ASCOT RESOURCES LTD.

TECHNICAL REPORT (43-101)

FOR

SWAMP POINT AGGREGATE PROJECT

Hains Technology Associates

Prepared by:

Hatch
Suite 2200 – 1066 West Hastings Street
Vancouver, BC V6E 3X2
Tel: (604) 689-5767
www.hatch.ca

Golder Associates Ltd.
Unit B, 12330-88th Avenue
Surrey, BC V3W 3J6
Tel: (604) 591-6616
www.golder.com

Hains Technology Associates
605 Royal York Rd., Suite 206
Toronto, Ont. M8Y 4G5
Tel: (416) 971-9783

Rev. 0, 17 January 2006

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IMPORTANT NOTICE

This report was prepared as a National Instrument 43-101 Technical Report in accordance with Form 43-101F1 for Ascot Resources Ltd. (Ascot) by Golder Associates Ltd. (Golder), Hains Technology Associates (Haines) and Hatch Ltd. (Hatch). The document contains the expression of professional opinion of Golder, Hains and Hatch based on the information available at the time of preparation. The quality of information, conclusions and estimates contained herein is consistent with the intended level of accuracy as well as the circumstances and constraints under which the mandate was performed. It is based on (i) information available at the time of preparation, (ii) data supplied by outside sources, and (iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended to be used by Ascot, subject to the terms and conditions of its contract with Golder, Hains and Hatch. This contract permits Ascot to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, *Standards of Disclosure for Mineral Projects*. Except for the purposes legislated under provincial securities law, any use of this report by any third party is at that party's sole risk, and neither Golder, Hains and Hatch nor any of its directors, officers or employees shall have any liability to any third party for any such use for any reason whatsoever, including negligence.

As required by National Instrument 43-101, the scope of this Report is preliminary in nature and includes a Measured Mineral Resource. Therefore the mine planning information contained in this report is preliminary to a pre-feasibility study level of accuracy.

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3. SUMMARY

This technical report (TR) is based on the Pre-Feasibility Study (PFS) completed on the Swamp Point aggregate project (Swamp Point) in December 2005 and the PFS report Rev. 1 dated 12 January 2006. The report was commissioned by Ascot Resources Ltd. (Ascot).

Qualified professional (QP) authors Fred H. Shrimer, P. Geo., Don H. Hains, P. Geo. and Keith Watson, P.Eng. have all worked on specific aspects of this project and have visited the property and are independent of Ascot.

The Swamp Point aggregate property is in a remote location of northern British Columbia, approximately 880 kilometres northwest of Vancouver and approximately 50 kilometres south of the tidewater port of Stewart, BC. The area of the proposed development is 61 hectares and is situated on the east side of the Portland Canal (centered on latitude 55º 28' N; longitude 130º 02' W), which is a large fjord that separates British Columbia from the Southern Alaska panhandle on the northern coast of British Columbia. The port city of Prince Rupert is approximately 130 kilometres south of Swamp Point and is the closest major supply centre with an airport that has regular scheduled flights to and from Vancouver.

Ascot owns 100% of Licence of Occupation number 740560 which covers the sand and gravel deposit on which the project will be based, Foreshore Licence number 740744 which covers part of the foreshore area beside the deposit, and two mineral claims which in part underlie the gravel deposit.

Licence 740560 grants Ascot a licence of occupation for the purpose of quarrying, digging or removal of gravel and uses ancillary to quarrying such as sorting, crushing and stockpiling. Licence 740744 grants Ascot a licence of occupation for development of a deep sea loading facility for a gravel quarry upland. Neither licence grants exclusive use of the land. Ascot will apply for a lease prior to initiating development as a lease gives exclusive use to the land.

The Swamp Point aggregate property will load gravel and sand onto ocean going freighters and barges at the site for shipment to customers along the Pacific coast of North America and possibly other destinations. An optimal production of 3.4 million tonnes of aggregate per annum is planned.

The mine design of this PFS is based on a measured mineral resource. The measured mineral resource could be re-classified and upgraded to a Probable Reserve upon securing aggregate product sales and long term shipping contracts.

Ascot commissioned numerous experienced consultants to perform specific technical studies for the Environment Assessment (EA) Certificate Application. The EA Certificate Application for the project was accepted by the British Columbia Environmental Assessment Office on December 8, 2005, starting a 180 day review period.

Prior to initiating construction, Ascot will require a Mine Permit and other permits. These can be acquired after the Project's Environmental Assessment Certificate has been issued.

