APPENDIX A.18A: Heritage Resources Summary Report

ECOFOR
natural and cultural resource consultants

Casino Heritage Resources Summary Report

Remaining Areas to Assessed and Heritage Resources to be Managed

TO BE INCLUDED IN YESAA MATERIALS
SITE SENSITIVE DATA HAS BEEN REMOVED

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December 10, 2014

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Ecofor Consulting Ltd. (Ecofor) prepared this report on behalf of Casino Mining Corporation.

James Mooney and Kevin Wilson (Owner) would like to thank Casino Mining Corporation for the opportunity to conduct this project and for providing us with assistance.

Ecofor is solely responsible for any errors evident in this report. The opinions and/or recommendations presented herein are ours and do not necessarily reflect those held by the Heritage Branch of the Yukon Government. Previous resource management recommendations made by other private consultants, and others by staff from the Yukon Heritage Resources Unit, are listed within this summary and identified by author. The authors would like to thank Ruth Gotthardt of the Heritage Branch for assistance in providing reports and clarification as needed.

MANAGEMENT SUMMARY

Cultural resources staff of Ecofor Consulting Ltd., (Ecofor) completed this desktop summary in 2014, at the request of Casino Mining Corporation in relation to their submittal to the Yukon Environmental and Socio-economic Assessment Board (YESAB). This report is intended to be a summary document for YESAB to clearly identify what heritage assessment and mitigation work, remains to be completed, and when it should be completed. There are three tasks remaining to be completed. These consist of: 1) remaining heritage impact assessment work; 2) management of impacts to heritage resources (such as avoiding sites, monitoring construction, and mitigating negative impacts where needed through detailed data recovery excavations); and 3) managing chance heritage finds during construction. The first two tasks must be completed after final engineering designs are prepared but prior to construction efforts.

The first steps are to identify all remaining areas where heritage resource impact assessments were not previously completed; and to summarize the management recommendations for archaeological sites and historic resources that may be impacted by the development of the proposed Casino Mine Site and ancillary facilities. These footprints include the upgrades to Freegold Road, the road upgrades from the mine area to the Yukon River, and construction of a road from the mine site to the proposed airstrip and the proposed airstrip itself. These combined footprints also include proposed borrow pits and access roads to the borrow pits, and the mine site and tailings facility. Previous heritage impact assessment work for the proposed extension of Freegold Road was completed and reported under permits 88-03ASR (Gotthardt 1988), 94-09ASR (Handly, Merchant, and Rousseau 1994), 94-22ASR (Handly and Rousseau 1995), 95-01ASR (Gotthardt 1995), 95-02ASR (Hammer 1995), 09-09ASR (Soucey et al 2010a), 10-04ASR (Soucey et al 2010b), 11-04ASR (Mooney 2011), 13-06ASR (de Guzman et al 2014), 13-07ASR (Mooney 2013a), and 13-18ASR (Mooney 2013b). Additional permitted work along the proposed Freegold Road includes 11-13ASR (Mooney 2012), and 12-03ASR (Mooney 2013c). This summary reviews each of these previous efforts and combines them for reference.

The results of this heritage resources summary are presented in the following sections:

1) Areas remaining to be assessed (17 proposed borrow pits and approximately 7.45 km of ROW);
2) Thirty-three (33) archaeological sites to be managed along the proposed upgrading of Freegold Road;
3) Thirty-one (31) historic structures and resources to be managed along the Freegold Road;
4) Seventeen (17) archaeological sites to be managed near the mine site, the proposed airstrip, the road to the airstrip, and the road to the Yukon River;
5) Sixteen (16) historic structures and resources to be managed near the mine site, the proposed airstrip, the road to the airstrip, and the road to the Yukon River;
6) Ten (10) previously noted First Nation use sites along the Freegold Road.

If this project moves forward it is possible that further revisions in the road and ancillary components will be made. It is recommended that any areas of potential ground disturbing impact not previously assessed are reviewed and assessed in the field prior to impacts. Impacts to recorded historic and prehistoric resources should be avoided were possible, or mitigation efforts should be completed prior to construction impacts. Site by site recommendations are presented below. Future ground disturbances associated with the proposed mine and ancillary components are also guided by the Casino Mine Interim Heritage Resources Management Plan (Mooney 2013b).

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1.0 INTRODUCTION

1.1 Scope of Project

The Casino Property is a proposed open-pit Gold, Copper, and Molybdenum mine. The property is located in south-western Yukon, near the Yukon River in the Klondike Plateau and Central Yukon Plateau. At present the property is only accessible by air or by boat via the Yukon River. Plans are being made by Casino Mining Corporation to build a road to connect Casino Property to Carmacks and the Yukon Highway systems. In addition, an airstrip and access road are also proposed southwest of the Casino Camp to accommodate larger aircraft. Previous heritage impact assessment work for the proposed extension of Freegold Road was completed and reported under permits 88-03ASR (Gotthardt 1988), 94-09ASR (Handly, Merchant, and Rousseau 1994), 94-22ASR (Handly and Rousseau 1995), 95-01ASR (Gotthardt 1995), 95-02ASR (Hammer 1995), 09-09ASR (Soucey et al 2010a), 10-04ASR (Soucey et al 2010b), 11-04ASR (Mooney 2011), 13-06ASR (de Guzman et al 2014), 13-07ASR (Mooney 2013a), and 13-18ASR (Mooney 2013b). Additional permitted work along the proposed Freegold Road includes 11-13ASR (Mooney 2012), and 12-03ASR (Mooney 2013c). This summary reviews each of these previous efforts and combines them for reference.

The Casino name may have first been used in this region in 1915, when prospectors Jack O'Hara and Frank Farnan, discovered gold in a tributary to Dip Creek and named it after their favourite card game (Coutts 2003). The Casino Trail has been referred to as a planned mining access road from the end of the Freegold Road to the near the upper Hayes Creek area in the Dawson Range, ever since the existing Freegold Road was built. The Freegold Road itself was built in 1949 by N.A. Timmons mining interests in order to explore and develop the LaForma Gold mine on Mount Freegold. The Casino Trail is said to run northwest of the end of the Freegold Road towards Casino Creek. Parts of the proposed Casino Trail follows previously used travel corridors which were linked to trails to important copper sources in the White River area, and a section of the old Chilkat trail from Fort Selkirk (the west branch of the Dalton Trail). This travel corridor provided connectivity in pre-contact times and since the early 1900s was known by the Casino name. Since then, this travel corridor provided access for multiple uses of trapping, hunting, fishing, mineral exploration, and other collection activities, as seen in the archaeological and historic resources left behind.

1.2 Report Format

Section 2 describes areas remaining to be assessed. Section 3 summarizes the archaeological sites to be managed along the proposed upgrading of Freegold Road. Section 4 historic structures and resources to be managed along the proposed upgrading of Freegold Road. Section 5 presents archaeological sites to be managed near the mine site, road to the Yukon River, the proposed airstrip, and a road to the airstrip. Section 6 summarizes the historic structures and resources to be managed near the mine site, the road to the Yukon River, and the proposed airstrip. Section 7 lists some previously noted First Nation use sites along the proposed upgrading of the Freegold Road. Two appendices are included at the end of this report. Appendix I contains the project mapping, Appendix II contains a detailed table of remaining areas to be assessed, the archaeology sites to be managed, the historic structures and resources to be managed, and some previously noted First Nation use sites along the proposed Freegold Road upgrade.

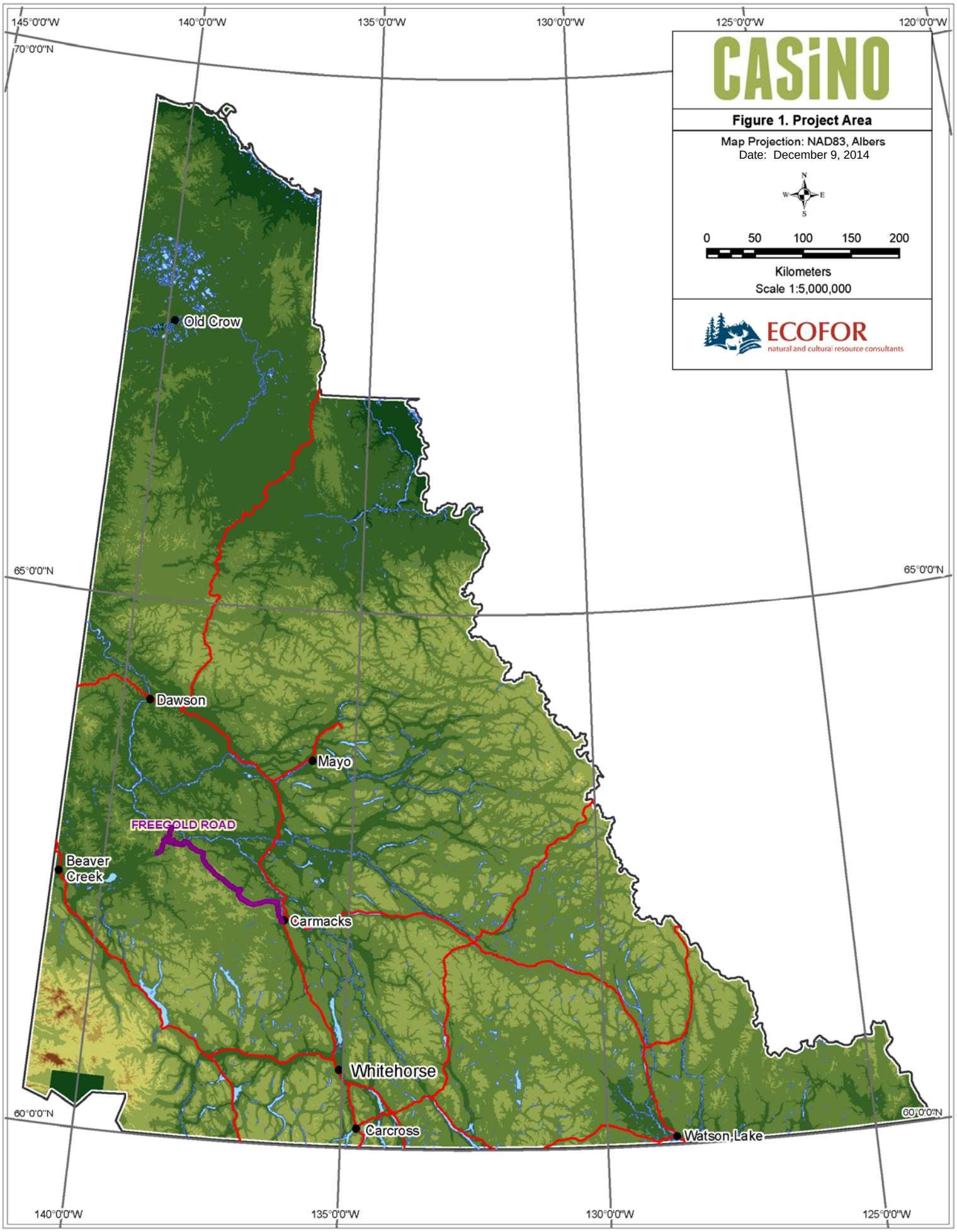
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Figure 1. Project Area
Map Projection: NAD83, Albers
Date: December 9, 2014
N
W
E
S
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50
100
150
200
Kilometers
Scale 1:5,000,000
ECOFOR
natural and cultural resource consultants
Old Crow
Dawson
Mayo
FREEGOLD ROAD
Beaver Creek
Carmacks
Whitehorse
Carcross
Watson Lake

2.0 AREAS REMAINING TO BE ASSESSED

After detailed review, the remaining areas and footprints remaining to be assessed, fall into two groups; currently planned impact areas, and future revision areas. The currently planned impact areas have been reviewed and these are broken down further into linear right-of-way (ROW) segments along the proposed ROW upgrades, and planned borrow pits (including access to each borrow pit).

2.1 Proposed Upgrading of the Freegold Road Right-of-Way (ROW)

The areas of the currently proposed ROW that have not been fully assessed in the past are segments km 0+550 to approximately km 5+100 (all km markings are listed with 0+000 at the starting point from the Klondike Highway on the south side of Carmacks). This segment includes the east bank of the Nordenskiold River and continues to where it joins the existing Freegold Road on the west side of Carmacks.

The second segment requiring additional survey is km 14+100 to approximately km 17+000. A portion of this area was assessed by Handley and Rousseau in 1994 but not the entire segment. The currently proposed impacts in this area also includes proposed borrow pits which are listed below.

2.2 Proposed Borrow Pits and Access to the Borrow Pits

Between km 0+000 and km 32+000 there are seventeen (17) proposed borrow pits which have not been assessed. These require assessment and if they are used, the access roads to each pit also require assessment.

These proposed borrow pits and the proposed segments of the ROW remaining to be assessed are presented in Appendix I (mapping) and Appendix II (table summary by km and UTMs).

The remaining proposed borrow pits from km 32+000 all the way to the proposed mine site and road to the proposed airstrip have been assessed. However, in the cases where the proposed borrow pit does not lie adjacent to the proposed road ROW, an access road to the borrow pit needs to be proposed, and accessed for impacts to heritage resources. In some cases an estimated route to the borrow pit has been assessed in the field but these must be reviewed on a case by case basis as the planned borrow pits move forward in the selection process. Some of the currently planned borrow pits may be dropped from planning while others may be added. If any borrow pits are added to the project they must also be the subject of a heritage resource impact assessment.

3.0 ARCHAEOLOGICAL SITES ALONG UPGRADE OF FREEGOLD ROAD

Only the previously recorded sites near or within the impact area of the proposed upgrades to the Freegold ROW are discussed below. If a site is not listed, it is not in danger of being impacted by the project. Some sites are listed that are very close to planned footprints and could be impacted if plans change slightly. Other sites are close to proposed impacts and these should be monitored to ensure impacts are avoided. Many of the sites have had their boundary's flagged with 1" wide, yellow ribboning with "No Work Zone" printed in black. The sites near the proposed mine site, the road to the Yukon River, and the road to the proposed air strip, have also been signed with white plastic signs with black lettering "No Disturbance Zone". However not all of the sites along the proposed Freegold Road and extension have been flagged or signed, and some or all of the flagging or signage may be weathered or removed by natural forces. Each site is presented below (by the most relevant reports cited) with a brief summary and management recommendation. Management recommendations are listed by previous author. Where no previous recommendation was made, or current recommendations have been added, these are made by the current authors. Sites are listed in order of appearance travelling from Carmacks heading northwest to the proposed mine site. These summaries are also presented in Appendix I by mapping, and by Appendix II in table format.

3.1 KM 0 TO KM 33

KaVa-17/Mount Nansen Road Cemetery (No permit report just site form): The site is located on the southern end of a glacial moraine to the south of the First Nation cemetery on the Mount Nansen Road (Mount Nansen Road Cemetery). The site was found when a research team headed by Dawn Charlie of Carmacks was inspecting historic features around the grave yard and noted the presence of flakes.
Scope of Possible Impacts from Casino Project: This site and cemetery are not currently planned for impacts and are located upslope and to the east of the proposed ROW.
Management Recommendations: Avoidance of this site and the cemetery are recommended.

KaVa-3 (Handly and Rousseau 1995): A pre-contact site with surface and subsurface lithic scatter previously recorded by VanDyke in 1978. Situated near where the Freehold Road crosses the Nordenskiold River, northwest of Carmacks. Situated near the Freegold Project ROW (at time of 1995 report). Extensive disturbance from previous road construction, power lines, cemetery construction and gravel quarry. Remaining intact cultural deposits only apparent along terrace edge margins and road cutbanks. Debitage and bone recovered. Interpreted as a large campsite. A First Nations elder stated that Champagne-Aishihik peoples would camp in this area while trading with the Little Salmon Carmacks peoples. Presence of a contemporary community cemetery within portions of the site boundary may indicate the presence of precontact and/or historic First Nations and/or European burials along the terrace.
Scope of Possible Impacts from Casino Project: This site is not currently planned for impacts.
Management Recommendations:.Handly and Rousseau "strongly recommend that a detailed, systematic, archaeological data recovery program (i.e., mitigative excavations) be undertaken prior to the commencement of any further land-altering activities, including replacement of the bailey bridge. This would involve excavating 1m^2 excavation units dug in 5 cm-thick arbitrary levels" (1995:49). They estimated that 10 units would be required for a representative sample of remaining cultural materials and

could be accomplished by a crew of 4 experienced archaeologists assisted by 2 Band members in 3 working days.

KaVb-2 (Gotthardt 1995): Located on a high terrace of the Yukon River at the south end of the terrace. Location of the Dominion Land Surveys 1948 benchmark T397. Flakes and fire cracked rock recovered over 30 m area along terrace. Old foot trail that leads to Carmacks is visible on the edge of the terrace on the site.
Scope of Possible Impacts from Casino Project: This site is outside of the impact zone of the Freegold Road upgrade.
Management Recommendations: Site avoidance is recommended (Gotthardt 1995). If avoidance is not possible then data recovery mitigations are recommended. This site is not planned to be impacted by 2013 footprint.

KaVb-1 (Hammer 1995; Handly and Rousseau 1995): Handly and Rousseau first identified this site in 1994 as a medium sized, pre-contact subsurface lithic scatter site. Hammer (1995) reassessed the site through survey and conducted limited shovel tests, recovering a small number of lithics and fire cracked rock. The site sits on a ridge overlooking a small pond east of the Freegold Road and a portion of the eastern bank of the Yukon River to the east.
Scope of Possible Impacts from Casino Project: This site is located within a proposed borrow pit and the proposed ROW.
Management Recommendations: In developing the borrow pit, impacts to the south edge of the terrace should be avoided and it is recommended to maintain 30 m buffer along the terrace edge. Additionally, the borrow pit access road should be routed along north side of the terrace (Hammer 1995). If impacts cannot be avoided then data recovery excavations are recommended.

KbVb-2 (Hammer 1995; Handly and Rousseau 1995): Handly and Rousseau identified this site as a medium sized, precontact subsurface lithic scatter site. There was previous bulldozer disturbance to KbVb-2. Debitage from below White River Ash stratum (pre-1,250 BP). KbVb-2 recovered chert debitage and a unifacially flaked scraper. The site was interpreted as medium sized, short term campsite or possible game monitoring stations where tool production was occurring. Handly and Rousseau (1995) identified the preferred management option would be to avoid this site but if not a feasible option they recommended a detailed, systematic, archaeological data recovery program prior to any further land-altering activities. Hammer (1995) did a salvage excavation of the site over 6 days. They concluded that KBVb-2 was a small prehistoric campsite occupied during the Northern Archaic Tradition (4,500 – 1,250 BP). They recovered over 4,600 lithics, fire cracked rock, bone fragments, and recorded several features.
Scope of Possible Impacts from Casino Project: What remains of this site is within the 2013 planned ROW.
Management Recommendations: Hammer (1995) recommended that during construction for the upgrading of the Freegold Road, the surface soil (0-30 cm below surface) be removed in the vicinity of KbVb-2 and stockpiled so possible remaining cultural materials may be salvaged at a future date.

KbVb-4 (Gotthardt 1995): Small site on a low terrace on the north side of Crossing Creek. May have been a fishing camp as well as stop on the trail. Multiple occupations of the site are indicated which span from the mid-Holocene to within the last 1000 years. Site has been impacted by an old cat trail but intact portions remain.
Scope of Possible Impacts from Casino Project: This site is within the 2013 planned ROW.
Management Recommendations: Archaeological data recovery is recommended prior to upgrading the Freegold Road through the area.

3.2 KM 33 TO THE CASINO MINE SITE AREA

KbVb-3 (Gotthardt 1995): Site is interpreted as small and possibly a single occupation site. The old cat trail along the terrace edge has almost completely destroyed the site.
Scope of Possible Impacts from Casino Project: This site is within the 2013 planned ROW.
Management Recommendations: No further work.

KcVd-3 (Mooney 2013a): This site is located on the east end of a rounded ridge overlooking the confluence of Seymour and Big Creeks. This ridge point provides a significant view of both Seymour Creek and Big Creek Valleys. This landform likely contains a low to moderate density of lithic materials and likely represents a small sized temporary campsite, or lithic reduction workshop. No cultural diagnostic materials were identified, however all of these lithic materials were directly under a thick deposit of White River Tephra.
Scope of Possible Impacts from Casino Project: The site is located on the north edge of a proposed borrow pit and is also upslope from the proposed extension of Freegold Road. This site will be directly impacted by borrow pit use.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 14 - 18 square meters of excavation would be recommended based on existing data.

