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Re: Archaeological Overview Assessment (AOA) of the property at 1298 Trans-Canada Highway, Sorrento, B.C.

This letter reports the findings of a desktop archaeological overview assessment (AOA) of the property at 1298 Trans-Canada Highway, Sorrento, B.C. conducted for Dustin and Alissa Harasym of Sorrento Parts & Services Ltd. (the proponent).

The objectives of the AOA are to:

- Identify and evaluate any areas of archaeological potential within the project area that warrant subsurface testing and/or monitoring;
- Provide recommendations regarding the need and appropriate scope of further archaeological studies prior to any proposed construction.

Project Setting and Description

The subject property is located at 1298 Trans-Canada Highway, Sorrento, BC, approximately 330 m south of the shoreline of Shuswap Lake, and 300 m east of Newsome Creek (Figure 1). The legal address is PID: 023-529-644, Lot 1 Section 16 Township 22 R 11 West of the 6th Meridian KDYD Plan KAP57595. The property is gently sloping to the north with level areas (where buildings have been constructed). Vacant land borders the property to the east, a residential lot to the south and commercial property to the west. The property measures 0.81 hectares and currently has a residential building, septic field, concrete pad, and a small orchard. A waste water disposal covenant has been placed in the northwest property section (Figure 2). The surface expression at this location consists of silt, sand and gravel lacustrine deposits with some underlying unconsolidated glacial till (Fulton 1965). The lot has been historically disturbed by activities related to residential development (building, service installation, septic system), and fruit horticulture (land clearing).

Previously Recorded Archaeological Sites and Potential Models

A search of the BC Archaeology Branch's Remote Access to Archaeological Data database (RAAD) did not identify any previously recorded archaeological sites within the subject lot boundary. Sixteen sites are located within 5 km of the subject property, the majority of which were recorded during the Shuswap Planning Study and are located along the south shore of

Shuswap Lake (Mohs 1977). Figure 1 provides the locations of these sites in relation to the subject property. These sites are summarized in Table 1.

Table 1. Previously recorded archaeological sites within 5 km of 1298 Trans Canada Hwy, Sorrento

Site #	Site Type	Dimensions (m)	Distance from Subject Property
EfQu-8	Pre-Contact subsurface lithics	300 x 200	~3.46 km N
EfQu-11	Pre-Contact cultural depressions (cache pits), surface lithics, habitational platform	90 x 75	~2.60 km NW
EfQu-12	Pre-Contact cultural depressions (cache pits), surface and subsurface lithics	114 x 75	~1.14 km WNW
EfQu-13	Pre-contact cultural depressions (cache pits)	55 x 30	~1.51 km WNW
EfQu-14	Pre-contact cultural depressions (cache pits), surface lithics	130 x 40	~1.08 km WNW
EfQu-15	Pre-contact cultural depressions, surface lithics	60 x 20	~1.05 km NW
EfQu-17	Pre-contact cultural depressions (cache pits), subsurface lithics	150 x 120	~2.61 km N
EfQu-23	Pre-Contact surface and subsurface lithics	80 x 15	~2.67 km NNE
EfQu-24	Pre-Contact surface and subsurface lithics and fauna	60 x 25	~3.64 km NE
EfQu-28	Pre-Contact cultural depressions (cache pits, housepits)	450 x 265	~2.99 km NNW
EfQv-19	Pre-contact cultural depressions (cache pits)	200 x 70	~3.72 km NW
EfQv-112	Pre-contact subsurface lithics	25 x 25	~4.2 km NW
EfQv-128	Pre-Contact cultural depressions (cache pits), surface lithics	85 x 25	~3.32 km NW
EfQv-134	Pre-contact cultural depressions (cache pits)	40 x 22	~4.79 km WNW
EfQv-135	Pre-contact cultural depressions (cache pits), surface lithics	275 x 60	~3.29 km WNW
EfQv-136	Pre-contact cultural depressions, subsurface lithics	70 x 20	~3.07 km WNW

The closest documented archaeological sites are **EfQu-14** and **EfQu-15**. EfQu-14 measures 130 m x 40 m and consists of 24 circular cultural depressions of varying sizes (Mohs 1977). The siteform for EfQu-14 indicates the site was in possible danger from future residential development. EfQu-15 measures 60 m x 20 m and consists of three rectangular cultural depressions and an isolated surface lithic that was left *in situ* (*ibid*).