Construction and initial mining operations is expected to cover phase one during the period 2006/2007. By the second quarter of 2007 initial mine operations will be established and the second phase of mining

to reach full production is scheduled to start in 2009. This implementation schedule is dependent on permitting. There are no contracts secured for the product, and no contracts to ship the product currently in place. However, the development scenario and economic models in this Pre-Feasibility study will be applicable to the project should permitting delays or securing contracts result in a later commencement date.

The site is primarily covered by immature coniferous (cedar and hemlock) and deciduous vegetation with a wet muskeg area in the central part of the property. Almost all of the area has been previously logged, and only in an area of steep slopes above the shoreline in the northwest part of the property is any mature forest left standing. This area is not part of any planned development. At least three eras of logging are evident. Large, old tree trunks and logs attest to early logging, probably by A-frame from water as is typical along the coast. Most of the area was clear-cut within the last twenty to thirty years, and the pre-existing roads were built at this time. A small area above the north beach was logged recently.

Access to the Swamp Point Project site is by boat, float plane or helicopter. There is no access to site by road, and none is planned. Rough roads built to support logging transect the property. Small barges are able to land on the South Beach (tidal conditions permitting) which has a road connected to these other roads on the property. Deep tidewater occurs close to the shoreline allowing access for large freighter vessels.

There are no existing communities in the immediate vicinity of the Swamp Point aggregate mine. The nearest community is located in the town of Stewart, 50 km to the north at the end of the Portland Canal.

The Nisga'a Nation has certain interests in the immediate vicinity of the Swamp Point Project, and along its shipping route within Portland Canal and Portland Inlet, mandated by the Nisga'a Final Agreement.

The Nisga'a Lisims Government (NLG) is an active participant in the Swamp Point Aggregate Mine Working Group on behalf of the Nisga'a Nation. Ascot is required by the Nisga'a Lisims Government to actively consult with the Nisga'a Nation regarding effects of the Project on the Nisga'a Nation rights. Ascot has been conducting this consultation and will continue to do so.

Ascot will continue to meet with representatives from the Nisga'a Nation during the Application review period and throughout the mine life. The scope and frequency of future meetings will be discussed prior to initiating construction activities.

First Nations in the general area of Swamp Point include the Tsimshian First Nations of Lax Kw'alaams and Metlakatla. The communities of both Lax Kw'alaams and Metlakatla continue to rely on resources from the sea, and both communities want to be ensured that this Project will not affect their ability to continue to do so.

The Lax Kw'alaams and Metlakatla First Nations have expressed concerns about potential effects to marine resources that originate near the proposed mine site and/or resources found along the shipping lane. Ascot has designed the project and has developed mitigation strategies and management plans to address these concerns. Ascot will request that Vessel Traffic Control from Prince Rupert organize an information meeting to clarify how vessel traffic is managed between Triple Island and Stewart. Additional information will be sought regarding the laws of the sea and how various responsibilities are

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assigned to shipping companies, the ship's Pilot, the ship's Captain and the company chartering these vessels.

Ascot will continue to meet with representatives from the Lax Kw'alaams and Metlakatla First Nations during the Application review period and throughout the mine life. The scope and frequency of future meetings will be discussed prior to initiating construction activities.

The Swamp Point property is in a region characterized by a maritime climate, with warm winters, cool summers and heavy precipitation. January and July are the coldest and warmest months of the year respectively with temperatures averaging –5°C and 14°C. The average annual precipitation ranges between 1,800 and 2,000 mm per year with the majority falling as rain during the fall months (September through November). The annual snowfall is approximately 540 mm per annum.

A limestone deposit at Swamp Point was mined for flux for the Anyox smelter from 1916 to 1922. Mining was from two quarries located between the northwest part of the aggregate deposit and tidewater. In this area, a 60 m thick bed of white to dark bluish- grey, medium to coarse-grained limestone strikes 360° and dips steeply to the east. The bed is folded and cut by a few thin dykes. Reported production was 260,000 t (BC Ministry of Energy, Mines and Petroleum Resources – Minfile).

The Swamp Point area is underlain by the western margin of a 14 by 10 km roof pendant within the Tertiary Coast Plutonic Complex. The rocks are commonly correlated with the Lower Jurassic Hazelton Group and are comprised of mafic and intermediate volcanics interbedded with felsic tuff, siltstone, silty argillite, fine grained sandstone and limestone. The sequence strikes 010 to 035 degrees and dips 40 to 85 degrees southeast. Regional metamorphism has resulted in variable foliation and mafic rocks have been chloritized to greenstone and chlorite-hornblende schist. The pendant is surrounded on the north and south sides by large Tertiary intrusions.