KcVe-4 (Mooney 2011): This prehistoric site is located on a terrace within the proposed Freegold Road Extension. The terrace overlooks the confluence of Burgis Creek and Big Creek. The cultural materials were all found below the White River ash along the southeast facing terrace edge. This lithic scatter likely represents a temporary campsite or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site is located very close to the proposed extension of Freegold Road and may be directly impacted by the proposed road alignment.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KcVf-2 (Mooney 2013a)**:** This site is located on a terrace and likely represents a temporary campsite or lithic reduction workshop; which included the use of microblades during the Little Arm Phase.

Scope of Possible Impacts from Casino Project: The site is located on the edge of a proposed borrow pit of the Freegold Road extension and would be directly impacted by the proposed developments.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to determine artifact distribution and density, followed by 1 x 1 m block excavation. Approximately 12 - 15 square meters of excavation would be recommended based on existing data.

KcVf-3 (Mooney 2013a): This site is located on an s-shaped terrace overlooking the head waters of Hayes Creek likely represents a temporary campsite(s) or lithic reduction workshop(s). No culturally diagnostic materials were identified and it is uncertain when these materials were deposited.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit of the Freegold Road extension and would be directly impacted by the proposed developments.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to determine artifact distribution and density, followed by 1 x 1 m block excavation. Approximately 12 - 15 square meters of excavation would be recommended based on existing data.

KeVf-1 (Mooney 2011): This site is on a southwest facing bench located approximately 500 m NE and high above the headwaters to the tributaries to Hayes Creek. The lithic scatter likely represents a temporary campsite or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit and will be directly impacted by 2013 designs.
Management Recommendations: If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to determine artifact distribution and density, followed by 1 x 1 m block excavation. Approximately 12 - 15 square meters of excavation would be recommended based on existing data.

KdVf-4 (Gotthardt 1988; Mooney 2011): The site is located on the south-eastern bench of a series of benches. This bench was found to contain lithics by Gotthardt in the 1980s. Gotthardt discussed the likelihood that this area was on, or near, an overland trail that was the traditional Chilkat return trail from Fort Selkirk to Dyea via Aishihik, was crossed by then proposed Casino Trail route in the upper Hayes Creek area. A section of (the 1988) proposed Casino Trail route in the drainages of Big Creek, North Big Creek, and Hayes Creek in fact parallels a traditional foot trail which leads ultimately to the important copper sources and trade rendezvous on the White River via the Klotassin River (Gotthardt 1988). The lithic scatter likely represents a temporary campsite or lithic reduction workshop overlooking the wide valley near the drainage divided between Big Creek to the southeast and Hayes to the northwest.
Scope of Possible Impacts from Casino Project: The site was located within a proposed borrow pit (now dropped from planning in 2013) and is located above the proposed extension of Freegold Road. This site would not be directly impacted.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities, followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.

KdVf-13 (Mooney 2011): This prehistoric lithic site is located on the south-eastern corner of a terrace overlooking the confluence of a small tributary to Hayes Creek. The site has a lower section and a slightly higher section and both were found to contain prehistoric materials, over a significant area. The lithic scatter likely represents a moderate density, medium sized, temporary campsite or lithic reduction workshop overlooking the wide valley at the head of the Hayes Creek valley.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit and is located above the proposed extension of Freegold Road. This site would be directly impacted by the proposed borrow pit.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities, followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KdVf-7 (Mooney 2011): This multi-component site was likely used during the Northwest Microblade Tradition and the Proto-historic (post A.D. 1667) period. Located on the Freegold Road Extension and approximately NE of the road alignment on a lower bench on the south-eastern corner of a terrace approximately NE of a tributary to Hayes Creek. This lithic scatter likely represents a moderate density small sized temporary campsite or lithic reduction workshop overlooking the wide valley at the head of the Hayes Creek valley. A Chinese coin was discovered during shovel testing. The Chinese coin was minted in China under the rule of Qing (Ch'ing) dynasty Emperor Sheng Zu (1662-1722 AD). One possible use of the coin may have been as a supplement to Tlingit warriors' armour. Another possibility is that this coin was curated and traded for many years as a token or amulet and deposited in the project area by Chinese placer miners.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit and very close to the current proposed alignment of the road. This site may be directly impacted by the road construction.
Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site. Additional historical research in regards to possible Chinese placer mining in the project area is also recommended.

KdVf-6 (Mooney 2011): The site is located on the Freegold Road Extension and approximately NE of the road alignment along a banana shaped raised ridge in the Hayes Creek valley overlooking Hayes Creek. This prehistoric site contains lithics, including a project point fragment, and a possible cultural pit or cache feature. The lithic scatter likely represents a moderate density, medium sized, temporary campsite or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site is located with the proposed extension of Freegold Road and potential borrow pits. This site will be directly impacted by the road construction.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact

densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KdVf-5 (Mooney 2011): This lithic site is located along a low bench above a tributary to Hayes Creek. Located approximately NE of the small tributary on the Freegold Road Extension. This small low landform provides a level camp site near water. A small area tested positive for a relatively dense scatter of prehistoric materials. The site is generally limited to the corner of the landform. The lithic scatter likely represents a moderate to high density, small sized, temporary campsite or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site is located within the proposed extension of Freegold Road and a previously planned borrow pit. The borrow pit has been dropped but the site will be directly impacted by the road construction.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KdVf-8 (Mooney 2011): This site is located near the road alignment on a level bench along a descending ridge line, overlooking Hayes Creek. This lithic site is represented by a single flake. The lithic isolate likely represents a low density, small sized temporary campsite, vista, or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site was located upslope of a proposed borrow pit which in turn is upslope from the proposed extension of Freegold Road. This site will not be directly impacted by the road construction or borrow pit use.
Management Recommendations: No further work is recommended. However, if borrow pit construction impacts lead to upslope erosion then avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended.

KdVf-10 (Mooney 2011): This prehistoric lithic site located near the road proposed road alignment. This site is on a small knoll at the top of a descending ridge line approximately NE of a small tributary of Hayes Creek. This site is a small knoll and site limits are likely limited by the landform. The lithic scatter likely represents a low density small sized temporary campsite, vista, or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site was located upslope of a proposed borrow pit which in turn is upslope from the proposed extension of Freegold Road. This site will not be directly impacted by the road construction or borrow pit use.
Management Recommendations: No further work is recommended. However, if borrow pit construction impacts lead to upslope erosion then avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended.

KdVf-11 (Mooney 2011): This prehistoric lithic site is near the proposed road alignment. It is on a small knoll near the bottom of a descending ridge line approximately NE of a small tributary of Hayes Creek. Artifacts recovered include 2 flakes.

Scope of Possible Impacts from Casino Project: The site was located upslope of a proposed borrow pit which in turn is upslope from the proposed extension of Freegold Road. This site will not be directly impacted by the road construction or borrow pit use.
Management Recommendations: No further work is recommended. However, if borrow pit construction impacts lead to upslope erosion then avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended.

KdVf-9 (Mooney 2011): This prehistoric lithic site is located near the Freegold Road Extension road alignment. It is located on the corner of a bench overlooking the valley approximately SW of a small tributary of Hayes Creek. This lithic scatter is likely limited by the landform but contains a moderate density of lithic materials. This lithic scatter likely represents a low to moderate density small sized temporary campsite, vista, or lithic reduction workshop with a potential ground cache.
Scope of Possible Impacts from Casino Project: The site was located within a proposed borrow pit which was dropped from planning but it is also within the proposed extension of Freegold Road. This site will be directly impacted by the road construction.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KdVf-14/KdVf-1 (Mooney 2013a): This area was previously noted to include a possible spirit house and grave and was recorded as site KdVf-1 (Gotthardt 1988). Although this area is not currently planned to be impacted by the proposed project, the area was revisited in an attempt to confirm the presence of a spirit house or possible grave for further heritage management. No structural remains or human remains were identified in either area. This rocky knoll along the ridge was briefly tested and found to contain prehistoric lithic materials. The lithic scatter likely represents a temporary campsite or lithic reduction workshop overlooking the Hayes Creek valley.
Scope of Possible Impacts from Casino Project: This site is not located within any planned project impacts.
Management Recommendations: Avoidance of the site is recommended. If this area is planned for any future impacts then additional efforts are recommended to confirm possible grave or spirit house locations with First Nation representatives. A heritage management/data recovery plan should include additional traditional use/traditional knowledge efforts as well as additional shovel testing and possible block excavation.

KdVf-12 (Mooney 2011): This lithic site is located on a narrow point that overlooks the Hayes Creek valley, approximately SW of a small tributary of Hayes Creek. This sloping landform provides a view of the valley and close access to water. This lithic scatter is limited by the landform and contains a low density of lithic materials. It likely represents a low to moderate density small sized temporary campsite, vista, or lithic reduction workshop. Diagnostic materials include a possible microblade core and chalcedony shatter suggesting cultural affiliation with the Northwest Microblade Tradition.
Scope of Possible Impacts from Casino Project: The site appears to be located within the proposed extension of Freegold Road and will be directly impacted by the road construction.

Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KeVf-3 (Mooney 2013a): This site is located on a narrow rocky ascending ridge line with a higher and slightly wider, east end. The lithic scatter was identified across the ridge with two pockets of higher concentrations in the middle and east end. The ridge line overlooks the confluence of Selkirk Creek and Hayes Creek and provides a significant vista across the combined valleys. The lithic scatter likely represents multiple moderate to high density small sized temporary campsite(s) or lithic reduction workshop(s). Culturally diagnostic materials consisted of a microblade and a microblade core.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit for the construction of the proposed extension of Freegold Road and would be directly impacted by these developments.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by separate loci of 1 x 1 m block excavation. Approximately 20 – 28 square meters of excavation would be recommended based on existing data.

KeVg-5 (Mooney 2011): The lithic site is located on a bench near the proposed Freegold Road Extension. It is on a rounded bench at the bottom of a southeast facing descending ridge which overlooks a tributary to Hayes Creek. This point is also west of the historic steamers/upright boilers site (YHSI 115J/09/002) and was likely along a trail connecting the steamers placer mining site with previously recorded historic cabins at Site KeVg-1. This landform contains a low to moderate density of lithic materials and likely represents a small sized temporary campsite or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site was located within a proposed borrow pit and the proposed extension of Freegold Road, however the borrow pit has since been dropped from planning. This site will be directly impacted by road construction.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KeVg-4 (Mooney 2011): The site is located on a ridge near the proposed Freegold Road Extension. It is on a long southeast facing descending ridge which overlooks a tributary to Hayes Creek. This sloping landform provides good southern exposure and close access to water. This lithic scatter is limited by the landform and contains a moderate density of lithic materials and burned bone. This lithic scatter likely represents a moderate density, medium sized, temporary campsite, vista, or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site was located within a proposed borrow pit and upslope of the proposed extension of Freegold Road, however the borrow pit has since been dropped from planning. This site will be upslope, and adjacent to the proposed road construction.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact

densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KeVg-9 (Mooney 2013a): The site is located on the east facing side of a north-south descending ridge overlooking the confluence of a tributary to Hayes Creek. This site has a lower section and a slightly higher section, both were found to contain prehistoric materials. What appears to be a historic cultural depression is located at the north end of the down slope ridge. A shovel test inside the center of the depression was negative. This depression may have been associated with placer mining activities. The lithic scatter likely represents a low density, medium sized, temporary campsite(s) or lithic reduction workshop(s). No culturally diagnostic materials were identified and it is uncertain when these materials were deposited.
Scope of Possible Impacts from Casino Project: The site is located within the proposed extension of Freegold Road. This site would be directly impacted by road construction.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 8 - 10 square meters of excavation would be recommended based on existing data.

KeVg-7 (Mooney 2011): This lithic site is located on a rounded ridge, within a previously proposed borrow pit of the Freegold Road Extension. The southeast facing corner overlooks both the Selwyn River and Hayes Creek, about 750 m SW of the site. Location provides southern exposure, access to water, and an approximately 300 degree vista. This landform contains a low to moderate density of lithic materials and likely represents a small sized, temporary campsite, and/or vista, or lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site was located within a proposed borrow pit and upslope from the proposed extension of Freegold Road. The borrow pit has since been dropped from planning, however this site may be impacted by road construction.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.

KeVg-8 (Mooney 2013a): This contained a site single lithic flake fragment found along a narrow ascending ridge running southeast up to the northwest. Significant shovel testing along the ridge to the north and south failed to identify any other cultural materials. This ridge drops quickly to the southeast but provides a good southern exposure and a vista to the southeast over Selwyn Creek. This lithic isolate likely represents a low density, small sized, temporary campsite or lithic reduction workshop. No cultural diagnostic materials were identified however this lithic isolate was identified above the White River Tephra and likely represents an Aishihik Phase use of the landform.
Scope of Possible Impacts from Casino Project: This site is located within a proposed borrow pit which in turn is upslope from the proposed extension of Freegold Road. This site will be directly impacted by the borrow pit development.

Management Recommendations: Due to the amount of testing along this landform and in the area of the isolated lithic it is unlikely that additional efforts will add significantly to the understanding of the past use of this landform. No further heritage work for this site is recommended.

KeVg-3 (Mooney 2011): This site is now located within a proposed borrow pit of the Freegold Road Extension. It previously was not in planned 2011 impacts, however since then a proposed borrow covers this area. The site is on a high knoll approximately 1.5 km NW of the confluence between Hayes Creek and the Selwyn River, SW of the Selwyn River. This site is directly below KeVg-6 but unlike that site this landform provides a more protected bench with a rock wall at its back. This slightly raised area of bench contains a moderate to high density of lithic materials dispersed in pockets of level ground, and likely represents a small sized, temporary vista and lithic reduction workshop. The presence of microblade fragments suggests a Northwest Microblade Tradition cultural affiliation.
Scope of Possible Impacts from Casino Project: This site is within a proposed borrow pit and the proposed extension of Freegold Road. This site will be directly impacted by borrow pit use.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1 x 1 m unit block excavations in relationship to the size and distribution of the site.

KeVg-6 (Mooney 2011): This prehistoric lithic site is located within a proposed borrow pit north of the proposed Freegold Road Extension. It was previously not within planned impacts in 2011, but since then a proposed borrow covers this area. It is NW of the confluence between Hayes Creek and the Selwyn River. This prehistoric lithic site is located on a narrow ridge with an east-southeast facing aspect which overlooks the Selwyn River far below. This ridge provides southern exposure and a great vista. This landform contains a moderate to high density of lithic materials dispersed in pockets of level ground and likely represents a small sized temporary vista and lithic reduction workshop. Microblade fragments suggest a Northwest Microbade Tradition cultural affiliation.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit and will be directly impacted by borrow pit use.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.

KeVh-3 (Mooney 2011): This site is located near the proposed road alignment of the Freegold Road Extension. It is on the southwest side of a rock outcrop high above the Yukon River between the headwaters of Mascot and Idaho Creeks. This rock outcrop would have provided a break from the wind and weather and a significant vista. This rock outcrop area contains a low density of lithic materials dispersed in pockets of level ground and likely represents a small sized, temporary vista and lithic reduction workshop.
Scope of Possible Impacts from Casino Project: The site appears to be just north of the proposed extension of Freegold Road. This site will not be directly impacted.

Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.

KeVh-4 (Mooney 2013a): This lithic isolate was found on a high elevation stepped rocky bench and outcrop that overlooks the Idaho Creek drainage. This lithic scatter likely represents a low density, small sized temporary campsite, or lithic reduction workshop. No cultural diagnostic materials were identified.
Scope of Possible Impacts from Casino Project: This site is located within a proposed borrow pit for the proposed extension of Freegold Road. This site will be directly impacted by the borrow pit development.
Management Recommendations: Due to the amount of testing along this landform and in the area of the isolated lithic it is unlikely that additional efforts will add significantly to the understanding of the past use of this landform. No further heritage work for this site is recommended.

4.0 HISTORIC STRUCTURES AND RESOURCES ALONG UPGRADE OF FREEGOLD ROAD

This resources were noted in a variety of reports and recorded in a variety of ways. Some were noted as historic roads and trails, while others were recorded as archaeological sites, or recorded as historic resources and recorded with the Yukon Historic Sites Inventory (YHSI). These historic structures and historic resources are presented in order by location along and near the proposed Freegold Road upgrade from Carmacks in the southeast to the proposed mine site in the northwest.

H1 Whitehorse-Dawson Winter Road (Handly and Rousseau 1995): Road was used after the turn of the century as an overland stage coach route for transporting goods and people from Dawson City to Whitehorse. The majority of the Freegold Road follows the old road but is outside of the proposed impact zone but a 2 km section appears to be within the ROW.
Scope of Possible Impacts from Casino Project: Sections of the Whitehorse-Dawson Winter Road are located within the proposed impact zone associated with the Freegold Project. These sections have already been significantly disturbed and/or destroyed during construction of the present Freegold Road. Remaining intact sections of the Winter Road are situated outside of the Freegold Project ROW impact zone. The use of heavy equipment in these areas, and subsequent land-altering activities, such as grading or the ground surface, and tree and ground-cover removal, could potentially impose a threat of adverse impact to these sections of the Whitehorse-Dawson Winter Road.
Management Recommendations: No further mitigation actions required.

H2 Log Structure (Handly and Rousseau 1995): A large almost completely intact log structure located on the alluvial terrace below precontact site KaVa-3. George and Hazel Mack Browns, owners of the Carmacks Roadhouse lived here from 1922-1942.
Scope of Possible Impacts from Casino Project: There are no impacts planned for this structure due to the road realignment around Carmacks.
Management Recommendations: Preferred management option would be to see the site avoided during land altering activities associated with the Freegold Road. If not feasible, Handly and Rousseau "strongly recommend that consultation between Community and Transportation Services and the Village of Carmacks be undertaken prior to the Freegold Project being developed, to determine the historical significance of Site H2 and define the appropriate mitigation procedures that should be implemented." (Handly and Rousseau 1995:52).

H3 Mink/Fox Fur Farm (Handly and Rousseau 1995): A completely destroyed mink/fox fur farm consisting mainly of metal cages and burned wood. Dated to early 20th Century. Completely destroyed from Freegold Road construction.
Scope of Possible Impacts from Casino Project: No impacts are planned for this area due to the road realignment around Carmacks.
Management Recommendations: No further mitigation actions required.

H4 Dalton Trail (Handly and Rousseau 1995): Originally a First Nations trail over the Chilkat Pass to the Yukon River, then became a toll road from 1896-1906. Used to transport cattle, horses, sheep and people from Skagway to Yukon Crossing and then by barge to Dawson City. A small section of the Dalton Trail was noted on a very steep slope on the east side of the Freegold Project impact zone north of Three Mile Lake.
Scope of Possible Impacts from Casino Project: There are no planned impacts to this section of the trail.
Management Recommendations: No further mitigation actions required.

H5 Place Mine Trench (Handly and Rousseau 1995): On the west side of the Freegold Road ROW, where it crosses Murray Creek, there was evidence of very recent placer mining activity. A small placer mine trench and sluice box where located outside the Freegold Project impact zone.
Scope of Possible Impacts from Casino Project: These remains were located outside the proposed impacts to Freegold Road.
Management Recommendations: No further mitigation actions required.

H6 Morrison Road House (Handly and Rousseau 1995): Two completely collapsed log structure along an access road leading from Freegold Road to Stanley Jonathan's fish camp on the Yukon River.
Scope of Possible Impacts from Casino Project: These remains are located outside the proposed impacts to Freegold Road.
Management Recommendations: No further mitigation actions required.

Tricker Cabin (Gotthardt 1995): Al and Ann Tricker's trapline cabin is located at about km 25 of the Freegold Road, about 20 - 30 m south of the Road. The cabin is situated on the north bank of Crossing Creek about 20 m of the creek and about 2 m above the water level. The cabin appears to have been constructed in the 1970's, based on the earliest entry in the journal/guest book left in the cabin: May 1974. The cabin is built from green balsam poplar, and measures about 10 x 12 feet.
Scope of Possible Impacts from Casino Project: The Tricker cabin is about 20 m south of the planned Freegold Road realignment and should escape road construction impacts.
Management Recommendations: Avoidance. No further mitigation actions required (Gotthardt 1995). It is uncertain what impacts the project will have on this cabin, avoidance is recommended.