Provincial records indicate that the subject property is located within a moderate potential polygon area (Study ID 519, Object ID 4629754) as determined through the regional 1997 Okanagan Timber Supply Area AOA (Arcas 1997). This AOA covered the entire TSA and created a model using TRIM 1:20,000 maps. Areas where contours appear to level out or flatter appear to have been given moderate archaeological potential within this model. At closer examination of the project area, this moderate rating is devalued to low archaeological potential (as per Results below).

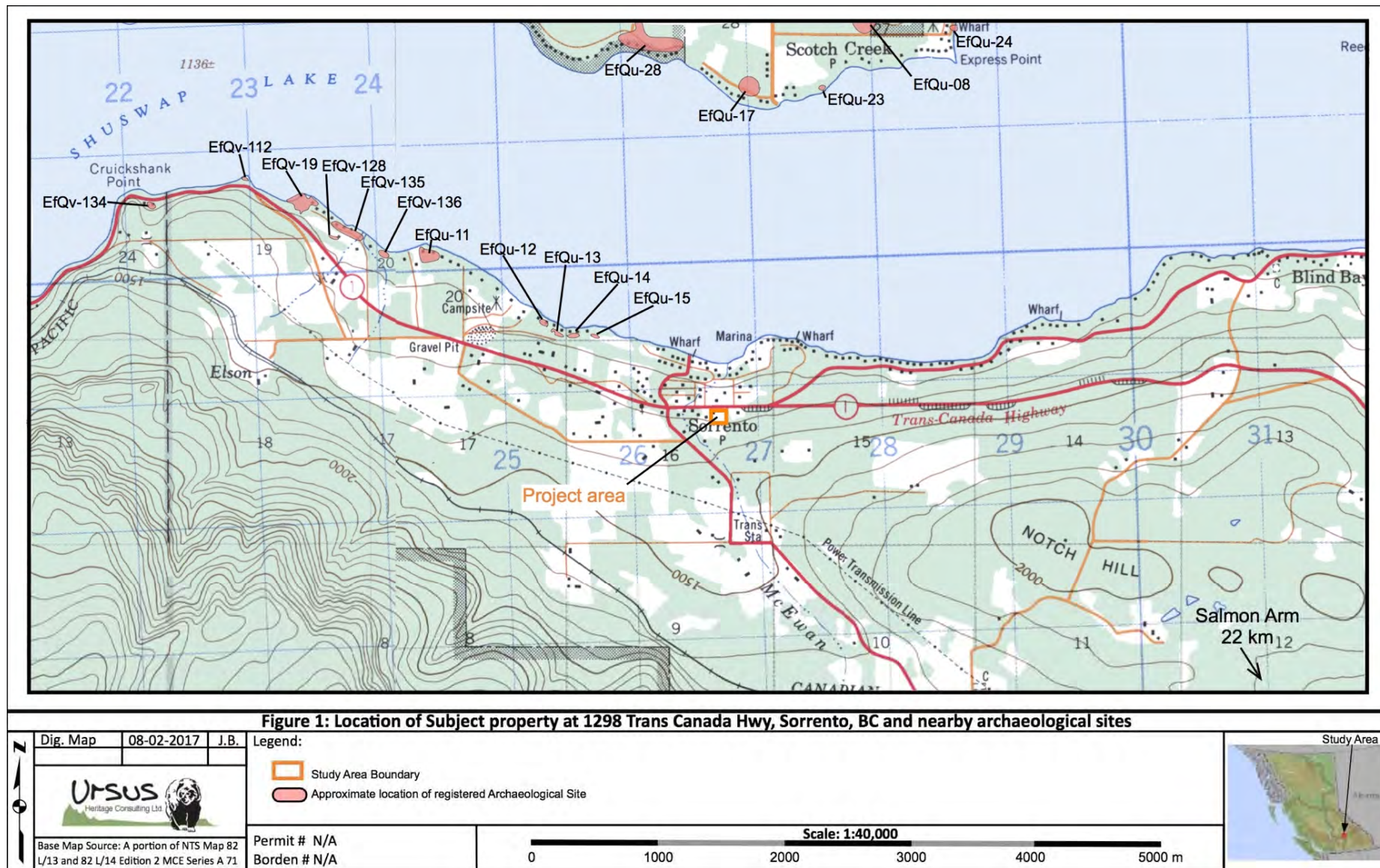
Nearby archaeological consultant reports include Brady (2005), Choquette (1989), Rousseau (2004), Franck (2004), Thorogood (2010), Fredlund (1970), Fladmark and Stewart (1972), Eng and Rousseau (2009), Richards and Rousseau (1987), Stewart and Johnson (1972), Wilmeth (1978), Sykes (2004) and Rousseau and Will (2005).