Mineralization in the area includes several quartz veins containing copper, gold, and silver located to the south of the Swamp Point aggregate deposit. A total of 126,000 t were reportedly produced from the Outsider vein located 2 km south of the property. The Anyox copper smelter, town site and mine were located 15 km east southeast of the property.

Bedrock exposure at Swamp Point is mostly limited to the shoreline and the steep slopes in the northwest part of the property. A small number of outcrops occur in the valley in the north-central part of the property. Rocks exposed along the shoreline in the south part of the property were described in the field as black rusty weathering argillite and massive, green fine grained volcanic (and/or intrusive). Limestone occurs in the northwest part of the property. Bedrock at the bottom of drill holes drilled through the aggregate deposit was described as foliated dark metasediment. A sample from the rocky point in the south part of the property that was sent for petrographic analysis was described as a fine grained hornblende schist.

In 2005, Charlotte Mougeot of Gartner Lee Ltd. prepared a surface geology map using air photography, previous reports, notes from Ascot's personnel, borehole information, and a field visit. As well, a stratigraphic model was prepared using exposures, borehole data, existing maps, and interpretation of the depositional environment of the property area. Details are contained in the report produced by Gartner Lee Ltd. for Ascot dated May 2005 and titled, "Quaternary Geology of the Swamp Point Area, BC".

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The Swamp Point area is described as a glaciofluvial-deltaic complex. Glaciofluvial deposits appear to compose most of the terrace or plateau-like landform at Swamp Point and form most of the estimated resource of the Swamp Point property. This material was observed in sections, road cuts, in test pits, and correlated to most of the sand and gravel intervals described in the 2003 and 2005 boreholes.

The proposed Swamp Point Aggregate Mine will involve extraction of sand and gravel only. The sand and gravel deposits are underlain by bedrock, which may locally be exposed in the southeast and northwest portions of the final pit. However, the total maximum area of potential exposure is small (less than 0.9 ha) compared to the total area of the excavation (60 ha), and the bedrock will not be mined but remain as the original sub-surface expression of the natural contact. Some possibility for small bedrock cuts exists along the access road to the Operations Camp, the Laydown Area, and the Loadout Pad.

The potential for metal leaching/acid rock drainage (ML/ARD) from gravel deposits is expected to be extremely low since the materials have been weathered, eroded, transported, and deposited under geological conditions and would therefore be completely leached of any soluble components by natural processes. The "Draft Manual of Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" (Price, 1997) states that "No testing is required on unconsolidated materials as glaciofluvial and fluvial deposits, derived from wide areas, having little opportunity for either sulphide or trace element concentration or deposition." Nonetheless, some testing of the aggregate for ML/ARD potential has been completed to confirm their characteristics.

Aggregate mining is expected to result in very limited exposure of bedrock. The ML/ARD assessment indicates that the development should avoid exposure of bedrock and that any excavation will require monitoring and contingency plans to ensure that any waste rock and cut faces are managed to avoid drainage impacts.

Due to the background sulphide mineralization in the schist and argillite, it is expected that groundwater presently in contact with the rock may contain elevated iron concentrations and possibly acidity and metals such as copper and zinc.

Since no bedrock excavation is currently contemplated, mitigation plans for management of rock cuts and waste rock are not needed. In the event that any bedrock excavation is found to be a requirement as mining progresses, the rock would be visually characterized and samples collected and tested for total and soluble metal content and ARD potential. Based on the results, an appropriate management strategy would be designed.

The Swamp Point deposit is a sand and gravel deposit comprised of approximately 50% gravel, 47% sand, and 3-4% silt. The deposit, which was formed as a result of glacial outwash, is weakly to poorly stratified. Discontinuous lenses of more silt-rich and till-like layers occur in the deposit, but the extent of these is not expected to be significant. Till-like lenses are more common along the eastern and northern edges of the deposit. The deposit becomes finer grained overall in a southward direction. Boulders ranging from 0.5 to 3.5 m in diameter were observed at surface and encountered in drill holes and test pit excavations.

Petrographic work indicates that the sediments, which form the deposit, are comprised of predominantly intrusive rock (granite-granodiorite and diorite-gabbro) and fine-grained metamorphic rocks (phyllite,

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schist, amphibolite, gneiss), with lesser amounts of volcanic (basalt-andesite with some rhyolite-dacite) and other rock types.