Fallen Cache Cabin (YHSI 115I/03/002) (Mooney 2013a): These remains consist of a small one course high log cabin outline. These cabin remains are located between the Freegold Road and Seymour Creek. The cabin is approximately 110 m from the creek and can almost be seen from the current roadside. There are no roads or trails that lead directly to or from the cabin. It is unclear it is was unfinished or simply a base for a less permanent structure. There is a fallen high cache located nearby as well as two log lined pits and appears to have been used circa post 1940 AD.
Scope of Possible Impacts from Casino Project: Only the pit features and fallen cache feature of the Fallen Cache Cabin are within the proposed road realignment.
Management Recommendations: It is recommended that construction impacts to these historic structures are avoided, where possible. If these resources are not avoided then additional documentation is recommended prior to construction impacts. This additional documentation should include additional

on-site recording including site mapping and photo-documentation, as well as interviews with First Nation informants and other stakeholders to better document the history and use of the structures.

Dog House Cabin (YHSI 115I/06/012) (Mooney 2013a): The cabin is located between the Freegold Road and Seymour Creek. The cabin is approximately 80 m from the creek just east of a small unnamed tributary. There are no roads or trails that lead directly to or from the cabin. The structure, possible dog house or cache, and outhouse are all in fairly poor condition and appears to have been used circa post 1940 AD.
Scope of Possible Impacts from Casino Project: This cabin is within the planned road realignment and would be directly impacted.
Management Recommendations: It is recommended that construction impacts to these historic structures are avoided, where possible. If these resources are not avoided then additional documentation is recommended prior to construction impacts. This additional documentation should include additional on-site recording including site mapping and photo-documentation, as well as interviews with First Nation informants and other stakeholders to better document the history and use of the structures.

Gas Can Cabin (YHSI 115I/06/010) (Mooney 2013a): The cabin is located between the Freegold Road and Seymour Creek. The cabin is approximately 50 m from the creek and is located directly beside another smaller cabin (Melmac Cabin 115I/06/11). There are no roads or trails that lead directly to or from the cabin. A portion of the gas can roof is fallen in. The rest of the structure seems to be in fairly good condition and appears to have been used circa post 1940 AD.
Scope of Possible Impacts from Casino Project: Appears to be within the planned road realignment and would be directly impacted.
Management Recommendations: It is recommended that construction impacts to these historic structures are avoided, where possible. If these resources are not avoided then additional documentation is recommended prior to construction impacts. This additional documentation should include additional on-site recording including site mapping and photo-documentation, as well as interviews with First Nation informants and other stakeholders to better document the history and use of the structures.

Melmac Cabin (YHSI115I/06/011) (Mooney 2013a): The cabin is located between the Freegold Road and Seymour Creek. The cabin is approximately 50 m from the creek and is located directly beside another larger cabin (Gas Can Cabin 115/I/06/10). There are no roads or trails that deal directly to or from the cabin. The roof is almost completely collapsed and appears to have been used circa post 1940 AD.
Scope of Possible Impacts from Casino Project: Appears to be within the planned road realignment and would be directly impacted.
Management Recommendations: It is recommended that construction impacts to these historic structures are avoided, where possible. If these resources are not avoided then additional documentation is recommended prior to construction impacts. This additional documentation should include additional on-site recording including site mapping and photo-documentation, as well as interviews with First Nation informants and other stakeholders to better document the history and use of the structures.

Ketchup Cabin (YHSI 115I/06/009) (Mooney 2013a): The cabin is located between the current Freegold Road and Seymour Creek. The cabin has a small trail leading towards and away from it, however it is not connected to any currently used roadway. The cabin is approximately 100 m north of Seymour Creek and there are a number of large tree stumps in the surrounding area. The entire cabin is falling apart and only portions of the walls remain and appears to have been used circa post 1940 AD.
Scope of Possible Impacts from Casino Project: Appears to be within the planned road realignment and would be directly impacted.
Management Recommendations: It is recommended that construction impacts to these historic structures are avoided, where possible. If these resources are not avoided then additional documentation is recommended prior to construction impacts. This additional documentation should include additional on-site recording including site mapping and photo-documentation, as well as interviews with First Nation informants and other stakeholders to better document the history and use of the structures.

Three Room Cabin (YHSI 115J/06/013) (Mooney 2013a): The cabin is located between the Freegold Road and Seymour Creek. The cabin is approximately 100 m from the creek and there is a previous placer road that leads directly to the cabin, however it is no longer driveable. The cabin is fully standing and in fairly good condition. The floor is quite unstable but still fairly good and appears to have been used circa post 1940 AD.
Scope of Possible Impacts from Casino Project: Appears to be within the planned road realignment and would be directly impacted.
Management Recommendations: It is recommended that construction impacts to these historic structures are avoided, where possible. If these resources are not avoided then additional documentation is recommended prior to construction impacts. This additional documentation should include additional on-site recording including site mapping and photo-documentation, as well as interviews with First Nation informants and other stakeholders to better document the history and use of the structures.

The Frenchman Cabin (YHSI 115I/06/005) (Mooney 2011, 2012, 2013c): An historic sod roof log cabin. It is associated with a man known locally as "The Frenchman". The cabin has a packed dirt floor and a sod gable roof. The cabin is 13 courses of logs high on the front and back, all logs have been stripped of their bark. Constructed with saddle notched logs and moss chinking. The door is on the south wall and windows are located on the north and west walls. There is a hole in the south wall for a chimney and a cot made out of branches inside. There are names and dates written and inscribed inside the cabin from past use, from 1950 forward.
Scope of Possible Impacts from Casino Project: Near planned road construction but may not be directly impacted.
Management Recommendations: Avoidance, and if not possible, relocation of structure.

Bow Creek Cabins (Mooney 2011, 2012, 2013c): These three cabins were likely constructed in or after the 1970s and they were not recorded with YHSI forms.
Scope of Possible Impacts from Casino Project: Near planned road construction but should not be directly impacted.
Management Recommendations: Avoidance, and if not possible, relocation of structure.

KcVd-2 (possible Harry Baum trapline cabin) (Gotthardt1988): This old trapline cabin belonging to Harry Baum is located just west of confluence of Big Creek and Seymour Creek. The locality is bypassed by the road right-of-way, and was not visited in this survey (Gotthardt 1988).
Scope of Possible Impacts from Casino Project: Said to be located north of approximately km 77+000. Unknown exact location north of planned road construction but will not be directly impacted.
Management Recommendations: No further work required.

KcVd-1 (possible Tommy McGinty trapline cabin) (Gotthardt1988): Old trapline cabin belonging to Tommy McGinty is shown on map compiled by T. Pearse on the left bank of Big Creek, about 2 km above its confluence with Seymour Creek. The locality is outside the road right-of-way and was not visited in this survey (Gotthardt 1988).
Scope of Possible Impacts from Casino Project: Said to be located north of approximately km 78+000. Unknown exact location north of planned road construction but will not be directly impacted.
Management Recommendations: No further work required.

Five Course Cabin (YHSI 115I/06/001) (Mooney 2011, 2012, 2013c): Historic structure appears to be either an incomplete cabin or base structure for a wall tent. The remains of an outhouse are also present.
Scope of Possible Impacts from Casino Project: Near planned road construction but should not be directly impacted.
Management Recommendations: If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts.

Garage by Big Creek (Mooney 2011, 2012, 2013c): This log structure located on the north side of the existing Freegold Road may have been a garage and/or workshop for previous mining efforts and may have been constructed in or after the 1950s. They were not recorded with YHSI forms.
Scope of Possible Impacts from Casino Project: Near planned road construction but should not be directly impacted.
Management Recommendations: If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts.

High Cache Cabin (Mooney 2011, 2012, 2013c): This log cabin and high cache structure are located on the south side of the existing Freegold Road and were not recorded with YHSI forms.
Scope of Possible Impacts from Casino Project: Near planned road construction but should not be directly impacted.
Management Recommendations: If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts, or possible relocation of structure.

Burl Cabin (Mooney 2011, 2012, 2013c): This private cabin is located south of the proposed Freegold Road upgrade and was not recorded with YHSI forms.
Scope of Possible Impacts from Casino Project: Near planned road construction but should not be directly impacted.

Management Recommendations: If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts, or possible relocation of structure.

KcVe-3 (Gotthardt 1988): Reported to be an old grave site approximately in the area of the Casino Trail, just west of a small creek flowing into Big Creek from the north. A grave site was not found although there is an old brush camp adjacent to the proposed road. An old foot trail was also observed. Gotthardt suggests that the likely location for the grave site is on the small hill overlooking Big Creek, most of which has been removed by road construction. Local informant says the graves may belong to Mr. McGinty's grandfather (Chief Joseph McGinty) and another chief.
Scope of Possible Impacts from Casino Project: No impacts are currently planned for this site location and the current ROW is on the opposite (south) side of Big Creek.
Management Recommendations: Traditional and prehistoric sites in the road corridor should be avoided by adjustments to the road alignment if possible. Signs should be developed in consultation wth the Selkirk and Little Salmon/Carmacks First Nations and placed in appropriate locations on the Casino Trail to inform travellers of the history of the country and of its traditional importance to Selkirk people (Gotthardt 1988). Since the current alignment does not come near this location no further work is required.

KcVe-1 (Gotthardt 1988): This is an old grave site previously identified by the Selkirk Band (Land Claims Site S56). Although the site was not visited in the course of the present survey, it is likely located on top of the hill overlooking Big Creek on the north side (Gotthardt 1988).
Scope of Possible Impacts from Casino Project: No impacts are currently planned for this site location.
Management Recommendations: Avoidance of the area, likely location is west of proposed ROW.

KcVe-2 (Gotthardt 1988): This is an old trapline cabin belonging to Stanley Jonathan. This site was not visited during the present survey; judging from the location on the map (complied by T. Pearse and M. Weinstein in interviews with Mr. Jonathan, May 1988), the cabin is on Big Creek, just below the confluence of North Big Creek (Gotthardt 1988).
Scope of Possible Impacts from Casino Project: No impacts are currently planned for this site location.
Management Recommendations: Avoidance of the area, likely location is west of proposed ROW.

KdVf-3 (possible Jimmy Robert's trapline cabin) (Gotthardt 1988): This old trapline cabin is located on a lower bench of a side hill in the upper Hayes Creek area, near the proposed Casino Trail route. The cabin is constructed exclusively of axe cut logs, which suggest it was probably made in the early decades of the twentieth century. In overall dimensions, I would estimate the cabin is about 5 x 5 m, and was probably about 2 m high. Although the walls of the cabin are still intact, the roof has since collapsed into the cabin interior. Associated with the cabin was a mooseskin scraping pole. The pole, which is now charred, is a sharpened stake, about 1 m long, fixed in the ground. It is located about 10 m north of the cabin. About 5 m west of the cabin is a 'dog house' - essentially a small brush camp made for a dog. The trapper using this cabin did not have a dog team, and used his single dog for packing. No cache was observed associated with the cabin; Mr. Wilfred Charlie suggested that the cabin was used only on a temporary basis and otherwise served as a cache when the owners were travelling elsewhere. The old

foot trail to Wellesley Lake and White river was noted about 10 m on below the cabin on a lower bench of the side hill (Gotthardt 1988).
Scope of Possible Impacts from Casino Project: Said to be located east of approximately km 123+500. Unknown exact location east of planned road construction but, may be close to a proposed borrow pit or possible borrow pit access road.
Management Recommendations: The cabin is recommended to be relocated and flagged for avoidance. If avoidance of possible borrow pit or access road is not feasible then additional documentation is recommended.

KdVf-2 (possible log structure, cabin or spirit house) (Gotthardt1988): Attempts to relocated an old log structure reported by survey crew at near the proposed Casino Trail route (Percival 1988:34) were unsuccessful. The structure is located at the toe of a hill and across the stream (on the east side) from Site A. Percival has suggested that the structure may be a cabin or spirit house. The latter interpretation implies the structure is fairly small; I would propose as an alternative interpretation that the log structure is a ground cache, used for storing meat and furs by trappers exploiting the region in the historic period (Gotthardt 1988).
Scope of Possible Impacts from Casino Project: Said to be located east of approximately km 127+600. Unknown exact location east of planned road construction but will not be directly impacted.
Management Recommendations: No further work required.

Steamers/Upright Boilers Site (YHSI 115J/09/002) (Mooney 2011): Historic site consists of two Metal Steamers, two log ladders, eight+ placer pits and cribbed shafts. The boilers are situated in what appears to be an old placer mining site with shafts and open cuts nearby. Dates from 1906 to 1965. According to Mooney (2011), the Upright Boilers Site is very likely associated with the Hayes Creek Cabins (KeVg-1) and are likely connected by a trail system along the west side of the Hayes Creek Valley as mentioned in Soucey et al 2010a.
Scope of Possible Impacts from Casino Project: Now these resources appear to be within the planned ROW and previously they were within a planned borrow pit.
Management Recommendations: Avoidance is recommended. If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts. Relocation of some of these resources may be possible.

Hayes Creek Cabins (YHSI 115J/09/001) aka KeVg-1 (Mooney 2011, 2013a): Located approximately SW of Hayes Creek, SE from the confluence of Hayes and Selwyn Creeks previously recorded as KeVg-1. According to Mooney (2011), the Upright Boilers Site is very likely associated with the Hayes Creek Cabins (KeVg-1) and are likely connected by a trail system along the west side of the Hayes Creek Valley as mentioned in Soucey et al 2010a. Three structures were identified: two single story collapsed log cabins and a smaller log structure that could be a cache. There is a blazed trail that leads to the two cabins from a nearby stream. The cabins are in poor condition and date between 1906 and 1967.
Scope of Possible Impacts from Casino Project: The remains of Hayes Creek Cabins appear to be near, but just outside, the proposed alignment and borrow pit locations. As such these should not be directly impacted by road construction and no further work is recommended.

Management Recommendations: If avoidance is not possible then additional research and documentation is recommended.

AY09-19 Ethnohistoric trail (Mooney 2013; Soucey et al 2010a): A 2 m wide foot trail that traverses northwest-southeast across the northeast facing slope at the confluence of Hayes Creek and the Selwyn River. Extends for a minimum 600 m and is marked by a blazed tree. Historic site KeVg-1 is adjacent to this trail and it may join with AY-09-18.
Scope of Possible Impacts from Casino Project: Portion of trail to potentially be impacted was flagged by Ecofor (2013) with white CMT tape.
Management Recommendations: Impacts to the previously recorded ethno-historic trails are recommended to be avoided and/or minimized where possible. If impacts to these ethno-historic trails can't be avoided then additional background research, on-site recording, and informant interviews to document use of the trails is recommended.

AY-09-18 Ethnohistoric trail (Mooney 2013; Soucey et al 2010a): A 2 m wide foot trail aligned roughly north-south across the northeast facing slope at the confluence of Hayes Creek and the Selwyn River. May be part of the Tutchone Trail followed by Schwatka in 1891 (Soucey et al 2010a). Selkirk First Nation Elders suggested it may be a “Grandfather Trail”, a traditionally used inter-regional trail (Soucey et al 2010a).
Scope of Possible Impacts from Casino Project: Portion of trail to potentially be impacted was flagged by Ecofor (2013) with white CMT tape.
Management Recommendations: Impacts to the previously recorded ethno-historic trails are recommended to be avoided and/or minimized where possible. If impacts to these ethno-historic trails can't be avoided then additional background research, on-site recording, and informant interviews to document use of the trails is recommended.

KeVg-2 (Soucey et al 2010b; Mooney 2013a): A historic culturally modified tree (CMT) site consisting of a modified tree stump on the eastern bank of the Selwyn River. It is on level terrain less than 5 m from the river. The tree appears to have been cut by an adze rather than an axe.
Scope of Possible Impacts from Casino Project: The site is located outside of the project area.
Management Recommendations: No further work is recommended.

5.0 ARCHAEOLOGICAL SITES NEAR PROPOSED MINE SITE, ROAD TO YUKON RIVER, AND ROAD TO AIRSTRIP

Archaeological sites near the proposed mine site, the road to the Yukon River, and the road to the proposed airstrip are listed below.

KeVi-1 (Handly et al 1994; Mooney 2013a; Soucey et al 2010a): Originally recorded by Handly and Martin as a very small prehistoric lithic scatter site, KeVi-1 was revisited by Soucey et al in 2009 and was reported as having been destroyed by trail building activities. It is located on a colluvial ridge above the confluence of Meloy and Casino Creeks and below an access road. Both KeVi-1 and KeVi-2 are located on the same colluvial ridge.
Scope of Possible Impacts from Casino Project: This site was located with the proposed tailings management facility footprint (aka supernatant pond) and has been previously destroyed.
Management Recommendations: No further work is required.

KeVi-2 (Handly et al 1994; Mooney 2013a; Soucey et al 2010a): Originally recorded by Handly and Martin as a very small lithic scatter site, KeVi-1 was revisited by Soucey et al in 2009 and was reported as having been destroyed by trail building activities. It is located on a colluvial ridge approximately above the confluence of Meloy and Casino Creeks and below an access road. Both KeVi-1 and KeVi-2 are located on the same colluvial ridge.
Scope of Possible Impacts from Casino Project: This site was located with the proposed tailings management facility footprint and has been previously destroyed.
Management Recommendations: No further work is required.

KeVi-3 (Handly et al 1994; Mooney 2013a; Soucey et al 2010a): An archaeological site consisting of an isolated surface find (biface fragment) on an existing road. Shovel tests by Handly et al failed to find any other artifacts and a detailed inspection of the site by Soucey et al in 2009 found no other evidence of cultural activity.
Scope of Possible Impacts from Casino Project: This isolated find was located within the proposed mine site footprint.
Management Recommendations: No further work is required.

KeVi-6 (de Guzman et al 2014; Soucey et al 2010a): A prehistoric lithic site consisting of lithics and faunal material. The size of the assemblage and the diversity of material types suggest that KeVi-6 is a small, short-term campsite. The presence of a microblade core rejuvenation flake indicates that microblades were being manufactured at the site. Further testing at the site included two 1 x 1 units in 2013 leading to the recovery of a large number of lithics including microblades and one lancelate projectile point. The assemblage indicates that the site dates to the Little Arm Phase of Early Prehistoric Time Period dating it to between 8, 000 B.P. and 4, 500 B.P.
Scope of Possible Impacts from Casino Project: This site is located outside of planned project impacts.
Management Recommendations KeVi-6 is considered to be adequately sampled relative to the size of the landform and the site boundaries assessed in 2009. No further work is recommended.

KeVi-12 (Mooney 2013a): This prehistoric lithic site is located on a long, very narrow, south descending ridge near the proposed access road to the proposed airstrip. Ridge overlooks Casino Creek Valley at confluence with Brynelson Creek. This rocky ridge likely contains a low density of lithic materials dispersed in pockets of level ground and likely represents a small sized temporary vista and lithic reduction workshop.
Please Note: This Borden number was mistakenly assigned to two sites. This lithic site and an adze cut stump (Soucey et al 2010b). The stump is now part of Site KeVi-9 (Gotthardt personal communication 2014).
Scope of Possible Impacts from Casino Project: The site appears to be within approximately 50 m the proposed access road to the airstrip. This site will not be directly impacted.
Management Recommendations: No further work is recommended.

KeVi-13 (Mooney 2013a): This lithic isolate was found on a high elevation stepped rocky bench and outcrop that overlooks the Casino Creek drainage. This lithic scatter likely represents a low density small sized temporary campsite, lithic reduction workshop. No cultural diagnostic materials were identified.
Scope of Possible Impacts from Casino Project: This site is located within a proposed borrow pit for the proposed construction of the tailings management facility. This site will be directly impacted by the borrow pit development.
Management Recommendations: Due to the amount of testing along this landform and in the area of the isolated lithic it is unlikely that additional efforts will add significantly to the understanding of the past use of this landform. No further heritage work for this site is recommended.