Expected Site Types

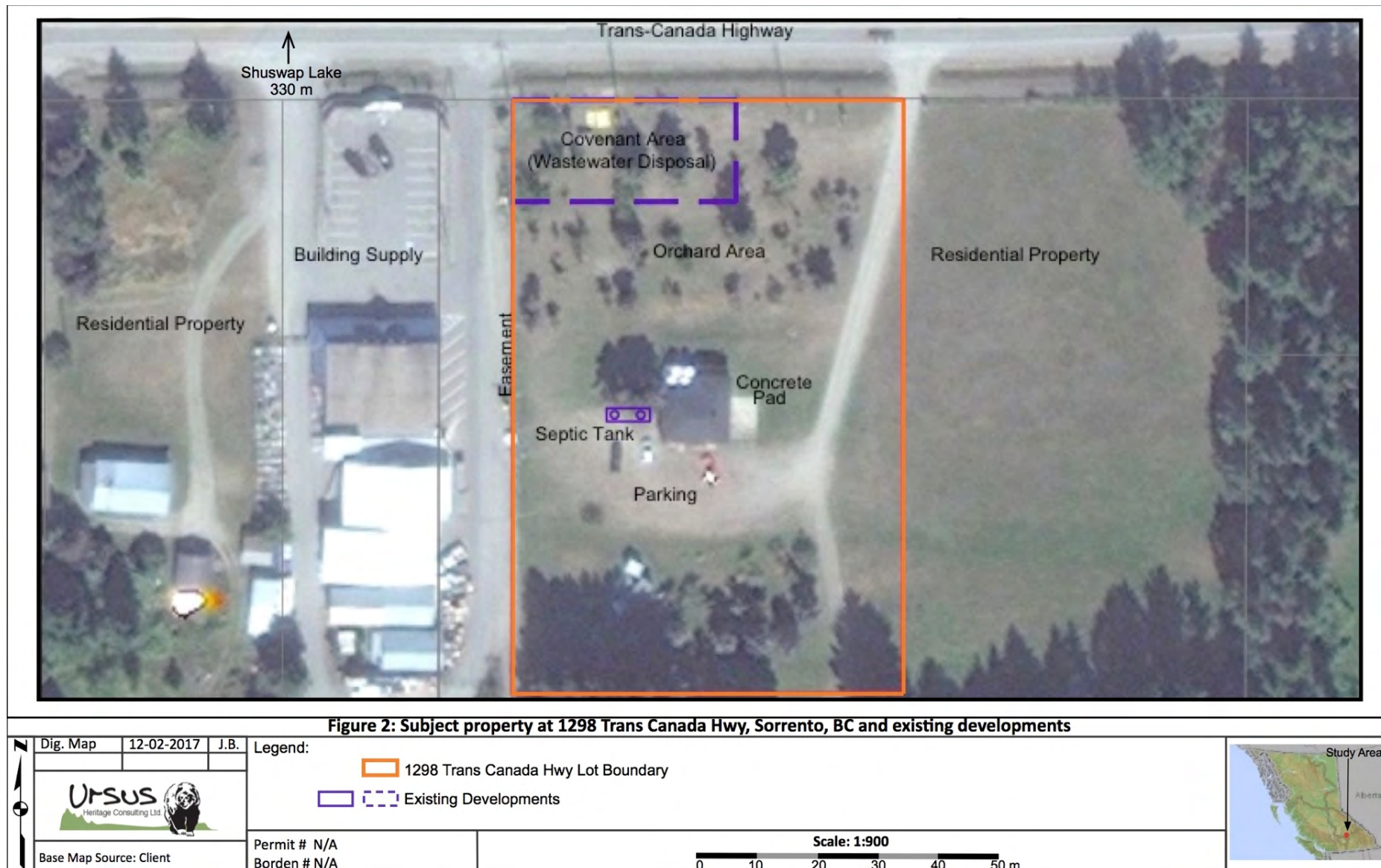
Following a review of pertinent archaeological, historical, ethnographic, geological, and biophysical literature, an examination of previously recorded sites in the Shuswap Lake region, and an assessment of the physical characteristics of the project locality the following site types could be expected within the study area:

