 10 km).

Corridor

Travel/transportation corridors were selected as a criterion in the Golden TSA. Areas that would have made good travel corridors such as the Rocky Mountain Trench including the Columbia River were scored 3. The Columbia River is an important travel corridor and economic resource due to the historical anadromous salmon run. Secondary corridors that might have not been utilized as intensively were scored 2. Minor passes connecting valley systems were scored 1 and valleys ending in steep headwalls lacking exit routes or passes are scored 0.

Bedrock Geology

Bedrock geology suitable to be employed in stone tool manufacture present within the study area was selected as a criterion. This is important as suitable bedrock outcrops could be lithic quarry sites where prehistoric peoples may have obtained stone for tool making. Geology maps in the Golden area created by the Geological Survey of Canada (1980a, 1980b, 1983, 2007) were examined for suitable lithic materials (namely sedimentary and igneous outcrops). The nearest known suitable bedrock outcrops exist in the Rocky Mountains on the Alberta side of the border (Geological Survey of Canada 2007). The bedrock in the northern Purcell Mountains are composed of metamorphosed sedimentary rock not suitable for manufacturing stone tools while the Rocky Mountain portion contains no suitable rock formations close to the study area. Bedrock geology was examined as a factor for all Landscape Units but subsequently scored 0 due to the lack of suitable bedrock formations for lithic materials used in prehistoric stone tool manufacture.

Ungulate Range

This criterion refers to the availability of ungulates for hunting by prehistoric peoples. The ungulate range would affect the site distribution of hunting camp and animal processing sites. At lower elevations within the study area, mule deer, white tail deer and elk ranges exist with occasional use of subalpine areas for summer grazing. Mountain goat and sheep habitat exists in the subalpine and alpine areas. Low lying flat marshy areas and meadows were scored higher than steeper dry areas for ungulate ranges though mountain goat and sheep availability was considered for polygons in the subalpine and alpine.

Solar Aspect

Areas of southerly exposure tend to be favored by humans due to the increase of solar heating of for those locations areas in northern latitudes. Increased solar exposure is inferred to therefore naturally increase the potential for archaeological sites due to increased “livability”. South facing terraces in proximity to potable water and landforms which offer some wind protection score higher in this category. North facing slopes will score lower in this category.

4.2 Microsite Criteria

Microsite criteria refer to factors that refine the shape, location and degree of potential of a polygon. These criteria include landform features such as terrace/fan, promontory, saddle, standing water, watercourse, relict watercourse, confluence, and watercourse node.

Terrace/Fan

This criterion refers to areas that are archaeologically important as they are usually well drained, flat and provide relatively easy travel corridors. Depending upon the availability of potable water, these areas may have the potential to yield habitation sites. Terraces and fans also good areas to acquire lithic resources, such as chert nodules, which may be located on some of these landforms, especially if they are the result of glacial processes and the material has been brought in from other areas with suitable bedrock outcrops located outside the project area.

Promontory

This criterion refers to areas where bedrock ridges or promontories provide vantage points where tool production and travel across the landscape may have taken place. Promontories are important for hunting parties as they allow for increased visibility of game. Camp sites could be found in wind breaks located in proximity to promontories.

Saddle

This criterion refers to saddles which are constricted areas at the heads of some valleys that are lower than the surrounding land and may have been used to traverse drainage divides. Archaeological deposits may exist here as they were sometimes used as temporary camp site locations. In addition, minor passes or saddles between promontories or escarpments could have been used as wind protected camp areas.

Standing Water

Besides being sources of water, and possibly fish, areas by standing water can be good for campsites and hunting grounds. While standing water includes swamps, wetlands and still water beside watercourses, polygons next to lakes and larger ponds were scored higher for this criterion.

Watercourse

This refers to rivers and streams which can provide fresh water as well as vital food resources. As with the previous AOA (Choquette 2006), this criterion reflects proximity and accessibility to watercourses. Polygons closer to larger watercourses such as rivers scored higher in this category than polygons by creeks or streams. Lowland polygons with streams scored higher than upland polygons with streams due to the higher potential for salmon to run in lowland streams.

Relict Watercourse

Terraces in proximity to major rivers and creeks that reflect previous higher water levels can be areas of high archaeological potential due to the associated activities that may have taken place beside these watercourses in the past.