KeVi-14 (Mooney 2013a): Site is located on a high elevation stepped rocky outcrop that overlooks the Casino Creek drainage. This lithic scatter likely represents a medium density small sized temporary campsite, lithic reduction workshop. The biface base shows evidence of basal thinning and edge grinding and appears to have been hafted. It is unlikely that the point base can be used to determine cultural affiliation. Therefore no culturally diagnostic materials were identified.
Scope of Possible Impacts from Casino Project: The site is located just on the north edge of a proposed borrow pit for the proposed construction of the tailings management facility. This site may be directly impacted by borrow pit use and/or access road construction.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 4 - 6 square meters of excavation would be recommended based on existing data.

KeVi-15 (Mooney 2013a): This site is located on the south-facing edge of a small bench which overlooks Casino Creek valley. The lithic scatter likely represents a moderate to low density small sized temporary campsite or lithic reduction workshop. No culturally diagnostic materials were identified and it is uncertain when these materials were deposited.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit northeast of the proposed airstrip and would be directly impacted by these developments.

Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 4 - 6 square meters of excavation would be recommended based on existing data.

KdVi-1 (de Guzman et al 2014; Handly et al 1994; Mooney 2013a; Soucey et al 2010a): Located at the confluence of Casino Creek and one of its tributaries, this subsurface prehistoric lithic site is interpreted as a small to medium sized, temporary or short-term use, camp site measuring an area of about 50 m x 10 m. A radiocarbon date (3,390 +/- 60 B.P.) from a bone sample places occupation to the Taye Lake Phase of the Northern Archaic Time Period. Handly et al (1994) identified the site as being within or directly adjacent to the proposed impact zones relating to the tailings impoundment areas. In 2013, Altamira (de Guzman et al 2014) conducted excavations and shovel testing expanding the site boundaries and found a high ratio of tools relative to debitage. They identified KdVi-1 to be a highly significant historic resource.

Scope of Possible Impacts from Casino Project: Parts of this site are located within a proposed borrow pit west of the proposed road to the airstrip.

Management Recommendations: Soucey et al (2010a) recommend that the excavation needed to produce a reasonable recovery should be large. Given the high ratio of tools recovered from the southern activity area and the expansion of the northwest activity area, further excavation (up to 20 1-x-1 m units) at KdVi-1 is recommended (de Guzman et al 2014).

KdVi-2 (Mooney 2013a): This site is located along the north-south climbing ridge overlooking the confluence of Casino and Dip Creeks. This large site was found to contain a wide distribution of lithic materials but the lower section appears to hold the greatest concentration of materials, including microblades. The lithic scatter likely represents a large site use area but moderate density temporary campsite(s) or lithic reduction workshop(s) overlooking the valley at the confluence of the creeks. This landform may have been used repeatedly, however; thus far the only culturally diagnostic materials identified consist of microblades, which represent the Little Arm Phase.

Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit northeast of the proposed airstrip and would be directly impacted by these developments.

Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by separate loci of 1 x 1 m block excavation. Approximately 20 - 28 square meters of excavation would be recommended based on existing data.

KdVi-3 (Mooney 2013a): This site is located at the southwest end of an ascending ridgeline overlooking the confluence of Casino and Dip Creeks. The cultural materials were found on a small level area that provides a significant vista over the valley below. The single positive shovel test contained a significant amount of lithic materials which likely represents a moderate density small sized temporary campsite or lithic reduction workshop. No culturally diagnostic materials were identified and it is uncertain when these materials were deposited.

Scope of Possible Impacts from Casino Project: This small site is located within a proposed borrow pit northeast of the airstrip and would be directly impacted by these developments.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 4 - 6 square meters of excavation would be recommended based on existing data.

KdVi-4 (Mooney 2013a): This site is situated on a rocky undulating ridge top overlooking the confluence of Dip and Casino Creeks. This landform provides small sections of level ground and a significant vista over the valley area. The lithic scatter likely represents a moderate to low density small sized temporary campsite(s) or lithic reduction workshop(s). No culturally diagnostic materials were identified and it is uncertain when these materials were deposited.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit northeast of the airstrip and would be directly impacted by these developments.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 8 - 10 square meters of excavation would be recommended based on existing data.

KdVi-5 (Mooney 2013a): This site is located on a somewhat level ridge top overlooking the confluence of Dip and Casino Creeks. The lithic scatter likely represents a moderate to low density small sized temporary campsite(s) or lithic reduction workshop(s). No culturally diagnostic materials were identified and it is uncertain when these materials were deposited.
Scope of Possible Impacts from Casino Project: The site is located within a proposed borrow pit northeast of the airstrip and would be directly impacted by these developments.
Management Recommendations: Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 6 - 8 square meters of excavation would be recommended based on existing data.

KfVi-2 (de Guzman et al 2014, Soucey et al 2010a): KfVi-2 is an archaeological site located west of the eastern project boundary and south of the Yukon River. It is situated on a flat terrace, on the lowest terrace of the southern bank of the Yukon River, east of the confluence of Britannia Creek and the Yukon River. It consists of fire cracked rock (FCR) and faunal remains and hearth features. The landform has been modified by a 2 m wide road cut or trail that traverses north-south across the landform. The road cut lies 20 m to the west of KfVi-2. In 2014, Altamira completely excavated the hearth feature and noted the disturbance the area receives annually from frost heave and fluvial movements.
Scope of Possible Impacts from Casino Project: This site is located outside project impacts.
Management Recommendations: De Guzman et al (2014) recommend no further work because of the small number of artifacts recovered during the 2013 excavations at KfVi-2. They say that the site is considered to have been adequately sampled and mitigated through the excavations conducted in both 2010 and 2013 (De Guzman et al 2014).

KfVi-3 (de Guzman et al 2014; Soucey et al 2010a): A multi-component site consisting of archaeological and historic components. The historic component includes a poorly preserved wooden structure with an associated depression and scatter of Historic period artifacts. KfVi-3 is estimated to span an area of 1,375 square metres. According to de Guzman et al (2014) the recovered assemblage of the prehistoric component is typical of long-term and repeated occupation, spanning thousands of years: "Radiocarbon dating analysis places occupation to at least three different time periods, in addition to the Historic period occupation identified at the eastern extent of the site. Prehistoric occupation is dated to 1,170 to 1,260 cal BP, 4,650 to 4,830 calBP, and approximately 13,000 cal BP. Therefore, KfVi-3 likely represents continuous and/or repeated occupation that spans 13,000 years, extending throughout various phases and complexes in the Prehistoric period." (de Guzman et al 2014: 104). De Guzman et al consider the site rare, because of the size and extent and the variety of material recovered. They state that many questions remain unanswered because of the small amount of sampling done here.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Continued avoidance of KfVi-3 is recommended. If avoidance is not feasible, Stage 1 excavations of at least a 15% sample are recommended at KfVi-3; this would entail hand excavation of an additional 190 1-x-1 m units. If artifact recovery is limited, excavation could be halted upon discussion with the Heritage Resources Unit.

KfVi-4 (de Guzman et al 2014; Soucey et al 2010a): This site is a small campsite located on a pre-Reid glacio-fluvial terrace on the eastern Britannia Creek valley wall. First identified through shovel testing in 2009, the small prehistoric site yielded a small number of lithic and faunal material. It was reassessed in 2013 through two 1 x 1 m units and additional tests yielded no additional material. It is interpreted as a short-term occupation site.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: De Guzman et al (2014) recommend no further work.

KfVi-5 (de Guzman et al 2014; Soucey et al 2010a; Mooney 2013b, 2014): A prehistoric lithic site. The diversity in raw materials suggests the possibility that the site was occupied on multiple occasions as a short-term workshop. Artifacts recovered in 2009 included a microblade fragment and lithic debitage. The microblade fragment suggests a site occupation age during the Little Arm Phase, which dates from 8, 000 B.P. to 4, 500 B.P. Further testing by Altamira in 2013 resulted in recovery of an adze (de Guzman et al 2014). Further archaeological mitigation efforts were conducted by Ecofor under permit 13-18ASR (Mooney 2013b).
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Mooney (2013b, 2014) recommends no further work and continued avoidance.

6.0 HISTORIC STRUCTURES AND RESOURCES NEAR PROPOSED MINE SITE, ROAD TO YUKON RIVER, AND ROAD TO AIRSTRIP

The following structures and resources are listed in and around the proposed mine site, the road to the Yukon River and the road to the proposed airstrip.

KeVi-4 (Hanley et al 1994, Soucey et al 2010a): An historic site that was described by Handly et al in 1994 as being demolished or partly obliterated log cabin associated with Euro-Canadian or Historic Native hunting and trapping and dating between 1910 and the early 1940's. Located on a knoll on the east bank of Casino Creek, 8.2 km along an access road leading from the main Casino Exploration Camp, through Dam Site 1 to Heap Leach Site 1. Survey during 2009 by Soucey et al failed to relocate the site.
Scope of Possible Impacts from Casino Project: These partially collapsed remains are located within the proposed tailings management facility footprint.
Management Recommendations: Handly et al recommend no further work if avoidance is not feasible. Soucey et al recommend additional survey and data collection to determine the age and ownership of the cabin.

KeVi-5 (Handly et al 1994; Soucey et al 2010a): An historic cabin located on a flat alluvial terrace above the west bank of Casino Creek and west of where the bulldozer crosses the creek. Cabin is partially collapsed. It dates to before 1936. It is located two kilometres southeast of the recorded location for KeVi-4 (Handly et al 1994). The site was revisited by Soucey et al in 2009 and was found to consist of the remains of a cabin structure.
Scope of Possible Impacts from Casino Project: These partially collapsed remains are located within the proposed tailings management facility footprint.
Management Recommendations: Handly et al (1994) recommend no further work if avoidance is not feasible. Soucey et al (2010a) recommend that in the event that it is determined that site disturbance is likely to occur, it is recommended that additional research and test excavation be carried out.

KeVi-7 (Soucey et al 2010a): A historic cabin that dates to urban development period of the historic era. Located south of the confluence of Canadian Creek and Brittania Creek and east of the western project boundary. The cabin is constructed with axe cut and hand sawn horizontal logs. The maximum height of the surviving walls is 15 logs in height. The cans and the tree cores date use of the cabin to the early 20th century. Given the presence close proximity of the cabin to two possible placer mine pits, it was likely occupied by a placer miner of European descent.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. Additional testing at the site is recommended to augment the current knowledge of its placement and use within the historic time period.

KeVi-8 (Soucey et al 2010a): A partially collapsed, historic cabin situated on the south facing slope above Casino Creek. Site consists of one corner of a log cabin. The ownership, age and use of the cabin

are unknown but it likely dates to the late 19th to early 20th century. Located on the east side of Casino Creek, northeast of the confluence of Casino and Nelson Creeks.
Scope of Possible Impacts from Casino Project: This site is located near the tailings storage facility footprint and may be impacted by construction.
Management Recommendations: Avoidance is recommended by the current authors. In the event that it is determined that site disturbance is likely to occur, it is recommended that additional research and test excavation be carried out.

KeVi-9 (Soucey et al 2010a): Is a historic CMT site consisting of a black spruce tree that has been tied into a knot. It is located at the base of a large knoll. KeVi-6 is located on the top of the knoll. The site is thought to represent a marker on a trail that cuts a route between Britannia and Canadian Creeks. The site is dated to 1946 from a dendro-chronological sample. This site number now also includes what Altamira previously recorded as Site KeVi-12 (a possible adze cut stump). This possible adze cut stump was located fairly close to the above noted KeVi-9 CMT.
Please Note: The Borden site number KeVi-12 was also assigned to a small lithic site recorded by Ecofor. After consultation with Ruth Gotthardt the possible adze cut stump has been added to Site KeVi-9, and the lithic site will remain as site KeVi-12 (Gotthardt personal communication 2014).
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site KeVi-9.
Management Recommendations: Avoidance is recommended by the current authors. In the event that it is determined that site disturbance is likely to occur, additional consideration and research is warranted to determine site value. Further consultation and research with local informants could provide additional information about the site and its association with an existing trail.

KeVi-10 (Soucey et al 2010a): A historic site consisting of a collapsed wooden framework found at the base of a spruce tree. It may have served as a platform or hunting blind. A small piece of plywood was near the framework. The site is on the west side of a quad trail paralleling Canadian Creek.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. Site is located within the Canadian Creek valley, an area that may be impacted during project developments. In the event that it is determined that site disturbance is likely to occur, additional consideration and research is warranted to determine site value.

KeVi-11 (Soucey et al 2010a): An historic period site consisting of an ethno-historic hide working frame piece found on the north side of Nelson Creek.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. Site is located within the Nelson Creek valley, an area that may be impacted during project developments. In the event that it is determined that site disturbance is likely to occur, additional consideration and research is warranted to determine site value.

KfVi-6 (Soucey et al 2010a): An historic cabin located on a bench overlooking the Yukon River to the north. It is located south of the Yukon River east of the current barge landing. It has been preliminarily associated with a known early inhabitant of the study area.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. There is potential for additional materials to be recovered and additional research may confirm the cabin's owner(s). Additional investigation is warranted for this historic era site.

KfVi-7 (Soucey et al 2010a): An archaeological site that consists of an isolated modified ungulate metatarsal. The metatarsal shows evidence that it was used as an end scraper. The end scraper was found in a context next to the river; it is possible it may have been deposited during a flood event. It is possible that this site is associated with an ethno-historic site (KfVi-10) located nearby.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. There is potential for additional information to be recovered from the site area. Thus, additional archaeological investigation of the two site area is warranted.

KfVi-8 (Soucey et al 2010a): An historic period site consisting of the remains of a tent campsite that may be associated with placer mining. The site is located directly east of Britannia Creek.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. In the event that it is determined that site disturbance is likely to occur, additional consideration and research is warranted to determine site value and specific mitigation options. Further research and consultation with local informants could provide additional information about the site and its association with placer mining activities in the valley.

KfVi-9 (Soucey et al 2010a): An historic period site consisting of a partially buried wooden object. Located on the south bank of the Yukon River and east of the project boundary. The origin, date and use of the wooden object have are unknown. Preliminary interpretations suggest an association with human burial remains.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. In the event that it is determined that site disturbance is likely to occur, additional consideration and research is warranted to determine site value and specific mitigation options. Further research and consultation with local informants is warranted to establish its origin, use and possible cultural relationship.

KfVi-10 (Soucey et al 2010a): An historic site consisting of a single item, a hide-working frame that was found on the south bank of the Yukon River and east of the western project boundary.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. No management recommendations were given except that additional consideration and research could determine its value in terms of ownership and relationship to other sites or cultural activities in the area.

KfVi-11 (Soucey et al 2010a): A CMT site consisting of tree stump and pole that were used for hide-working. It has been identified as ethnohistoric. Site is located on a glacio-fluvial terrace above Britannia Creek. The site is west of the east project boundary east of archaeology site KfVi-4.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. No management recommendations were given except that additional consideration and research is warranted to determine its value in terms of ownership and relationship to other sites or cultural activities in the area.

KfVi-12 (Soucey et al 2010b): The site consists of a birch tree that has had bark stripped for traditional use activities. The birch tree measures 1.5 m in height and 15 cm in diameter. The tree is dead and the top has broken off. The site is evidence for traditional use activities along the Yukon River near Britannia Creek. No date has been assigned to the tree.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. Further research and consultation is recommended (Soucey et al 2010b).

KfVi-13 (Soucey et al 2010b): The site consists of a birch tree that has had bark stripped for traditional use activities. The birch tree is still living and only a small, 25 cm wide swatch of bark has been removed from the mid-lower portion of the tree. The site is evidence for traditional use activities along the Yukon River near Britannia Creek. No date has been assigned to the tree.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. Further research and consultation is recommended (Soucey et al 2010b).

KfVi-14 (Soucey et al 2010b): The site consists of a spruce tree that has had a cambium strip removed. The strip is 50 cm high by 15 cm wide and the scar is 10 cm deep. Two shallow cut marks were noted at the top of the scar. A core sample was taken from the tree, however several large knots were cored through; therefore, it was not possible to determine when the cambium stripping took place. The site is evidence for traditional use activities along the Yukon River near Britannia Creek. No date has been assigned to the tree.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: Avoidance is recommended by the current authors. Further research and consultation is recommended (Soucey et al 2010b).

7.0 PREVIOUSLY NOTED FIRST NATION USE SITES ALONG FREEGOLD ROAD

Handly and Rousseau collected information regarding these First Nation use sites (abbreviated FN's) while conducting assessment along the previously identified planned upgrade to the Freegold Road (Handly and Rousseau 1995). This are listed below in order from Carmacks heading northwest towards the proposed mine site.

FN1: May Roberts indicated that a First Nation Traditional Brush Camp was located at the northern end of Three Mile Lake, approximately west of present Freegold Road.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: No further work required, but perhaps keep access to area open from Freegold Road.

FN2: At the head of a narrow valley past Three Mile Lake, LSCFN peoples used to stop at a spring for water on their way to, or from fishing and hunting camps.
Scope of Possible Impacts from Casino Project: This camp is located near the proposed ROW but there are no planned impacts for this site.
Management Recommendations: No further work required, but perhaps keep access to area open from Freegold Road.

FN3: May Roberts indicated that there was a traditional First Nations trail which began at km 5.0 on the present Freegold Road. It continued behind Mount Miller to several lakes, and from there to approximately km 24.0 on the Freegold Road. The trail was recently upgraded by several members of the LSCFN. An information plaque had been erected on the present Freegold Road, but at the time of our survey, the plaque had been knocked over. This 'bypass trail' joined the Agate Trail (FN 8 below), providing access to lithic raw material source areas, as well as access to fall hunting campsites at several lakes along the trail. The trail is situated 1 to 2 km west of the present Freegold Road.
Scope of Possible Impacts from Casino Project: There are no planned impacts for this site.
Management Recommendations: No further work required, but perhaps keep access to area open from Freegold Road.

FN4: May Roberts stated that a prominent knoll, situated near the proposed Freegold Road Project ROW, was used as a caribou monitoring station. The knoll overlooks a bend in the Yukon River where the Forty Mile Caribou Herd previously forded the Yukon River. When the caribou herds were sighted, hunters would descend to the river, get into their canoes, and kill caribou as they swam across the river. FN 4 is situated outside the proposed Freegold Project impact zone.
Scope of Possible Impacts from Casino Project: This knoll is likely within a proposed borrow pit.
Management Recommendations: If it is within the proposed borrow pit, it would be required to be assessed prior to impacts.

FN5: May Roberts Fish Camp is located at km 7.1 of the Freegold Road ROW. This large site (20 m N/S by 20 m E/W) consists of four walled tent-frame structures and two large, covered fish drying racks 5 to 10 m back from the banks of the Yukon River.
Scope of Possible Impacts from Casino Project: There no planned impacts for this site.
Management Recommendations: No further work required, but perhaps keep access to area open from Freegold Road.

FN6: Stanley Jonathan's Fish Camp is a medium sized (15 m N/S by 10 m , Chinook salmon fishing camp was identified by May Roberts at km 9.8 on the Freegold Road.
Scope of Possible Impacts from Casino Project: There no planned impacts for this site.
Management Recommendations: No further work required, but perhaps keep access to area open from Freegold Road.

FN7: The start of the Agate Trail (Mount Miller Gem and Mineral Trail) is located at km 13.7 on the present Freegold Road.
Scope of Possible Impacts from Casino Project: There no planned impacts for this site.
Management Recommendations: No further work required, but perhaps keep access to area open from Freegold Road.

FN8: A small (3 m N/S by 3 m W/E), First Nations traditional hunting and trapping camp was located at km 13.7, approximately 5 m to the east of the proposed Freegold Road Project ROW, where the Agate Trail and present Freegold Road intersect. May Roberts said this used to be Jessie Wolf's hunting and trapping camp.
Scope of Possible Impacts from Casino Project: There no planned impacts for this site.
Management Recommendations: We strongly recommend that the First Nation traditional cultural material remaining at this site be systematically collected by representatives of the LSCFN prior to construction of the proposed Freegold Road (Handly and Rousseau 1995 - may no longer exist).

FN9: The remains of a small (2 m N/S by 2 m N/S), First Nation traditional bush camp was observed around the base of a large, White Spruce tree that had been felled within the Proposed Project ROW at km 15.8. The camp was noted late in the afternoon on October 5, but by morning of the next day the White Spruce tree had been felled by workmen clearing the Freegold Road impact zone.
Scope of Possible Impacts from Casino Project: This camp area was adjacent to the proposed Freegold Road ROW.
Management Recommendations: No further work recommended.