- Pre-contact temporary habitation sites consisting of lithic and artifact scatters, faunal remains, fire-altered rock, and other associated structural and/or subsistence features;
- Isolated lithic and artifacts scatters.

AOA of 1298 Trans-Canada Highway, Sorrento, B.C.



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AOA Methodology

The current AOA was conducted in accordance with the *British Columbia Archaeological Impact Assessment Guidelines* (Apland and Kenny 1998) issued by the Archaeology Branch at the Ministry of Forests, Lands, and Natural Resource Operations (MFLNRO). For the current project the AOA involved:

- A review of pertinent regional archaeological, historical, ethnographic, geological, and biophysical literature;
- A review of the property's biophysical and topographic characteristics;
- An evaluation of the previous impacts to the natural landscape of the property; and
- An evaluation of archaeological site potential.

The archaeological site potential assessment process considers a number of criteria in order to establish potential ratings for a given piece of landscape. A correlation exists between particular biophysical characteristics and the incidence of archaeological sites. The presence of particular biophysical characteristics can be used to predict the likelihood of a location being used prehistorically. Generally, people gravitate toward areas with access to water, shelter, and food and raw material resources, seeking out locations that are relatively level, well-drained, solar aspect, and provide a good vantage point. As such the biophysical characteristics that are considered are:

- Presence and nature of water features;
- Wildlife and fish values;
- Slope, aspect, and topography;
- Presence of bedrock exposures, karst, talus, or boulders suitable for rock art locations, caves, rock shelters, or lithic raw material sources;
- Vegetation and forest cover composition and age.

Archaeologically it is important to not only examine these biophysical characteristics as they appear currently but to also consider the changes in these biophysical characteristics over time, from the Late Pleistocene through to the Holocene.

Further to the biophysical characteristics, a number of cultural and archaeological criteria are considered in order to further refine the archaeological site potential assessment included:

- Connection of study area to First Nations' traditional use localities, oral history, and/or known traditional place names;
- Proximity of property to previously recorded archaeological sites;
- Prehistoric settlement and resource use of the region;
- Level and type of past historic land use and the resulting impacts;
- The previous archaeological experience of the researcher.