Exploration of the Swamp Point area was initiated by 647680 BC Ltd. in October 2002. Air photographs and topography were analyzed and a preliminary model of the landform was developed. In November 2002, a three-day aerial and ground survey was conducted across the lands of interest and samples of material were obtained from shallow hand-dug excavations and from bank exposures. The samples were evaluated in a program of laboratory testing to assess engineering properties of the materials. This preliminary testing indicated that the materials had potential for use as aggregate and a program for further evaluation of the property was developed.

A geophysical survey was conducted in December 2002, which indicated the presence of unconsolidated granular materials at the subject site, to a depth of some 95 m. To investigate the nature and extent of the deposit a drilling and test-pitting exploration program was undertaken in March 2003. Nine drillholes and a few test pits were advanced on the site to determine subsurface geological conditions and to sample the granular materials. Approximately 10,000 kg of sediments were retrieved during this exploration phase, and shipped to Vancouver for detailed materials testing. The initial exploration and testing data were used to develop a preliminary model of the deposit at Swamp Point, and also formed the basis for the issue of the NI 43-101 Technical Report issued by Golder and Hans Smit on July 15, 2004.

To further evaluate the property, a second phase of drilling was undertaken by Ascot in March and April of 2005. Thirteen holes totalling 596 m were drilled using a Becker Hammer drill. Most holes were drilled using a 23 cm diameter drill, and the balance with the 16.5 cm diameter drill. Eleven holes were drilled to better define the volume of the deposit and to collect additional samples for materials testing.

In the area above North Beach, a water well was drilled for testing potential ground water quantities and two monitoring wells were installed. One of these wells was installed in a hole drilled for materials testing. In addition, five test pits between 4 and 7 m deep were excavated to obtain sample material.

Approximately 20,000 kg of material from the 2005 drill holes and trenches was sent to the Golder Materials Engineering Laboratory in Surrey, BC for assessment testing. A similar amount of material was stored in Prince Rupert, BC pending further requirements for additional testing of materials.

In order to evaluate the suitability of the deposit for the production of commercial-grade aggregates, which would be acceptable in the construction market, tests were conducted in accordance with recognized standards for the evaluation of construction aggregates. The standards which were used include not only the Canadian Standards Association (CSA) procedures for concrete aggregates and B.C. Ministry of Transportation (MOT) tests for aggregate, but also those of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), and those of the California Department of Transportation (CALTrans). This more extensive range of testing procedures was carried out considering the potential marketing of the aggregates to US destinations, where the Canadian standards might not be recognized.

Detailed reports supporting all the test results were prepared by Golder Associates Ltd. (Golder) and Levelton Engineering Ltd. (Levelton), and form the basis of the results and test procedure descriptions outlined below. These test programs enabled an assessment of the granular materials in the deposit for their potential for use as aggregate.

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The materials testwork is still ongoing at the time of writing, and updates will be provided as this work continues. The expectation is that the long-term testing will be completed by Fall 2006.

Conversion of volume to mass is periodically required in aggregate property analyses and management. The average maximum dry density determined through Proctor testing of four samples was 2285 kg/m^3. Considering that the formations at Swamp Point actually contain considerable amounts of small to large boulders – material which could not be represented adequately in samples taken from site due to size – the in-site density values could likely be considered to be higher as well, and could be increased by an estimated additional 5 – 10%. This would give a density value of 2446 kg/m^3.

Allowing for error, variability and less compact conditions, reduction of this value by 10% would result in a conversion factor of 2.2.

This value would be considered appropriate for calculation of in-situ density of the Swamp Point formation only, and would not be appropriate for application in volume-mass conversion of materials that have been disturbed or processed. Hence, this value would not be applicable to any materials that have been removed from their in-situ condition, processed, stockpiled or transported. This value was used for determination of in-situ tonnage of the gross volume of the deposit.

Review of data generated in the Materials Testing Programs was carried out to ensure the reliability of the test results. Independent checks on the testing typically involved a minimum of three stages of review and cross-checking. This level of quality control protocol is consistent with that normally carried out in engineering materials testing practice. Both the Golder and Levelton laboratories involved in the testing programs are certified to CSA Category II.