FN10: A medium sized (10 m N/S by 6 m W/E) First Nations traditional fur trappers camp was noted at km 19.9), approximately 5 m outside the western edge of the proposed Freegold Project ROW. A brush lean-to, and a collapsed, rectangular tent-frame structure were noted, as well as four stoves and associated stovepipes, assorted hide stretchers, sawhorses, boots, saws, files, pots, pans, firewood and scattered

refuse. May Roberts indicated that this was originally Edward Charlie's trapping camp, but that now it was within Larry Tricker's (#150) trapline territory.
Scope of Possible Impacts from Casino Project: This camp area was adjacent to the proposed Freegold Road ROW.
Management Recommendations: We strongly recommend that the First Nation traditional cultural material remaining at this site be systematically collected by representatives of the LSCFN prior to construction of the proposed Freegold Road (Handly and Rousseau 1995 - may no longer exist).

Previous field efforts also recorded an additional modern cabin, and five trap trees near the existing Freegold Road (Mooney 2013a). These modern resources are noted here due to expected interests of current stakeholders. The modern cabin is located just above the existing Freegold Road and on the edge of a proposed borrow pit at what was previously known as "Mile 40" and currently at about 62 km on current project mapping. Due to the relatively modern age of this cabin it was not recorded with YHSI.

This cabin was constructed of milled lumber with a plywood exterior and a metal roof. This cabin is not anticipated to be impacted by borrow pit or road realignment but it is on the south edge of a proposed borrow pit and access to the cabin may be affected during construction.

Figure 2. Modern cabin looking southeast and a sample trap tree south of Freegold Road.

Five trap trees were noted along the south side of the existing Freegold Road between approximately 37 and 50 km of the current 2013 project mapping. Only a sample of them is shown above and not all will be impacted by the proposed realignments of Freegold Road.

No further heritage work is recommended for these moveable traps but consultation with the trapline holder(s) is recommended.

8.0 SUMMARY AND CONCLUSIONS

The proposed Casino Mine project and ancillary facilities consist of: proposed upgrades to the Freegold Road from the Klondike Highway to the mine site (including the proposed by-pass around Carmacks); road and infrastructure improvements from the mine site to the Yukon River; and road and airport construction to the southwest of the mine site. This summary presents what heritage resource impact assessment work remains to be completed, and which heritage resources are to be managed prior to and during construction. Overall there are fifty (50) known archaeological sites and forty-seven (47) known historic structures or historic resources that must be managed in relation to this project. These totals are further broken down by location along the proposed Freegold Road from the Klondike Highway to the proposed mine site, and from the mine site itself and access roads to the Yukon River and to the proposed airstrip. These are in addition to ten (10) previously recorded First Nation use sites. These are summarized below.

The heritage resource impact assessment remaining to be completed consists of seventeen (17) proposed borrow pits and approximately 7.45 km of ROW between the Klondike Highway and km 33+000, as well as, access roads to borrow pits, and any future additions of borrow pits or other ancillary components, or road re-alignments.

Some borrow pits are directly adjacent to the proposed ROW and do not require a separate access road to move borrow materials to the construction ROW. Other proposed borrow pits are not adjacent to the ROW, and will require access roads between the borrow pit and the ROW. No access roads for borrow pits have been specifically assessed (only in a few cases have approximate location of access roads been assessed). Each of the proposed borrow pits, that require an access road, will have to have their respective access road assessed.

There are thirty-three (33) known archaeological sites to be managed between the Klondike Highway and the mine site, along the proposed Freegold Road upgrade. These sites from Carmacks to mine site consist of: KaVb-17, KaVa-3, KaVb-1, KaVb-2, KbVb-2, KbVb-4, KbVb-3, KcVd-3, KcVe-4, KcVf-2, KcVf-3, KeVf-1, KdVf-4, KdVf-13, KdVf-7, KdVf-6, KdVf-5, KdVf-8, KdVf-10, KdVf-11, KdVf-9, KdVf-14 (a.k.a. KdVf-1), KdVf-12, KeVf-3, KeVg-5, KeVg-4, KeVg-9, KeVg-7, KeVg-8, KeVg-3, KeVg-6, KeVh-3, and KeVh-4. Each of these sites must be managed on a site by site basis. This management effort will ensure that the site boundaries are clearly marked. Management options range from avoiding impacts, minimizing impacts, to mitigating impacts with detailed data recovery excavations. Where engineering plans changes, these sites must be reviewed for possible impacts as per the Heritage Resource Management Plan (Mooney 2013b).

There are thirty-one (31) historic structures and/or historic resources to be managed along the proposed Freegold Road upgrade. From Carmacks to the mine site these include: H1 Whitehorse-Dawson Winter Road, H2 log structure, H3 mink fox farm, H4 Dalton Trail, H5 Place Mine, H6 Morrison Road House, Tricker Cabin, Fallen Cache Cabin, Dog House Cabin, Gas Can Cabin, Melmac Cabin, Ketchup Cabin, Three Room Cabin, Frenchman Cabin, Bow Creek Cabins, KcVd-2, KcVd-1, Five Course Cabin, Garage by Big Creek, High Cache Cabin, Burl Cabin, KcVe-3, KcVe-1, KcVe-2, KdVf-3, KdVf-2, Steamers/Upright Boilers, KeVg-1 (a.k.a. Hayes Creek Cabins), trail AY09-19, trail AY09-18, and KeVg-2. Specific recommendations vary on a resource by resource basis but where possible flagging and

avoidance is the first recommendation. Additional documentation and research is recommended for some resources, and if possible relocation of some resources is recommended. Where engineering plans changes, these sites must be reviewed for possible impacts as per the Heritage Resource Management Plan (Mooney 2013b).

There are seventeen (17) known archaeological sites to be managed near the mine site, road to the Yukon River, and road and airstrip to the southwest. These sites are KeVi-1, KeVi-2, KeVi-3, KeVi-6, KeVi-12 (lithic only CMT was reassigned to site KeVi-9), KeVi-13, KeVi-14, KeVi-15, KdVi-1, KdVi-2, KdVi-3, KdVi-4, KdVi-5, KfVi-2, KfVi-3, KfVi-4, and KfVi-5. Each of these sites must be managed on a site by site basis. This management effort will ensure that the site boundaries are clearly marked. Management options range from avoiding impacts, minimizing impacts, to mitigating impacts with detailed data recovery excavations. Where engineering plans changes, these sites must be reviewed for possible impacts as per the Heritage Resource Management Plan (Mooney 2013b).

There are sixteen (16) historic structures and/or historic resources to be managed near the mine site, road to the Yukon River, and road and airstrip to the southwest. These are: KeVi-4, KeVi-5, KeVi-7, KeVi-8, KeVi-9, KeVi-10, KeVi-11, KfVi-6, KfV-7, KfVi-8, KfVi-9, KfVi-10, KfVi-11, KfVi-12, KfVi-13, and KfVi-14. Specific recommendations vary on a resource by resource basis but where possible flagging and avoidance is the first recommendation. Additional documentation and research is recommended for some resources, and if possible relocation of some resources is recommended. Where engineering plans change, these sites must be reviewed for possible impacts as per the Heritage Resource Management Plan (Mooney 2013b).

There are ten (10) previously recorded First Nation use sites along the Freegold Road. These sites consist of FN 1 brush camp, FN 2 natural spring, FN 3 traditional trail, FN 4 look out site, FN 5 May Robert's fish camp, FN 6 Stanley Jonathan's fish camp, FN 7 Agate Trail, FN 8 small hunting and trapping camp, FN 9 small bush camp, and FN 10 trappers camp. Individual recommendations are provided on a site by site basis.

Along with these modern resources, there was also another cabin identified at approximately 62 km on current project mapping. Due to the relatively modern age of this cabin it was not recorded with YHSI. There were also five trap trees recorded along the existing Freegold Road. No further heritage work is recommended for these moveable traps but consultation with the trapline holder(s) is recommended.

9.0 REFERENCES CITED

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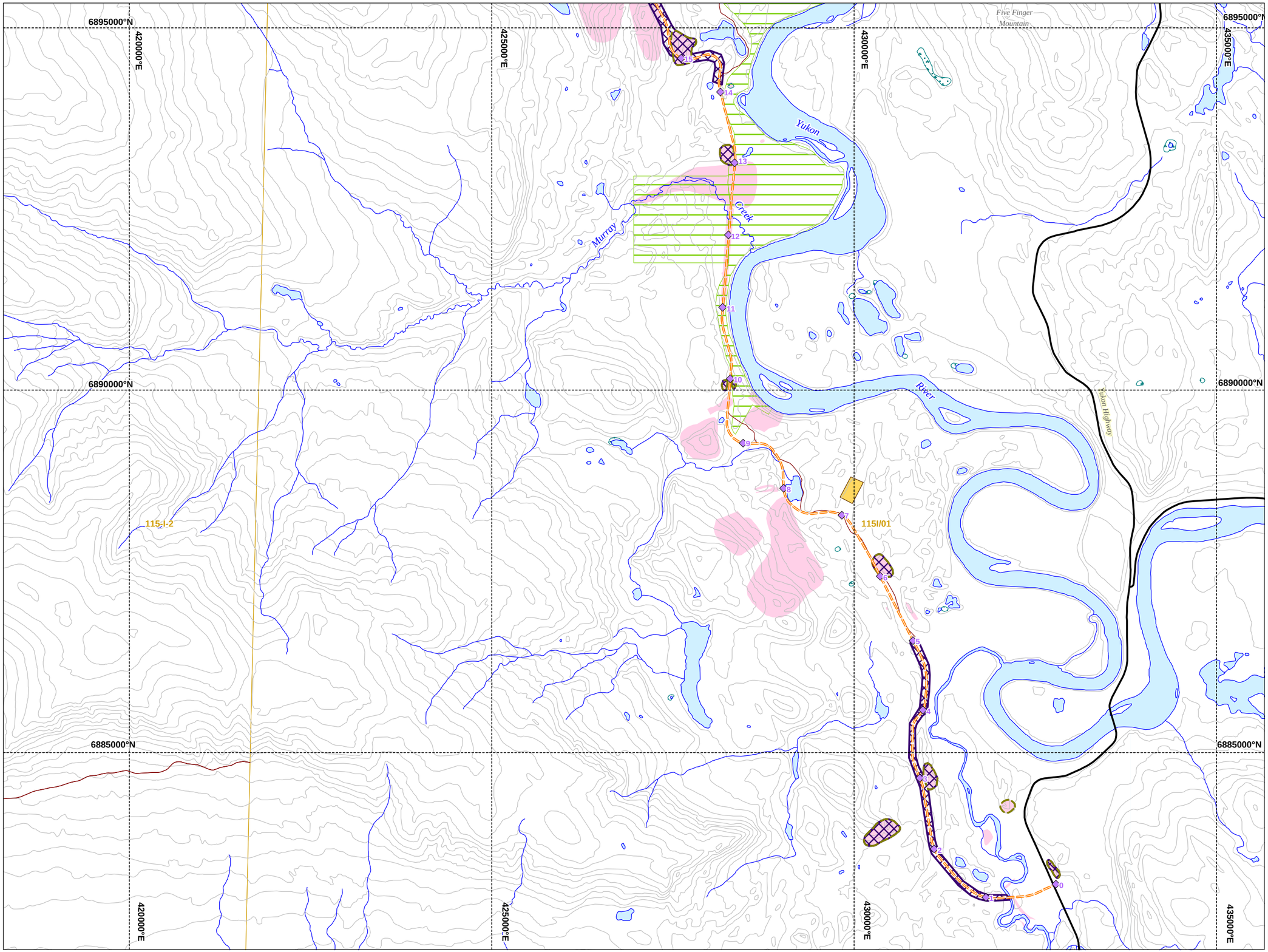
APPENDIX I: PROJECT MAPPING



CASINO

PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 1

Map Projection: NAD 83, UTM Zone 8
NTS Mapsheet: 115-I-1/2
Date: December 4, 2014

N

500 0 500 1000 1500

Meters

Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Logging Road
- Proposed Road Alignment
- Propoed Borrow Pit
- Road Meter Marker
- Terrain Polygon

Archaeological Information

- Assessed Area
- Remaining Areas to be Assessed

Land Use Information

- First Nation Settlement Lands

First Nation Settlements

- Little Salmon/Carmacks First Nation

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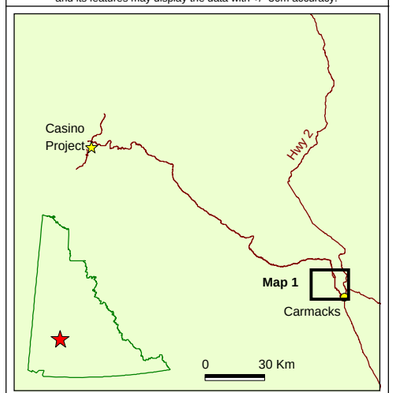

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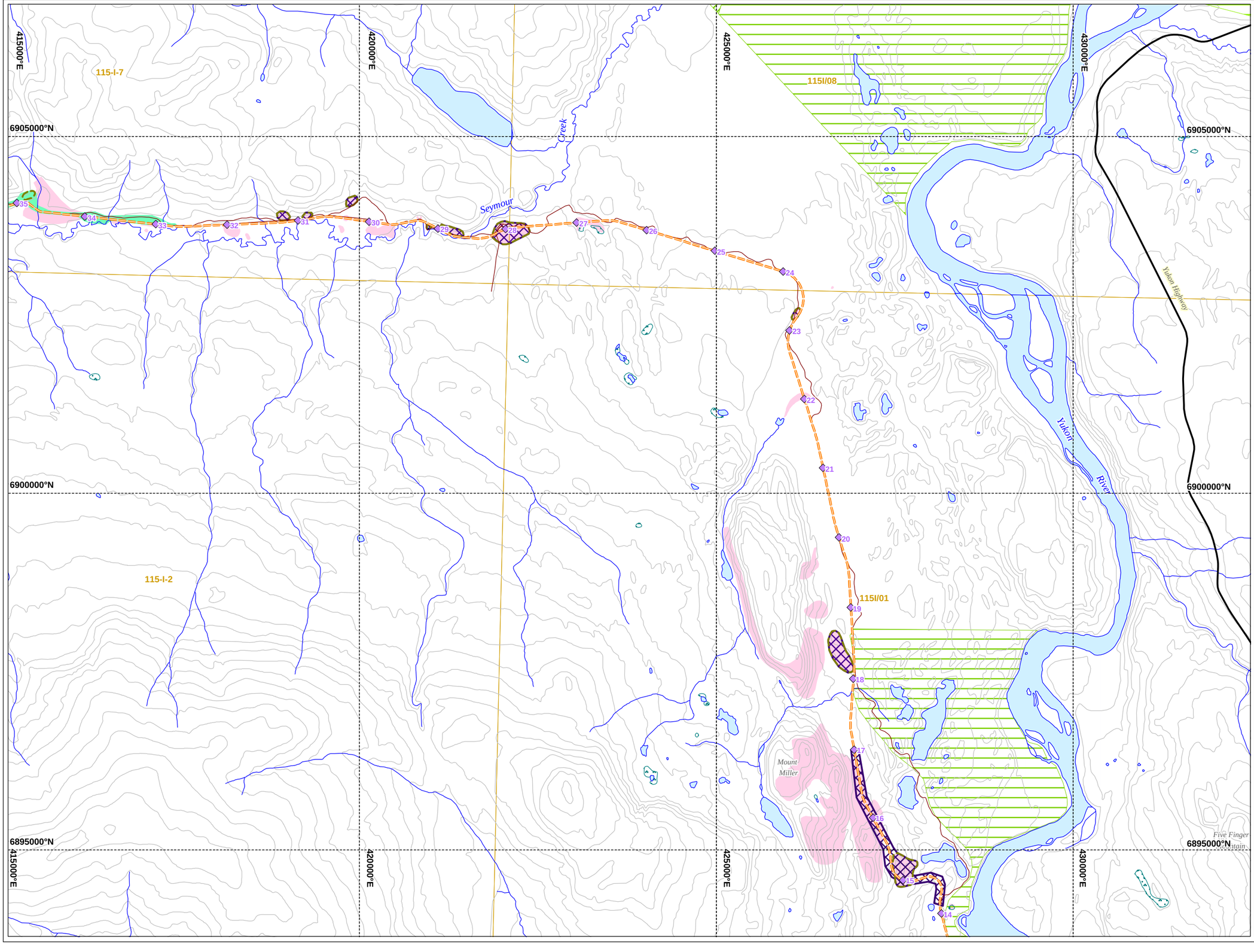

CASiNO

PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 2

Map Projection: NAD 83, UTM Zone 8
NTS Mapsheet: 115-I-1/2/7/8
Date: December 4, 2014

N

500 0 500 1000 1500

Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Logging Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker
- Terrain Polygon

Archaeological Information

- Assessed Area
- Remaining Areas to be Assessed

Land Use Information

- First Nation Settlement Lands

First Nation Settlements

- Little Salmon/Carmacks First Nation

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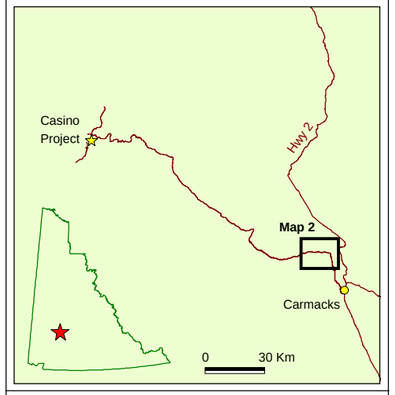

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405000°E
410000°E
415000°E
6905000°N
6900000°N
6896500°N
115-I-7
115-I-2
Creek
Seymour
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CASiNO

PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 3

Map Projection: NAD 83, UTM Zone 8
NTS Mapsheet: 115-I-2/7
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker

Archaeological Information

- Assessed Area
- Remaining Areas to be Assessed

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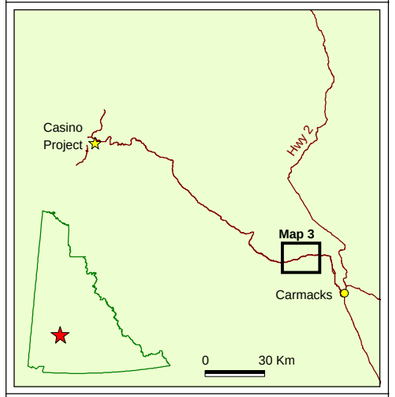