Confluence

The confluences of watercourses are important archaeologically as they served as settlement areas, sources of water and junctions of travel corridors. The confluences of larger water courses rate higher than those of smaller water courses.

Watercourse Node

As described by Choquette (2006), this refers to areas along watercourses such as nickpoints, rapids, large eddies, pools and waterfalls that could be utilized to serve as crossing fords or perhaps as good fishing locations.

Confidence

This criterion was created to be used for risk management. As described by Choquette (2006), the need of this measure was requested by the Cranbrook Forest District in the context of emergency situations (ie. fires) to ascertain the potential risk regarding archaeological site potential. Polygons that score 3 or 2 in this category are in close proximity to known sites and should be managed accordingly. Scores of 1 are given to the majority of polygons where inference of potential is not based off proximity to known archaeological sites.

5.0 RESULTS SUMMARY, DISCUSSION AND RECOMMENDATIONS

The archaeological overview assessment of 18 Landscape Units conducted in 2007/2008 resulted in the identification of 627 polygons of moderate or high archaeological potential. Table 2 presents a summary of the landscape units and totals of moderate and high potential polygons. Additional summary information can be obtained by querying the model.

The polygons of high and moderate potential as determined by this study indicate areas where further archaeological work should be carried out. As Wayne Choquette notes in his report for the 2006 Golden AOA, archaeological potential is a relative measure highly dependent upon an adequate database and where this is not possible, an attempt at identifying areas where sites might be located (Choquette 2006). While there has been some archaeological and palaeoecological work completed within the Landscape Units in the past, only one site has been recorded (and submitted to the Archaeology Branch) by the time of the study. The paucity of information regarding archaeological sites in this study area creates a more conjectural approach to predicting the location of archaeological sites. The majority of information has been based on of the expertise of those who have much experience surveying in the area.

Landscape Unit	High Potential Polygons	Moderate Potential Polygons	Total Polygons
G4	2	8	10
G6	2	20	22
G7	2	34	36
G8	9	33	42
G9	6	28	34
G10	1	49	50
G11	2	7	9
G12	3	26	29
G13	3	36	39
G14	2	6	8
G15	3	6	9
G16	3	73	76
G17	2	46	48
G18	1	17	18
G19	0	29	29
G22	3	33	36
R5	1	37	38
R17	1	29	30
Total	46	581	627

Section 4 outlined the methodology undertaken for this AOA and it is believed that utilization of Google Earth™ was highly beneficial to the quality of archaeological potential prediction. While the TRIM-orthomosaic 1:20,000 map sheets were excellent, they were not available for some Landscape Units and orthophotos or air photos were also not available for some Landscape Units. In those circumstances, utilizing Google Earth™ assisted greatly in determining archaeological potential. The employment of Google Earth™ is highly recommended for use in other studies where TRIM-orthomosaic coverage is not available.

It should be noted that areas where polygons of moderate or high potential have not been delineated are considered to have low archaeological potential. However, this does not imply that there are no archaeological sites present in those areas. Rather it is inferred that those locations are lacking in significant archaeological site density, at both the inter- and intra-site levels and could be difficult to locate when time and money are an issue. Polygons of moderate and high potential indicate that there is potential for a higher density of sites and there is a greater chance of locating these sites during field work programs.

Culturally modified tree sites have not been taken into consideration for this AOA and as recommended by Choquette (2006), there should be a field examination in proposed forestry developments where the age of trees exceeds ca. 100 years.

To really hone an AOA, a regimen of field testing is needed to confirm that areas that have been determined to have low, moderate and high potential have been correctly identified. The office based work should be seen as a guiding tool and local knowledge (when offered) should be incorporated into any choices when determining the level of effort for archaeological concerns in a particular forestry development.

6.0 CONCLUDING REMARKS

The archaeological overview assessment of 18 Landscape Units conducted in 2007/2008 resulted in the identification of 627 polygons of moderate or high archaeological potential. These polygons were assessed through the application of macrosite and microsite criteria as discussed in the methodology section.

This final report is concerned with assessing archaeological potential of sixteen Landscape Units in the Golden Timber Supply Area and two Landscape Units in the Revelstoke Timber Supply Area. It does not address impacts to traditional places or land use by this development. As such, this report does not comprehensively document all First Nations' interest in the land. The study was conducted without prejudice to First Nations' treaty negotiations, aboriginal rights, or aboriginal title.

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