Historical air photographs (in stereo pairs) were borrowed from the UBC Department of Geography Geographic Information Centre for years 1951, 1959, 1965, 1974, 1980, 1986, 1990, 1994, 2001 and 2007. These photographs were reviewed for land use and signs of disturbance over the timespan covered by the air photos (from 1951-2007).

AOA Results

This section contains the determination of archaeological potential for the property at 1298 Trans-Canada Highway, Sorrento. These results are framed within the context of the background research; including archaeological and ethnographic data, topography and geomorphology, structural geology, paleoenvironmental reconstruction, and the historic record.

After a review of historical air photographs for the subject property as well as Google Earth imagery, TRIM orthomosaic imagery and the archaeological data available in RAAD, the project location is assessed as having **low potential** for the presence of archaeology sites. This potential assessment is based upon a number of factors including:

- Lack of major water features. The property is set at least 330 m south of the shoreline of Shuswap Lake and 300 m east of Newsome Creek. The property is also at an elevation 50 m above Shuswap Lake.
- Historical ground disturbance. Terrain on the subject property has been disturbed historically through construction of a house, driveway, installation of a septic field and septic tank, land clearing, and planting of a fruit orchard. The approximate date of residential construction at the property is 1959 and land clearing occurred at the property as early as 1951 (evident in the review of historical air photos).
- Lack of favourable slope, aspect, and topography for the presence of archaeology sites. The project is located on gently sloping to machine leveled terrain with a northern aspect. The terrain is largely featureless and lacks landforms commonly associated with archaeological sites.

The majority of the subject property has been cleared historically for use as an orchard and the entire property has been logged or burned in the past leaving no chance for old growth forest or culturally modified trees. Archaeological potential for the subject property was determined to be **low** and no further archaeological work is recommended.



Photo 1. View north of subject property showing septic tank (Photo courtesy of Kala Geosciences Ltd. 2016).



Photo 2. View south towards the residence to the south (Photo courtesy of Kala Geosciences Ltd. 2016).



Photo 3. View north towards the Trans-Canada Highway #1 (Photo courtesy of Kala Geosciences Ltd. 2016).



Photo 4. View south towards a neighbouring residential property (Photo courtesy of Kala Geosciences Ltd. 2016).

AOA Recommendations

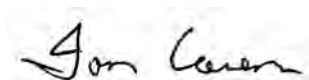
No areas of archaeological potential were identified during the AOA of the subject property. This potential rating is based on the historically disturbed nature of the terrain in the subject property, distance from significant water features, distance from known archaeological sites, elevation above Shuswap Lake, and a lack of landforms or features commonly associated with subsurface archaeological sites (such as terraces, south aspect breaks-in-slope, knolls).

This AOA is concerned with identification of archaeological potential within the subject property at 1298 Trans-Canada Hwy, Sorrento. It does not address potential for traditional use sites within the subject location. It is not the intent of this report to document First Nations' interest in the land. The study was conducted without prejudice to First Nations' treaty negotiations, Aboriginal rights, or Aboriginal title.

Users of this report should be aware that even the most thorough investigation may fail to reveal all archaeological remains that exist in an area, including sites protected by the BC *Heritage Conservation Act*. All users of this report should also be aware that: (1) archaeological remains in BC are protected from disturbance, intentional or inadvertent, by the *Heritage Conservation Act*; (2) in the event that archaeological remains are encountered, all ground disturbance in the immediate vicinity must be suspended at once; (3) it is the individual's responsibility to inform the Archaeology Branch, and appropriate First Nations as soon as possible, about the location of the archaeological remains and the nature of the disturbance; and (4) the *Heritage Conservation Act* may incur heavy fines and imprisonment for failing to comply with these requirements.

The subject property is assessed as having **low potential** for the presence of archaeological deposits and it is the authors' opinion that no further archaeological work is warranted for the subject property. For more information on this review of archaeological potential, please contact the report author.

With respect,



Ian Cameron, MSc, RPCA
Director, Senior Archaeologist
Ursus Heritage Consulting Ltd.

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