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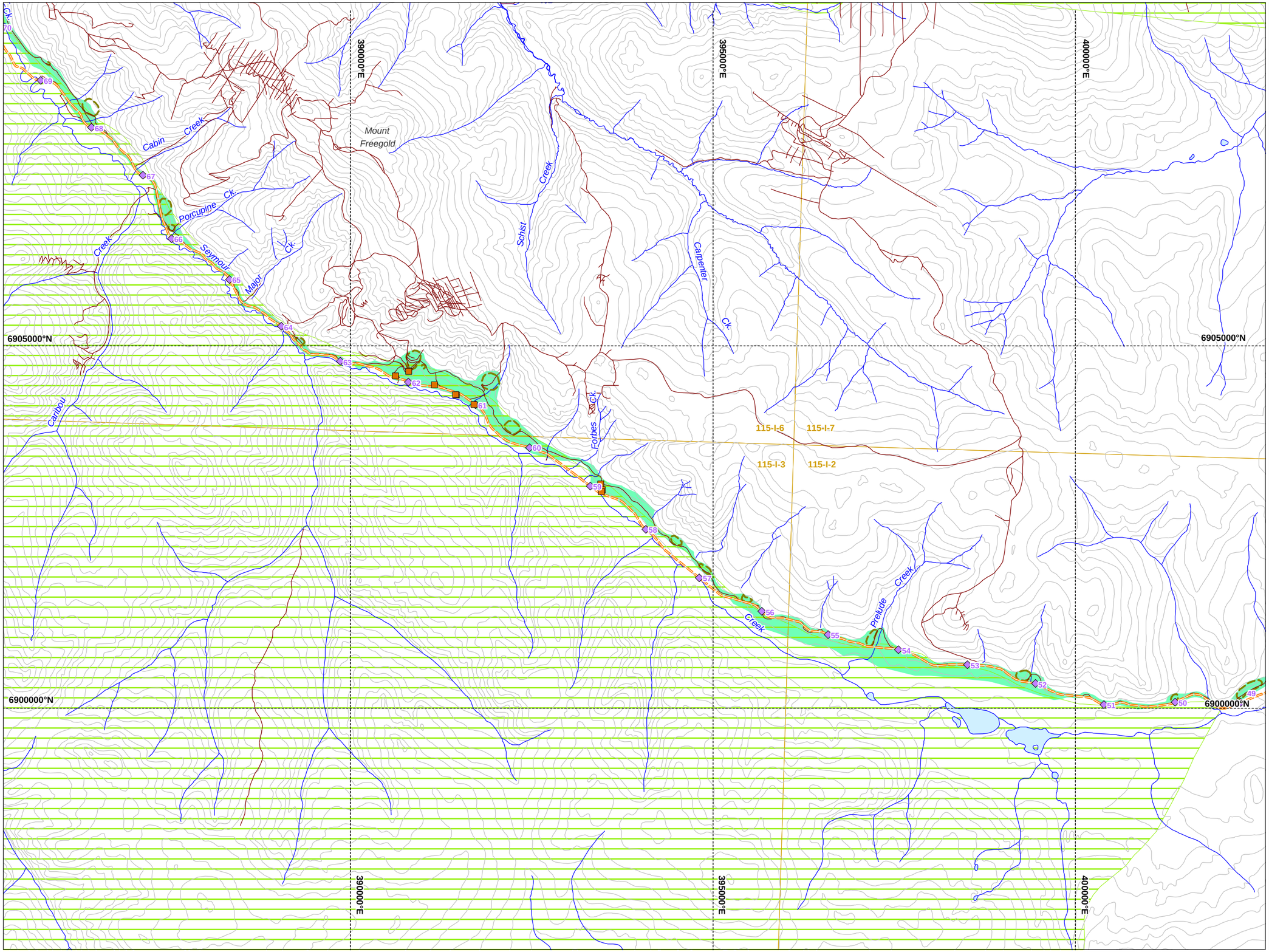

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PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 4

Map Projection: NAD 83, UTM Zone 8
NTS Mapsheet: 115-I-2/3/6/7
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker

Archaeological Information

- Assessed Area
- Historic Structure

Land Use Information

First Nation Settlements

- Little Salmon/Carmacks First Nation

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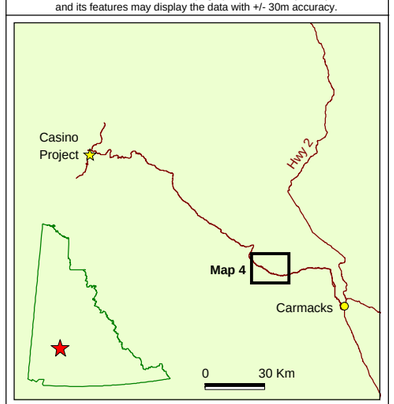

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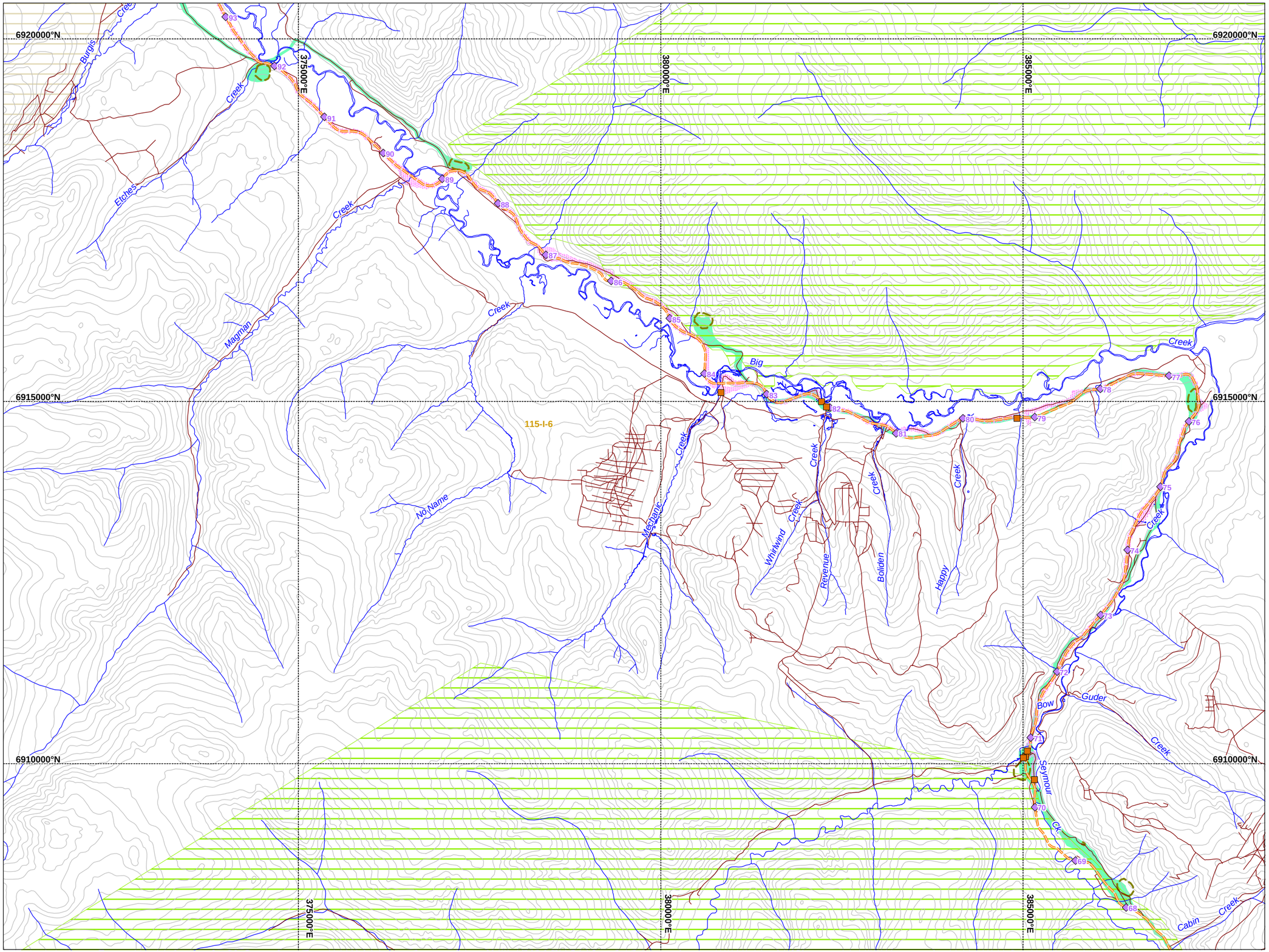

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PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 5

Map Projection: NAD 83, UTM Zone 8
NTS Mapsheet: 115-I-6
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker

Archaeological Information

- Assessed Area
- Previously Assessed Area
- Historic Structure

Land Use Information

First Nation Settlements

- Little Salmon/Carmacks First Nation
- Selkirk First Nation

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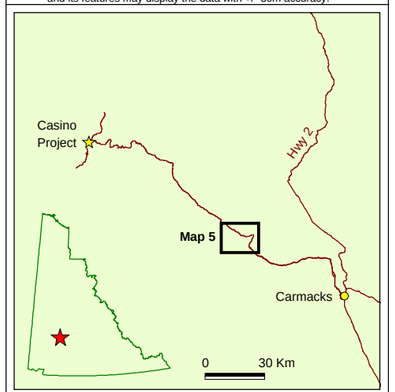

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PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 6

Map Projection: NAD 83, UTM Zone 8
NTS Mapsheet: 115-I-5/6
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker

Archaeological Information

- Assessed Area
- Previously Assessed Area

Land Use Information

First Nation Settlements

- Selkirk First Nation

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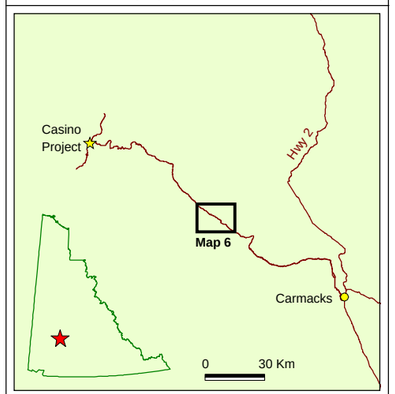

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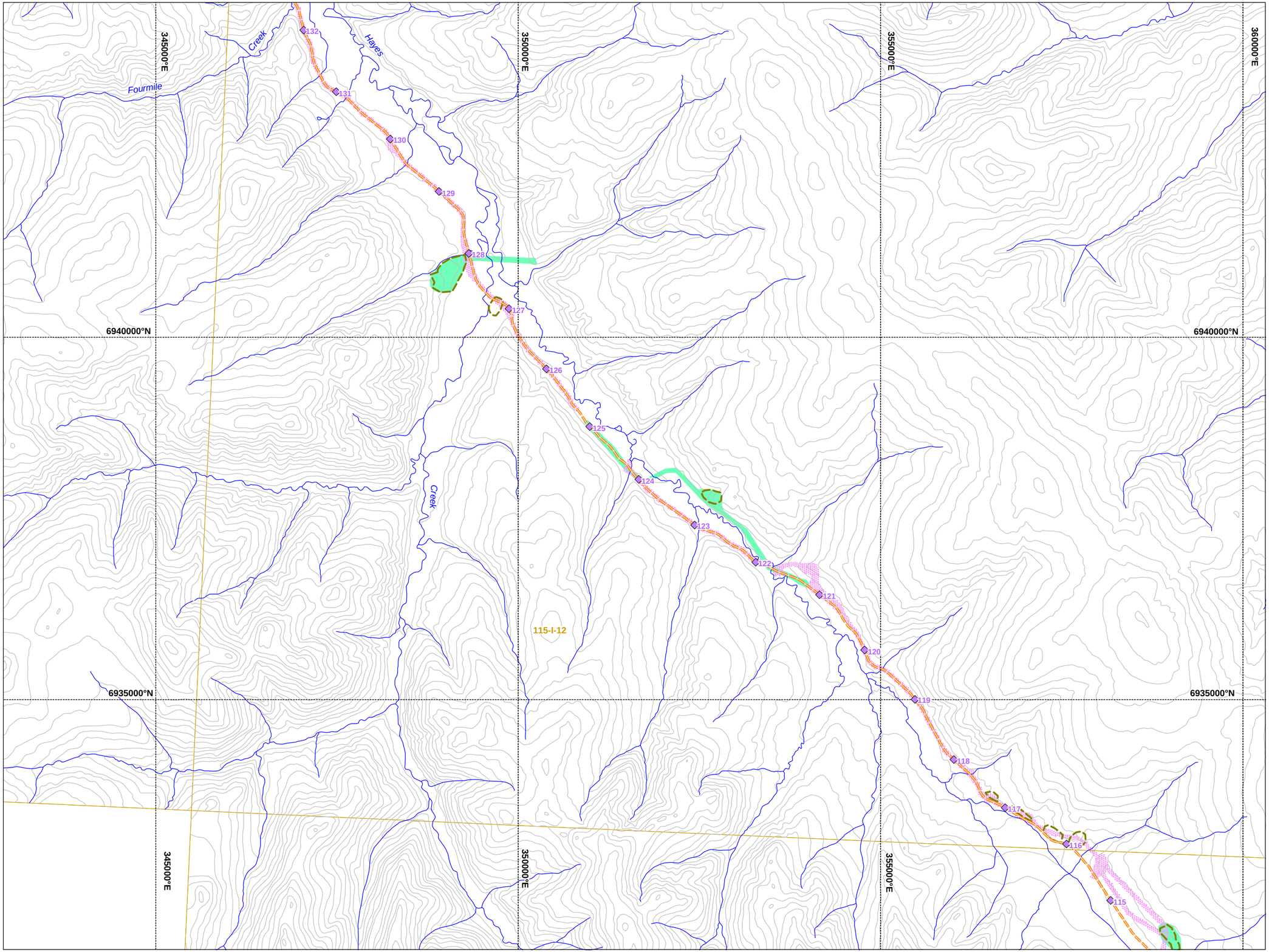
360000°E
365000°E
370000°E
375000°E
6930000°N
6925000°N
6920000°N
115-I-5
115-I-6
Big Creek
Burgs Creek
Creek



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PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 7

Map Projection: NAD 83, UTM Zone 8
NTS Mapsheet: 115-I-12
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker

Archaeological Information

- Assessed Area
- Previously Assessed Area
- Historic Structure

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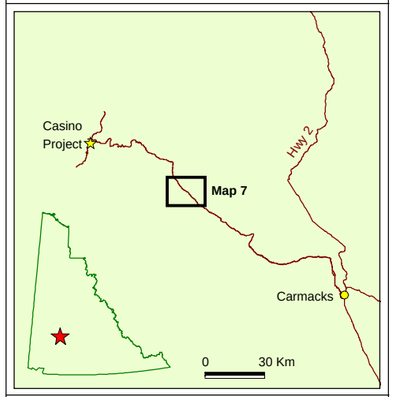

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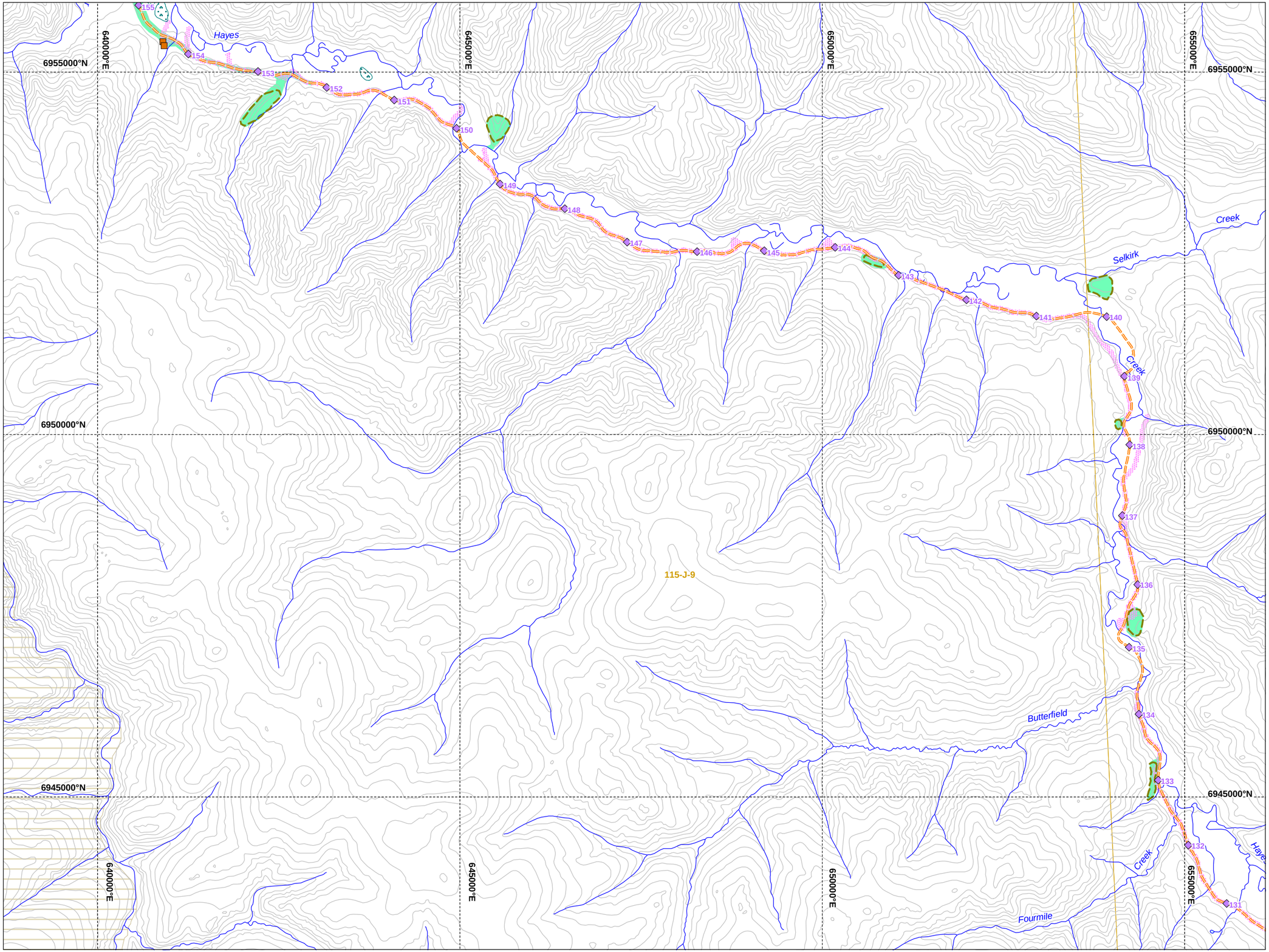

CASINO

PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 8

Map Projection: NAD 83, UTM Zone 7
NTS Mapsheet: 115-J-9
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker

Archaeological Information

- Assessed Area
- Previously Assessed Area
- Historic Structure

Land Use Information

First Nation Settlements

- Selkirk First Nation

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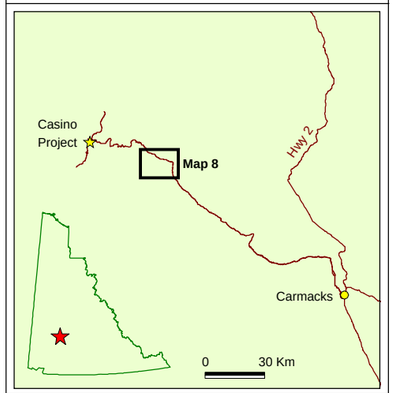

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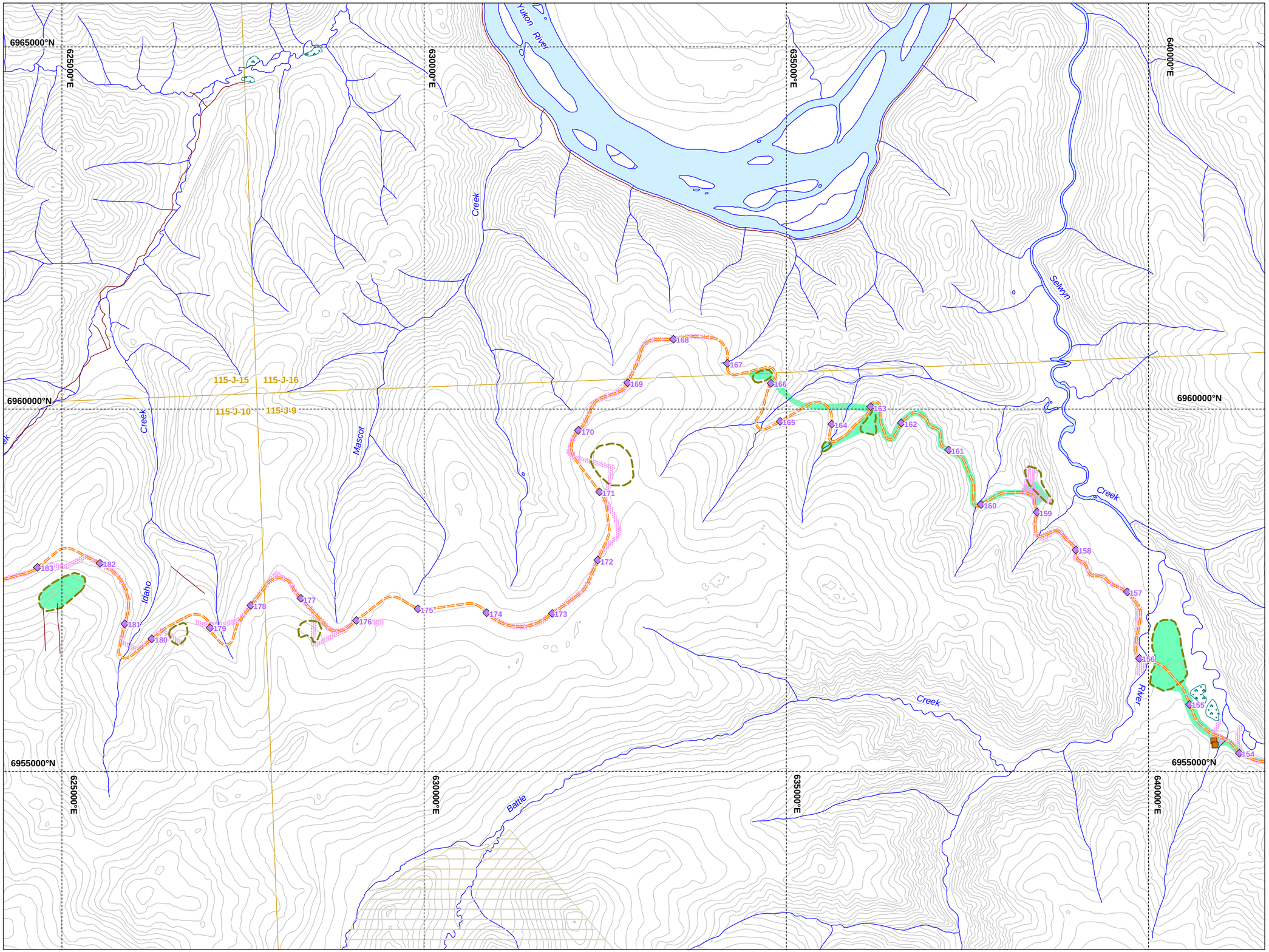

