



Request for Expression of Interest

Mine Engineering Services for New and Existing Projects

1 INTRODUCTION

Polaris Materials (“Polaris”) manages the operation of the Orca Quarry (“Orca”) through Orca Sand & Gravel LP and is developing two adjacent properties – Black Bear and East Cluxewe Extension (ECE). Polaris is a wholly owned subsidiary of US Concrete Inc, a leading supplier of concrete and aggregates for large-scale commercial, residential and infrastructure projects in high-growth markets across the United States. Orca is a sand and gravel quarry and processing plant on a site which lies alongside Highway 19 to the west of Port McNeill. ECE is an undeveloped sand and gravel deposit laying to the south-east of the Orca site and adjacent to Highway 19. Black Bear is a hard rock deposit laying to the south of the ECE property. The locations of these properties are shown in the figure at end of this document, and a further description is discussed below.

Orca wishes to enter into an arrangement with a Mine Engineering Firm to provide project evaluation, planning, design, construction, and permitting assistance services for both existing and new projects on an ongoing and as-needed basis in addition to specific deliverables as identified below.

2 SITE DESCRIPTIONS

2.1 ORCA QUARRY (EAST CLUXEWE DEPOSIT)

Orca is an active sand & gravel operation covering approximately 300 ha with a remaining reserve of about 95-million tonnes within the East Cluxewe deposit. It operates under Mine Permit G-225 and EA Certificate M05-01. It includes a 1,200 metric tonne per hour plant and 4,500 metric tonne per hour loadout facility with a deep-water port. The plant includes crushing washing, sorting and dewatering stages, and produces three main products for use as construction aggregates.

The following background documentation on the Orca Quarry and East Cluxewe Deposit is available for review:

- Beck & Associates. Technical Report – Orca Sand & Gravel. February 12, 2003.
- Beck & Associates. Resource Evaluation and Conceptual Operating Plan. August 11, 2003.
- Nordin, G. and Boronowski, A. Geology and Test Results. December 2003.
- Amec. Orca Sand & Gravel Project 43-101 Technical Report. October 7, 2005.
- Amec. NI 43-101 Technical Report on the Orca Sand & Gravel Quarry. December 23, 2008.
- Nordin, G. and Drabinski, K. Geology Report East Cluxewe Deposit Exploration 2008. December 31, 2008.
- Mine Permit G-225 and Mine Permit Application
- Environmental Assessment Certificate M05-01 and EA Application
- Orca Sand & Gravel. 2019 Five-Year Mine and Reclamation Plan. April 2019.



2.2 BLACK BEAR

Black Bear is a development project on which exploration has been completed and a resource has been reported. The company has initiated an Amendment Application process for its Orca EA certificate to include product from Black Bear, and the Environmental Assessment Office has provided an Amendment Application Information Requirements document. This Amendment Application was developed based on modest production levels of 250,000 tonnes per year over a ten-year period; going forward, the company wishes to consider all reasonable options and will revisit this Amendment Application process as needed. The Black Bear property covers about 700 ha of crown land which Polaris Materials holds tenure through a License of Occupation. The measured and indicated resource is 70 million tonnes with an additional 330 million tonnes inferred. The property is about 6km from the existing Orca Quarry which would likely be utilized for stockpiling and loadout.

The following background documentation on the Black Bear Project is available for review:

- Beck & Associates. Technical Report on the Black Bear Project. November 2016.
- Environmental Assessment Office. Amendment Application Information Requirements. October 2017.

2.3 EAST CLUXEWE EXTENSION

The East Cluxewe Extension is a sand and gravel deposit adjacent to the permitted Orca Quarry (and East Cluxewe deposit). This property covers approximately 580 ha of crown land which Polaris Materials holds tenure through a License of Occupation. The deposit has a reported 41 million tonnes measured and 6 million tonnes indicated. The property is about 4 km from the existing Orca Quarry which would likely be utilized for stockpiling, processing and loadout.

Through the mid-2000s, this property had been explored and reported on as the “Bear Creek” project. In certain reports, the Bear Creek Project also included lands to the north of Highway 19. Going forward, the East Cluxewe Extension will only include resources to the south of Highway 19 and within the active License of Occupancy.