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PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 9

Map Projection: NAD 83, UTM Zone 7
NTS Mapsheet: 115-J-9/10/15/16
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- 2013 Road Alignment
- 2013 Borrow Pit
- 2013 Road Meter Marker

Archaeological Information

- Assessed Area
- Previously Assessed Area
- Historic Structure

Land Use Information

First Nation Settlements

- Selkirk First Nation

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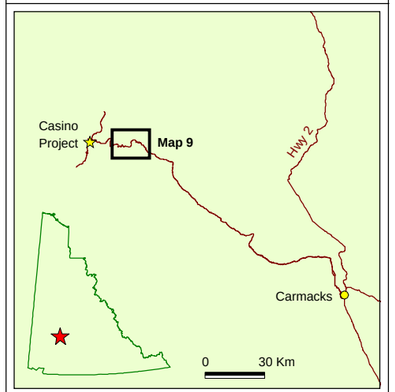

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PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 10

Map Projection: NAD 83, UTM Zone 7
NTS Mapsheet: 115-J-10/15
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker
- Drill Targets
- 2013 Additional Borrow Pits
- Mine Site, Tailings and Ancillary Footprints

Archaeological Information

- Assessed Area
- Previously Assessed Area
- Historic Structure

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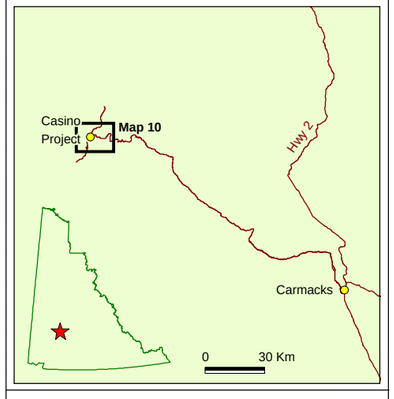

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6960000°N
6955000°N
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615000°E
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625000°E
115-J-15
115-J-10
Canadian Creek
Britannia Creek
Sunshine Creek
Isaac Creek
Melov Creek
Creek
203
203.280
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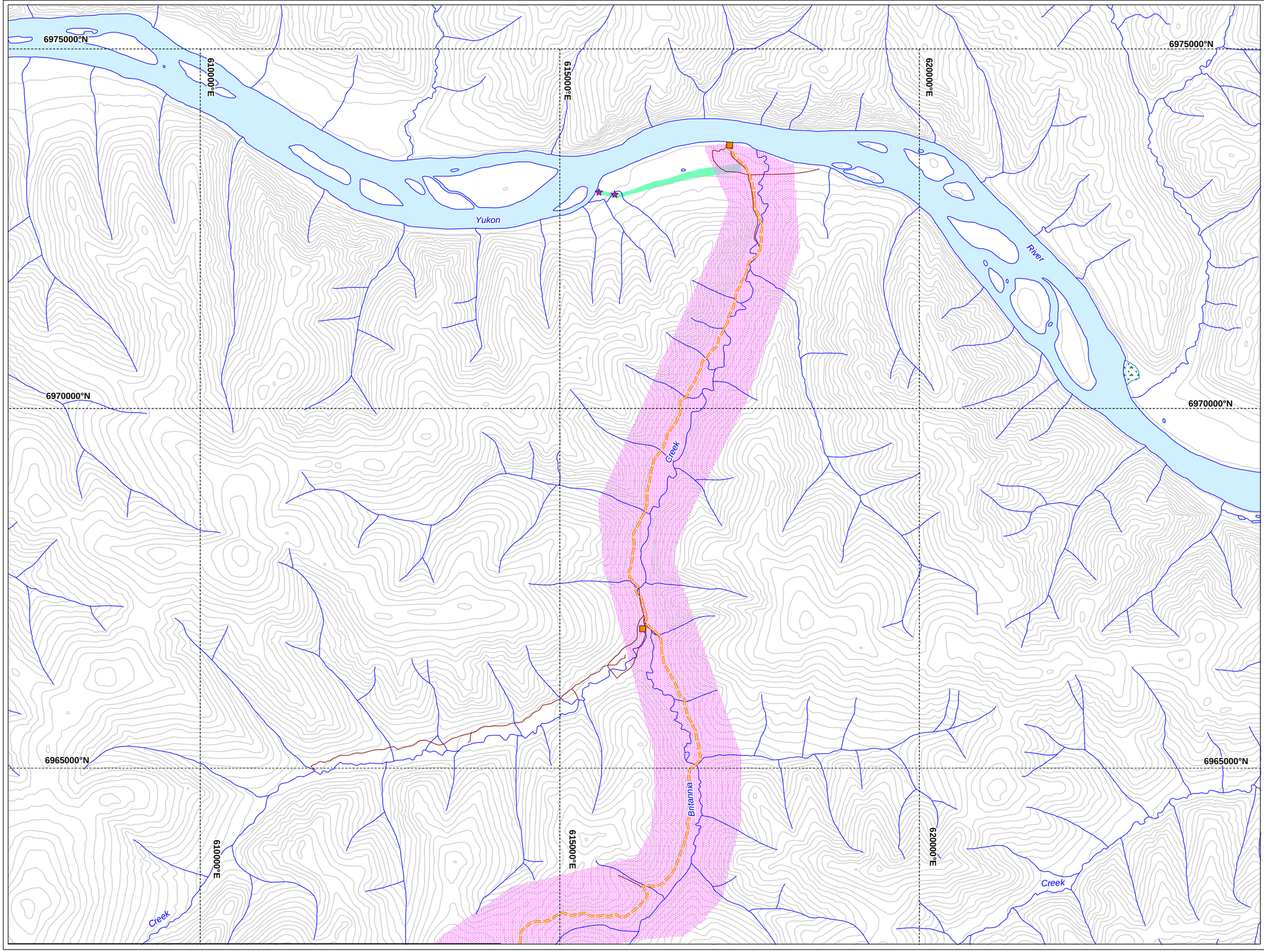


CASiNO

PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 11

Map Projection: NAD 83, UTM Zone 7
NTS Mapsheet: 115-J-10/15
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

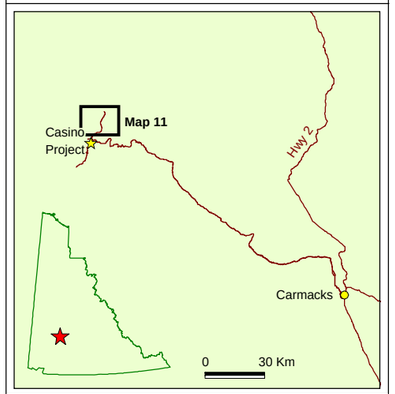
L E G E N D

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- 2013 Road Meter Marker
- Drill Targets

Archaeological Information

- Assessed Area
- Previously Assessed Area
- Historic Structure

Disclaimer:
This product is for informational purposes only and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. The base data layers have been obtained from the National Topographic Database (NTDB) and its features may display the data with +/- 30m accuracy.



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natural and cultural resource consultants

CASINO

PROPOSED EXTENSION OF FREEGOLD ROAD

ARCHAEOLOGICAL IMPACT ASSESSMENT MAP 12

Map Projection: NAD 83, UTM Zone 7
NTS Mapsheet: 115-J-10/15
Date: December 4, 2014

N

500 0 500 1000 1500
Meters
Scale: 1:50,000

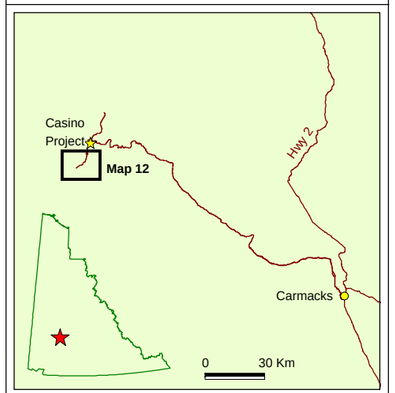
LEGEND

- Waterbody
- Wetland
- Stream
- Contour
- Road
- Proposed Road Alignment
- Proposed Borrow Pit
- Road Meter Marker
- Drill Targets
- 2013 Additional Borrow Pits
- Mine Site, Tailings and Ancillary Footprints

Archaeological Information

- Assessed Area
- Previously Assessed Area
- Historic Structure

Disclaimer:
This product is for informational purposes only and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. The base data layers have been obtained from the National Topographic Database (NTDB) and its features may display the data with +/- 30m accuracy.



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6950000°N
6945000°N
605000°E
610000°E
615000°E
620000°E
115-J-10
Casino Creek
Dip
Victor Creek
Rude Ck

APPENDIX II: SUMMARY TABLE

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
Remaining HRIA Survey Fieldwork To Be Completed								
na	na	na	na	Area is a proposed borrow pit east side of Klondike Highway.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit west side of Klondike Highway.	na	HRIA Assessment Required - Proposed Borrow Pit may be dropped as near possible graves	na	na
na	na	na	na	Within the proposed Freegold Project ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit west side of Proposed ROW and near Nansen Road.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit east side of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit west side of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit west side of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit east side of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit west side of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Within the proposed Freegold Project ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit both sides of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit west side of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit west side of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit both sides of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit north side of ROW.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit south side of ROW.	na	HRIA Assessment Required	na	na

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
na	na	na	na	Area is a proposed borrow pit north side of existing road.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit north side of existing road.	na	HRIA Assessment Required	na	na
na	na	na	na	Area is a proposed borrow pit north side of existing road.	na	HRIA Assessment Required	na	na

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
Archaeological Sites to be Managed Along Proposed Freegold Road Upgrade								
KaVa-17	prehistoric site; and cemetery	surface scatter (lithic)	Slighlty disturbed by dirt track and vehicle traffic.	This site and cemetery are not currently planned for impacts and are located upslope and to the east of the proposed ROW.	No	Avoidance of this site and cemetery are recommended.	N/A no permit just site form	Just KaVb-17 Site form YG Heritage Branch 2012
KaVa-3	prehistoric	surface scatter (lithic) and subsurface scatter (lithic and faunal)	disturbed	None planned	No	Avoidance (preferred) or mitigative excavations. If the existing bridge over the Nordenskiold River was upgraded and or replaced as part of the Freegold Project reconstruction, adverse impacts could be placed on the remaining buried cultural materials.	94-22ASR (Antiquus)	Handly and Rousseau 1995
KaVb-2	prehistoric	surface scatter (lithic) and subsurface scatter (lithic)	intact (1995)	Outside of the zone of impact of Freegold Project ROW.	No	Site avoidance.	95-1ASR (Yukon Govt)	Gotthardt 1995
KaVb-1	prehistoric	subsurface scatter (lithic).	disturbed	Within the proposed Freegold Project ROW, and proposed borrow pit.	No	Avoidance (preferred) or Mitigative Excavations(Handly and Rousseau); avoid impacts to the south edge of the terrace and maintain 30 m buffer along terrace edge. Access road should be routed along north side of the terrace (Hammer 1995).	94-22ASR (Antiquus); 95-2ASR (Hammerstone)	Hammer 1995; Handly and Rousseau 1995
KbVb-2	prehistoric	subsurface scatter (lithic)	excavated in 1995	Within proposed Freegold Project ROW.	No	Recommended that during construction for the upgrading of the Freegold Road, the surface soil (0-30 cm below surface) be removed in the vicinity of KbVb-2 and stockpiled so possible remaining cultural materials may be salvaged at a future date.	94-22ASR (Antiquus), 95-2ASR (Hammerstone)	Hammer 1995; Handly and Rousseau 1995
KbVb-4	prehistoric	subsurface scatter (lithic and faunal bone)	some intact portions of site remain	Within Freegold Project ROW.	No	Mitigative Excavations	95-1ASR (Yukon Govt)	Gotthardt 1995
KbVb-3	prehistoric	scatter (lithic)	No Evidence of Site Remains	Within Freegold Project ROW.	No	None required.	95-1ASR (Yukon Govt)	Gotthardt 1995

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KcVd-3	prehistoric	subsurface scatter (lithic)	intact	Within Freegold Project proposed borrow pit.	Yes	If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 14 - 18 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a
KcVe-4	prehistoric	subsurface scatter (lithic)	intact	Very close to the proposed extension of Freegold Road.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1 x 1 m unit block excavations in relation to the size and distribution of the site.	11-04ASR (Ecofor)	Mooney 2011
KcVf-2	prehistoric	subsurface scatter (lithic)	intact	On edge of Freegold Project proposed borrow pit.	Yes	If avoidance is not possible then data recovery work is recommended. Data recovery should include additional shovel testing to determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 12 - 15 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a
KcVf-3	prehistoric	subsurface scatter (lithic)	intact	Within Freegold Project proposed borrow pit.	Yes	If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 12 - 15 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KeVf-1	prehistoric	subsurface scatter (lithic)	intact	Within Freegold Project proposed borrow pit as of 2013 (previously not in planned impacts 2011).	Yes	If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 12 - 15 square meters of excavation would be recommended.	11-04ASR (Ecofor)	Mooney 2011
KdVf-4	prehistoric	surface and subsurface scatter (lithic)	intact	Was planned to be impacted by the proposed borrow pit (2011) but now is not planned for impacts (2013).	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the relation to the size and distribution of the site.	88-3ASR (Gotthardt); 11-04ASR (Ecofor)	Gotthardt 1988; Mooney 2011
KdVf-13	prehistoric	subsurface scatter (lithic)	intact	Will be directly impacted by the proposed borrow pit.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.	11-04ASR (Ecofor)	Mooney 2011

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KdVf-7	Multi-component: Prehistoric and Proto-historic	subsurface scatter (lithic and Chinese coin)*	intact	The site is located within a proposed borrow pit and very close to the current proposed alignment of the road. This site may be directly impacted by the road construction.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site. Additional historical research in regards to possible Chinese placer mining in the project area is recommended.	11-04ASR (Ecofor)	Mooney 2011
KdVf-6	prehistoric	subsurface scatter (lithic) and possible cache	intact	Within the proposed extension of Freegold Road and potential borrow pits.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.	11-04ASR (Ecofor)	Mooney 2011
KdVf-5	prehistoric	subsurface scatter (lithic)	intact	Was planned to be impacted by the proposed borrow pit (2011) but now borrow pit is dropped but site is within planned ROW impacts (2013).	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.	11-04ASR (Ecofor)	Mooney 2011
KdVf-8	prehistoric	subsurface scatter (lithic)	intact	This site will not be directly impacted by the road construction or borrow pit use.	Yes	No further work is recommended. However, if borrow pit construction impacts lead to upslope erosion then avoidance of the site is recommended. If avoidance is not possible then data recovery work under is recommended.	11-04ASR (Ecofor)	Mooney 2011

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KdVf-10	prehistoric	subsurface scatter (lithic)	intact	This site will not be directly impacted by the road construction or borrow pit use.	Yes	No further work is recommended. However, if borrow pit construction impacts lead to upslope erosion then avoidance of the site is recommended. If avoidance is not possible then data recovery work under is recommended.	11-04ASR (Ecofor)	Mooney 2011
KdVf-11	prehistoric	subsurface scatter (lithic)	intact	This site will not be directly impacted by the road construction or borrow pit use.	Yes	No further work is recommended. However, if borrow pit construction impacts lead to upslope erosion then avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended.	11-04ASR (Ecofor)	Mooney 2011
KdVf-9	prehistoric	subsurface scatter (lthic) and possible cache	intact	This site will be directly impacted by the road construction.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of each site.	11-04ASR (Ecofor)	Mooney 2011
KdVf-14 (aka KdVf-1)	prehistoric	subsurface scatter (lithic) and possible spirit house and grave site	intact	Outside of the zone of impact of Freegold Project ROW.	Yes	Avoidance of the site is recommended. If this area is planned for any future impacts then additional efforts are recommended to confirm possible grave or spirit house locations with First Nation representatives	88-3ASR (Gotthardt); 11-04ASR (Ecofor); 13-07ASR (Ecofor)	Gotthardt 1988; Mooney 2011, 2013a
KdVf-12	prehistoric	subsurface scatter (lithic)	intact	This site will be directly impacted by the Freegold road construction.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.	11-04ASR (Ecofor)	Mooney 2011

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KeVf-3	prehistoric	subsurface scatter (lithic)	intact	Inside the zone of impact of a proposed borrow pit.	Yes	If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by separate loci of 1 x 1 m block excavation. Approximately 20 – 28 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a
KeVg-5	prehistoric	subsurface scatter (lithic)	intact	This site will be directly impacted by road construction.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended.	11-04ASR (Ecofor)	Mooney 2011
KeVg-4	prehistoric	subsurface scatter (lithic and bone)	intact	This site may be directly impacted by road construction.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work under is recommended.	11-04ASR (Ecofor)	Mooney 2011
KeVg-9	prehistoric	subsurface scatter (lithic)	intact	Inside the zone of impact of the Freegold Road extension.	Yes	If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 8 - 10 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a
KeVg-7	prehistoric	subsurface scatter (lithic)	intact	Site may be impacted by road construction.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.	11-04ASR (Ecofor)	Mooney 2011
KeVg-8	prehistoric	subsurface scatter (lithic isolate)	intact	Within Freegold Project proposed borrow pit.	Yes	None Recommended	13-07ASR (Ecofor)	Mooney 2013a

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KeVg-3	prehistoric	subsurface scatter (lithic)	intact	Within Freegold Project proposed borrow pit as of 2013 (previously not in planned impacts 2011).	No	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.	11-04ASR (Ecofor), 13-07ASR (Ecofor)	Mooney 2011, 2013
KeVg-6	prehistoric	subsurface scatter (lithic)	intact	Within Freegold Project proposed borrow pit as of 2013 (previously not in planned impacts 2011).	No	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.	11-04ASR (Ecofor), 13-07ASR (Ecofor)	Mooney 2011, 2013a
KeVh-3	prehistoric	subsurface scatter (lithic)	intact	This site will not be directly impacted.	Yes	Avoidance of the site is recommended. If avoidance is not possible then data recovery work is recommended to include in-fill shovel testing to better determine artifact densities followed by a series of 1x1m unit block excavations in relationship to the size and distribution of the site.	11-04ASR (Ecofor)	Mooney 2011
KeVh-4	prehistoric	subsurface scatter (lithic isolate)	intact	Within Freegold Project proposed borrow pit.	No	None Recommended	13-07ASR (Ecofor)	Mooney 2013a