The following background documentation on the East Cluxewe Extension property is available for review:

- Beck & Associates. Bear Creek Deposit 2004 Technical Report. August 2005.
- Beck & Associates. Bear Creek Deposit Exploration Report 2007. November 2007.
- Beck & Associates. Conceptual Study in Support of the Proposed Bear Creek Aggregates Project. January 2008.
- Golder Associates. Electrical Resistivity Geophysical Investigation East Cluxewe Extension Area. January 2009.
- Hemmera and Dillon. East Cluxewe Extension – 2008 Environmental Data Collection and Recommendations. June 2009.
- Beck & Associates. Resource Evaluation of East Cluxewe Extension and West Cluxewe Aggregate Deposits. June 14, 2009.



3 CURRENT REQUIREMENTS

3.1 BLACK BEAR AND EAST CLUXEWE EXTENSION PROJECT ECONOMIC ANALYSIS

Polaris requires the immediate preparation of an internal economic analysis for the development of the Black Bear and East Cluxewe Extension projects which will complement the existing Orca Quarry and potentially provide additional asphalt or concrete aggregates. Using currently available geological and environmental information, the study should analyze and compare economics of developing Black Bear at various levels of production and infrastructure requirements. The potential development of the East Cluxewe Extension project can be included at nominal production rates to supplement Orca Plant feed; however, the primary focus should be on the economics of the Black Bear project. This should include all technical, environmental and operational aspects from permitting to final reclamation.

The Black Bear Project will include all infrastructure required to handle material from the new quarry site to existing plant or loadout infrastructure at the Orca Quarry. However, existing loadout facilities can be utilized for the life of the project at a marginal operating cost.

The Orca Quarry will require a certain amount of feed material sourced from the Black Bear project. This material will be blended with the pit run sand and gravel to produce a higher portion of coarse aggregates. Polaris will provide the required size and tonnage rates for this use; the balance of Black Bear production would be handled and processed separately from the Orca Plant.

Market analysis is not included in the scope of work for this project; Polaris will provide the required or ideal finished product specifications and potential tonnages, as needed.

4 FUTURE REQUIREMENTS

The following is an outline of potential future projects that a successful consultant will be utilized on. These are not part of the scope of the current project. They are listed to indicate the types of projects that will be required in the future so that relevant experience can be shared in the proposal.

4.1 BLACK BEAR PROJECT

If the decision to advance the project is made, Polaris will require support in the development of a Mine Permit and Environmental Assessment Application. This may include project management and/or completion of environmental studies as well as the development of Mine and Reclamation Plans.

Further, an additional exploration drilling program may be required to convert inferred resources to measured/indicated.

4.2 ORCA QUARRY

On an as needed basis, Orca may require ongoing operational and regulatory support.



5 SITE VISITS AND DOCUMENT REQUESTS

Arrangements to visit the site and access supporting documentation can be made through:

Mike McDonald, P.Eng.
Manager, Technical Services
Orca Sand & Gravel LP
250-230-4149
mmcdonald@orcasand.ca

6 SUBMISSIONS

Responses are sought from interested parties by end of day June 30, 2019. Submissions must contain the following information:

- Full name and address of the legal entity undertaking the work
- Standard Schedule of Rates
- Summary of experience in:
 - Aggregates industry
 - Preparation of Environmental Assessment Certificate and Mine Permit Applications in British Columbia
 - Providing regulatory support for operating mines in British Columbia
- Summary of Qualified Persons who will be working on the project
- Description of approach to this project and expected timeline for project completion
- Orca Sand & Gravel has policies concerning the use of local and First Nations contractors. Local and First Nation businesses and employees must be utilized where possible. Interested parties should describe their specific approach to enhancing participation of local First Nation peoples in the submission through any of: employment, skills development, subcontracting, capacity building, use of suppliers/services, etc. or other related measures it proposes to employ in the course of its work. In addition, the submission should indicate any partners, agencies, organizations or suppliers with which it proposes to work to achieve these results, including if appropriate, details of any First Nation ownership of its business.

Submissions should be sent to:

Mike McDonald, P.Eng.
Manager, Technical Services
Orca Sand & Gravel LP
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PO Box 699
6505 Island Highway
Port McNeill, BC V0N 2R0

FIGURE – PROJECT LOCATION