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
Archaeological Sites to be Managed Near Proposed Mine Site, Road to Yukon River, and Road to Proposed Airstrip								
KeVi-1	prehistoric	scatter (lithic) scatter (bone)	Destroyed (Soucey et al 2010a)	Supernatant pond area of Mine Site.	Yes	None Required (Handley et al 1994, Mooney 2013)	94-9ASR (Antiquus); 09-09ASR (Altamira); 13-07ASR (Ecofor)	Handly et al 1994 ; Mooney 2013a; Soucey et al 2010a
KeVi-2	prehistoric	scatter (lithic)	Destroyed (Soucey et al 2010a)	Supernatant pond area of Mine Site.	Yes	None Required (Handly et al 1994, Mooney 2013)	94-9ASR (Antiquus); 09-09ASR (Altamira); 13-07ASR (Ecofor)	Handly et al 1994; Mooney 2013; Soucey et al 2010a
KeVi-3	prehistoric	isolated lithic find	No Evidence of Site Remains	Mine Site Developments - within impact zone of Mine Site.	No - N/A	None Required (Mooney 2013)	94-9ASR (Antiquus); 09-09ASR (Altamira); 13-07ASR (Ecofor)	Handly et al 1994 ; Mooney 2013a; Soucey et al 2010a
KeVi-6	prehistoric	subsurface scatter (bone) subsurface scatter (lithic)	intact	Outside proposed project area.	Yes	No further work is recommended.	09-09ASR (Altamira); 13-06ASR (Altamira)	de Guzman et al 2014; Soucey et al 2010a
KeVi-12 Note: This Borden number was mistakenly assigned to two sites. This lithic site and an adze cut stump (Soucey et al 2010b). The stump is now part of Site KeVi-9 (Gotthardt personal communication 2014).	prehistoric	subsurface scatter (lithic) (Mooney 2011)	intact	Located within 50 m of the current proposed alignment of the road, not directly impacted.	Yes	Avoidance. The site appears to be within approximately 50 m the proposed access road to the airstrip. This site will not be directly impacted. No further work is recommended .	11-04ASR (Ecofor); 10-4ASR (Altamira)	Mooney 2011; Soucey et al 2010b
KeVi-13	prehistoric	subsurface scatter (lithic)	intact	Mine Site Developments	Yes	No further work is recommended.	13-07ASR (Ecofor)	Mooney 2013a

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KeVi-14	prehistoric	subsurface scatter (lithic)	intact	Mine Site Developments	Yes	Avoidance. If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 4 - 6 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a
KeVi-15	prehistoric	subsurface scatter (lithic)	intact	Mine Site Developments	Yes	Avoidance. If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 4 - 6 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013
KdVi-1	prehistoric	surface and subsurface scatter (lithic)	intact - abundance and density of the remains appears low	Near Proposed Borrow Pit west of road to Proposed Airstrip.	Yes	Avoidance if possible. If not possible, then further excavation (up to 20 1-x-1 m units) at KdVi-1 is recommended (de Guzman et al 2014).	94-9ASR (Antiquus) 09-09ASR (Altamira); 13-06ASR (Altamira); 13-07ASR (Ecofor); 13-06ASR (Altamira)	de Guzman et al 2014; Handly et al 1994; Mooney 2013; Soucey et al 2010a; de Guzman 2014
KdVi-2	prehistoric	subsurface scatter (lithic)	intact	Within a proposed borrow pit.	Yes	Avoidance. If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by separate loci of 1 x 1 m block excavation. Approximately 20 - 28 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KdVi-3	prehistoric	subsurface scatter (lithic)	intact	Within a proposed borrow pit.	Yes	Avoidance. If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 4 - 6 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a
KdVi-4	prehistoric	subsurface scatter (lithic)	intact	Within a proposed borrow pit.	Yes	Avoidance. If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 8 - 10 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a
KdVi-5	prehistoric	subsurface scatter (lithic)	intact	Within a proposed borrow pit.	Yes	Avoidance. If avoidance is not possible then data recovery work under is recommended. Data recovery should include additional shovel testing to better determine artifact distribution and density followed by 1 x 1 m block excavation. Approximately 6 - 8 square meters of excavation would be recommended.	13-07ASR (Ecofor)	Mooney 2013a
KfVi-2	undetermined	subsurface hearth scatter (bone) scatter (fire cracked rock)	intact	Outside of the proposed project area.	Yes	No further work is recommended.	09-09ASR (Altamira); 13-06ASR (Altamira)	de Guzman et al 2014; Soucey et al 2010a

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
KfVi-3	historic/prehistoric	house (building, outline) scatter (lithic)	intact	No planned impacts for this site.	Yes	Continued avoidance of KfVi-3 is recommended. If avoidance is not feasible, Stage 1 excavations of at least a 15% sample are recommended at KfVi-3; this would entail hand excavation of an additional 190 1-x-1 m units. If artifact recovery is limited, excavation could be halted upon discussion with the Heritage Resources Unit.	09-09ASR (Altamira); 13-06ASR (Altamira)	de Guzman et al 2014; Soucey et al 2010a
KfVi-4	prehistoric	subsurface scatter (bone) subsurface scatter (lithic)	intact	No planned impacts for this site.	Yes	No further work recommended.	09-09ASR (Altamira); 13-06ASR (Altamira)	de Guzman et al 2014; Soucey et al 2010a
KfVi-5	prehistoric	scatter (lithic)	Data Recovery Completed by Ecofor(13-18ASR)	No further planned Impacts.	Yes	Avoidance	09-09ASR (Altamira); 13-07ASR (Ecofor); 13-18ASR(Ecofor); 13-06ASR(Altamira)	de Guzman et al 2014; Mooney 2013a; Mooney 2014, Soucey et al 2010a

Borden Number or Temp Site #	Class	Features	Current Status of Site	Scope of Possible Impacts from Casino Project	Site Boundary Clearly Flagged	Management Recommendations and Proposed Mitigation Strategy	Report/ Permit number and Authors	Bibliographic Reference
Historic Structures and Resources to be Managed Along Proposed Freegold Road Upgrades								
H1: Whitehorse-Dawson Winter Road	historic	overland stage coach route	good	Outside of proposed ROW impact zone.	No - N/A	None Required	94-22ASR (Antiquus)	Handly and Rousseau 1995
H2: Log structure	historic	log structure	good	No impact due to road realignment around Carmacks.	No	Avoidance. Consultation between Community, Village of Carmacks, Community and Transportation Service prior to Project to determine historical significance and appropriate mitigation procedure.	94-22ASR (Antiquus)	Handly and Rousseau 1995
H3: Mink/Fox Fur Farm	historic	metal cages and burnt wood	highly disturbed	No impact due to road realignment around Carmacks.	No - N/A	None Required	94-22ASR (Antiquus)	Handly and Rousseau 1995
H4: Dalton Trail	historic	road/trail	disturbed	Outside of proposed ROW impact zone.	No - N/A	None Required	94-22ASR (Antiquus)	Handly and Rousseau 1995
H5: Place Mine Trench	historic	trench and sluice box	disturbed	Outside of proposed ROW impact zone.	No - N/A	None Required	94-22ASR (Antiquus)	Handly and Rousseau 1995
H6: Morrison Road House	historic	log structures	highly disturbed	Outside of proposed ROW impact zone.	No - N/A	None Required	94-22ASR (Antiquus)	Handly and Rousseau 1995
Tricker Cabin	historic cabin	log structure	unknown	Approximately 20 m south of proposed road realignment.	No	Avoidance. No further work is recommended.	95-1ASR (Yukon Govt)	Gotthardt 1995
Fallen Cache Cabin (YHSI 115I/03/002)	historic	cabin and two log pit features	poor	Within the proposed road realignment.	Yes	If these resources are not avoided then additional documentation is recommended prior to construction impacts. This should include additional on-site recording including site mapping and photodocumentationand interviews with First Nation informants and other stakeholders to better document the history and use of the structures.	13-07ASR (Ecofor)	Mooney 2013a

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Dog House Cabin (YHSI 115I/06/012)	historic	cabin	poor - mostly collapsed	Within the proposed road realignment.	Yes	If these resources are not avoided then additional documentation is recommended prior to construction impacts. This should include additional on-site recording including site mapping and photodocumentationand interviews with First Nation informants and other stakeholders to better document the history and use of the structures.	13-07ASR (Ecofor)	Mooney 2013a
Gas Can Cabin (YHSI 115I/06/010)	historic	cabin	Fair to Good	Within the proposed road realignment.	Yes	If these resources are not avoided then additional documentation is recommended prior to construction impacts. This should include additional on-site recording including site mapping and photodocumentationand interviews with First Nation informants and other stakeholders to better document the history and use of the structures.	13-07ASR (Ecofor)	Mooney 2013a
Melmac Cabin (YHSI 115I/06/011)	historic	cabin	poor - mostly collapsed	Within the proposed road realignment.	Yes	If these resources are not avoided then additional documentation is recommended prior to construction impacts. This should include additional on-site recording including site mapping and photodocumentationand interviews with First Nation informants and other stakeholders to better document the history and use of the structures.	13-07ASR (Ecofor)	Mooney 2013a

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Ketchup Cabin (YHSI 115I/06/009)	historic	cabin	poor - mostly collapsed	Within the proposed road realignment.	Yes	If these resources are not avoided then additional documentation is recommended prior to construction impacts. This should include additional on-site recording including site mapping and photodocumentationand interviews with First Nation informants and other stakeholders to better document the history and use of the structures.	13-07ASR (Ecofor)	Mooney 2013a
Three Room Cabin (YHSI 115J/06/013)	historic	cabin	good	Within the proposed road realignment.	Yes	If these resources are not avoided then additional documentation is recommended prior to construction impacts. This should include additional on-site recording including site mapping and photodocumentationand interviews with First Nation informants and other stakeholders to better document the history and use of the structures.	13-07ASR (Ecofor)	Mooney 2013a
Frenchman Cabin (YHSI 115I/06/005)	historic	cabin	intact	Near planned road construction but may not be impacted.	Yes	Avoidance and if not possible, relocation of structure.	11-04ASR (Ecofor)	Mooney 2011
Bow Creek Cabins	historic	three cabins	intact	Near planned road construction and borrow pit but may not be impacted.	Yes	Avoidance and if not possible, relocation of structures.	11-04ASR (Ecofor)	Mooney 2011
KcVd-2	historic cabin		unknown	None	No	None required.	88-3ASR (Gotthardt); 11-04ASR (Ecofor)	Gotthardt 1988; Mooney 2011, 2013a
KcVd-1	historic cabin		unknown	None	No	None required.	88-3ASR (Gotthardt); 11-04ASR (Ecofor)	Gotthardt 1988; Mooney 2011, 2013a
Five Course Cabin (YHSI 115I/06/001)	historic	cabin	intact	Near planned road construction but should not be impacted.	Yes	If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts.	11-04ASR (Ecofor)	Mooney 2011

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Garage by Big Creek	historic	cabin	intact	Near planned road construction but should not be impacted.	Yes	If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts.	11-04ASR (Ecofor)	Mooney 2011
High Cache Cabin	historic	cabin	intact	Near planned road construction but should not be impacted.	Yes	If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts, or possible relocation of structure.	11-04ASR (Ecofor)	Mooney 2011
Burl Cabin	historic	cabin	intact	Near planned road construction but should not be impacted.	Yes	If these resources are not avoided then a limited amount of additional documentation is recommended prior to construction impacts, or possible relocation of structure.	11-04ASR (Ecofor)	Mooney 2011
KcVe-3	historic/prehistoric	brush camp and possible grave site	unknown	None	No	No further work required.	88-3ASR (Gotthardt);	Gotthardt 1988
KcVe-1	possible grave		unknown	None	no	Avoidance of area	88-3ASR (Gotthardt);	Gotthardt 1988
KcVe-2	historic cabin		unknown	None	no	Avoidance of area.	88-3ASR (Gotthardt);	Gotthardt 1988
KdVf-3	historic	cabin	unknown	May be located near proposed borrow pit of borrow pit access road.	No	This cabin is recommended to be relocated and flagged for avoidance. If avoidance of possible borrow pit or access road is not feasible then additional documentation is recommended.	11-04ASR (Gotthardt); Mooney 2013 (Ecofor)	Gotthardt 1988; Mooney 2013
KdVf-2	historic	possible cache or cabin	unknown	Outside of the zone of impact of Freegold Project ROW.	No	No further work required.	88-3ASR (Gotthardt); 11-04ASR (Ecofor)	Gotthardt 1988; Mooney 2013a

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Steamers/Upright Boilers Site (YHSI 115J/09/002)	historic	boilers, pits, ladders	intact	Within the proposed alignment of Freegold Road (2013) previously listed within a proposed borrow pit (2011).	Yes	Avoidance and if not possible, relocation of resources where possible and additional documentation.	11-04ASR (Ecofor)	Mooney 2011
KeVg-1 (see YHSI 115J/09/001) AKA Hayes Creek Cabins	historic	two cabins & cache and trail AY09-19	poor	Outside of the zone of impact of Freegold Project ROW.	Yes	Avoidance. No further work is recommended. If planned impacts change then additional documentation.	09-09ASR (Altamira); 11-04ASR (Ecofor); 13-07ASR (Ecofor)	Mooney 2011; Soucey et al 2010a; Mooney 2013
AY09-19	ethnohistoric	trail	intact	Portions within Freegold Road ROW.	Yes - white CMT flagging	Impacts to the previously recorded ethno-historic trails are recommended to be avoided and/or minimized where possible. If impacts to these ethno-historic trails can't be avoided then additional background research, on-site recording, and informant interviews to document use of the trails is recommended.	09-09ASR (Altamira); 13-07ASR (Ecofor)	Mooney 2013a; Soucey et al 2010a
AY09-18	ethnohistoric	trail	intact	Portions within Freegold Road ROW.	Yes - white CMT flagging	Impacts to the previously recorded ethno-historic trails are recommended to be avoided and/or minimized where possible. If impacts to these ethno-historic trails can't be avoided then additional background research, on-site recording, and informant interviews to document use of the trails is recommended.	09-09ASR (Altamira); 13-07ASR (Ecofor)	Mooney 2013a; Soucey et al 2010a
KeVg-2	historic	adze-cut stump	intact	Outside of the zone of impact of Freegold Project ROW.	No	None Recommended	09-09ASR (Altamira); 13-07ASR (Ecofor)	Mooney 2013a; Soucey et al 2010b

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Historic Structures and Resources to be Managed Near the Proposed Mine Site, Road to the Yukon River, and Road to Proposed Airstrip								
KeVi-4	historic	cabin remains	partially collapsed	Within Tailings Management Facility. Mine Site Developments - within impact zone of Heap Leach Site #1.	Yes general area flagged	Additional survey and data collection is warranted to determine the age and ownership of the cabin (Soucey et al 2010a). Handly et al (1994) say avoidance if possible otherwise, no further work is recommended.	94-9ASR (Antiquus); 09-09ASR (Altamira); 13-07ASR (Ecofor)	Handly et al 1994; Mooney 2013a; Soucey et al 2010a
KeVi-5	historic	cabin remains	partially collapsed	Within Tailings Management Facility.	Yes	If site disturbance is likely to occur, it is recommended that additional research and test excavation be carried out (cabin is pre-1936) (Soucey et al 2010a). Handly et al (1994) recommend the site be avoided but if not feasible then no further work is recommended.	94-9ASR (Antiquus); 09-09ASR (Altamira)	Handly et al 1994; Soucey et al 2010a
KeVi-7	historic	cabin (log) depression	intact	No planned impacts for this site.	Yes	Avoidance. Additional testing at the site is recommended to augment the current knowledge of its placement and use within the Historic Time Period.	09-09ASR (Altamira)	Soucey et al 2010a
KeVi-8	historic	cabin (foundation)	partially collapsed	Mine Site Developments - possible impact.	Yes	Avoidance. If site disturbance is likely to occur, it is recommended that additional research and test excavation be carried out.	09-09ASR (Altamira)	Soucey et al 2010a
KeVi-9	indigenous historic	Culturally Modified Tree (knot); and possible adze cut stump formerly recorded by Altamira as KeVi-12 (Gotthardt personal communication 2014).	intact	No planned impacts for this site.	Yes	Avoidance. If site disturbance is likely to occur, additional consideration and research is warranted. Further consultation and research with local informants could provide additional information about the site and its association with an existing trail.	09-09ASR (Altamira); 11-04ASR (Ecofor); 10-4ASR (Altamira)	Soucey et al 2010a; Mooney 2011; Soucey et al 2010b

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KeVi-10	indigenous historic	platform or hunting blind	collapsed	No planned impacts for this site.	Yes	Avoidance. If site disturbance is likely to occur, additional consideration and research is warranted. Further consultation and research with local informants could provide additional information about the site and its association with an existing trail.	09-09ASR (Altamira)	Soucey et al 2010a
KeVi-11	indigenous historic	hide working rack	disturbed	Outside of zone of impact.	Yes	Avoidance. If site disturbance is likely to occur, additional consideration and research is warranted to determine site value.	09-09ASR (Altamira)	Soucey et al 2010a
KfVi-6	historic	cabin/depression/ dump/scatter (metal)	intact	No planned impacts for this site.	Yes	Avoidance. Additional investigation is warranted for this historic era site.	09-09ASR (Altamira); 10-4ASR (Altamira)	Soucey et al 2010a; Soucey et al 2010b
KfVi-7	indigenous historic	isolated find - bone tool	intact	No planned impacts for this site.	Yes	Avoidance. Additional investigation is warranted for this historic era site.	09-09ASR (Altamira); 10-4ASR (Altamira)	Soucey et al 2010a; Soucey et al 2010b
KfVi-8	historic	tent frame (log)	intact	No planned impacts for this site.	Yes	Avoidance. Additional consideration and research is warranted to determine site value and specific mitigation options.	09-09ASR (Altamira)	Soucey et al 2010a
KfVi-9	historic	partially buried wooden object	intact	No planned impacts for this site.	Yes	Avoidance. Additional consideration and research is warranted to determine site value and specific mitigation options.	09-09ASR (Altamira); 10-4ASR (Altamira)	Soucey et al 2010a; Soucey et al 2010b
KfVi-10	indigenous historic	hide working frame	intact	No planned impacts for this site.	Yes	Avoidance. Additional consideration and research could be undertaken to determine its value in terms of ownership and relationship to other sites or cultural activities in the area.	09-09ASR (Altamira); 10-4ASR (Altamira)	Soucey et al 2010a; Soucey et al 2010b

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KfVi-11	indigenous historic	Hide working stump and pole	intact	No planned impacts for this site.	Yes	Avoidance. Additional consideration and research is warranted to determine its value in terms of ownership and relationship to other sites or cultural activities in the area.	09-09ASR (Altamira)	Soucey et al 2010a
KfVi-12	indigenous historic	Culturally Modified Tree (bark stripping)	intact	No planned impacts for this site.	Yes	Avoidance. Further Consultation and Research.	10-4ASR (Altamira)	Soucey et al 2010b
KfVi-13	indigenous historic	Culturally Modified Tree (bark stripping)	intact	No planned impacts for this site.	Yes	Avoidance. Further Consultation and Research.	10-4ASR (Altamira)	Soucey et al 2010b
KfVi-14	indigenous historic	Culturally Modified Tree (bark stripping)	intact	No planned impacts for this site.	Yes	Avoidance. Further Consultation and Research.	10-4ASR (Altamira)	Soucey et al 2010b

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Previoulsy Noted First Nation Use Sites along the Proposed Upgrades to Freegold Road								
FN 1	indigenous historic	Brush Camp	unknown	No planned impacts for this site.	No	Keep access to area from old Freegold Road.	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 2	indigenous historic	natural spring	previously impacted	Adjacent to proposed ROW.	No	Keep access to area from old Freegold Road.	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 3	indigenous historic	trail	unknown	No planned impacts for this site.	No	Keep access to area from old Freegold Road.	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 4	indigenous historic	Caribou lookout	unknown	May be within a proposed borrow pit	No	Requires Heritage Assessment if in possible borrow pit	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 5	indigenous historic	fish camp	unknown	No planned impacts for this site.	No	Keep access to area.	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 6	indigenous historic	fish camp	unknown	None	No	Keep access to area.	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 7	indigenous historic	trail	unknown	Outside area of impact.	No	Keep access to area.	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 8	indigenous historic	hunting and trapping camp	unknown	Outside area of impact.	No	We strongly recommend that the First Nation traditional cultural material remaining at this site be systematically collected by representatives of the LSCFN prior to construction of the proposed Freegold Road.	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 9	indigenous historic	bush camp	previously impacted	Adjacent to proposed ROW.	No	No further work recommended.	94-22ASR (Antiquus)	Handly and Rousseau 1995
FN 10	indigenous historic	trappers camp	unknown	Adjacent to proposed ROW.	No	We strongly recommend that the First Nation traditional cultural material remaining at this site be systematically collected by representatives of the LSCFN prior to construction of the proposed Freegold Road (1995). Materials may no longer exist.	94-22ASR (Antiquus)	Handly and Rousseau 1995