The quantity determinations of the Swamp Point aggregate resource have been based on 1 m contour mapping from 1:10,000 GPS controlled and targeted photogrammetry. Accuracy of the mapping becomes hampered where the ground surface is not visible on the photos. Dense tall tree cover, as exists to a limited extent on the site, can introduce error into the digital terrain model in those areas. The accuracy of the topographic information is not considered critical to determining the resource. The bedrock profiles that were developed with the seismic (and in some cases from drill holes and bedrock at surface) were not done in isolation. Rather they are relative to the surface topography. All of the data is depth-related and not absolute in terms of elevation. If the topography is in error, then this same error is applied to the bedrock strata. So any consistent error is compensatory. Localized errors are the only real opportunity for inaccuracies caused by the topographic information. Field review of the site and assessment of the contours suggest that the mapping is good and that localized errors are not easily discernible.

Don Hains P.Geo. has reviewed the estimation procedures and assumptions used in developing the estimates of mineral resources and mineral reserves. Don Hains is in agreement with the methodologies employed in estimation of the mineral resources. Don Hains has also reviewed the mine planning and economic analysis conducted in connection with the PFS for the Swamp Point project. Based on the information available, Don Hains would classify 45.8 million tonnes of material as a Measured Resource in accordance with the CIM Mineral Resource and Mineral Reserve classification system. Don Hains is of the opinion that the Measured Resources would be classified as Probable Reserves upon receipt by Ascot of Letters of Intent for supply of aggregate at the price levels projected in the PFS.

3.1 Interpretation and Conclusions

3.1.1 Geology

The Swamp Point project is comprised of a deposit of sand and gravel units that are indicated to consist of some 20 million cubic meters of granular material, averaging 50% gravel, 47% sand and 3% silt. The engineering quality of the granular materials is consistent with that suitable for use as commercial-quality aggregates, and may include uses such as road aggregates, structural fill aggregates, asphalt aggregates, and concrete aggregates.

Variable quality of the sand and gravel is indicated, as is typically anticipated for natural glaciofluvial deposits. This variability is apparent from engineering test data. On the basis of the testing data processing of the sand and gravel is expected to be necessary. Such processing is projected to be capable of producing aggregates of suitable quality for the intended applications.

The thickness of the sand and gravel units is indicated, on the basis of drilling and geophysical surveys, to be up to 95 m in places. Structure within the deposit is as discussed in Gartner-Lee (2005). Sediment sizes range from fines to very large boulders, with the latter occurring towards the eastern portion of the deposit, and being less common towards the western and southern parts of the deposit.

The make-up of the sediments lithologically is fairly diverse, with variable amounts of granitic, volcanic, metasedimentary rocks, phyllite, schist and other rock types comprising the sand and gravel. The engineering geology of the sand and gravel is variable, but generally appears suited to the manufacture of aggregate products.

The presence of groundwater within the sand and gravel formation was not observed in the drillholes, which were advanced in representative locations across the site.

Bedrock structures include a buried N-S ridge along the west-centre of the site, which may have assisted in containing the thickest portion of the deposit. This zone also contains the bog deposit, which caps that portion of the deposit.

Bedrock crops out in a number of locations in and around the site, and exposures include metamorphic rocks (phyllite, schist, gneiss), basalt, argillite and limestone.

3.1.2 Marketing

Test results indicate aggregate material from Swamp Point should be suitable for use in most potential applications and target markets. The overall quality of the coarse and fine aggregates is considered to be good. The potential for alkali-aggregate reactivity (AAR) is very low, and it is expected that concrete mix designs may be developed to alleviate any potential concerns with respect to AAR, should they arise. Additional test work focussed on concrete batch designs incorporating Swamp Point material, locally sourced California cement and typical California batching procedures is indicated.

Market research conducted to date has been positive and the potential to develop profitable markets for aggregate from Swamp Point is high. Analysis of production and shipping costs indicates material from Swamp Point should be cost-competitive on a delivered price basis with locally sourced aggregate in the

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San Francisco Bay area and in the Los Angeles market. Opportunities should also be available in the San Diego market area, but on a more limited scale.

Detailed market studies are required to more firmly define the market potential, customer base and product prices. Specific analyses of market conditions in the San Francisco Bay area, Los Angeles area and San Diego area are required. Detailed analysis of shipping options and review of port facilities and other logistics requirements at receiving terminals is required and is an integral part of the market studies. Market research should focus on specific regional major target consumers and products with the objective of securing letters of intent and/or sales contracts.

3.1.3 Mine Plan

Development of the Swamp Point project is contingent on Ascot securing contracts for the sand and gravel products.

The Swamp Point deposit contains a measured mineral resource of ~46 Mt. The Swamp Point Aggregate Mine has been designed with mining development in five phases over a minimum projected mine life of 15 years. A maximum production rate of 3.3 Mtpa is planned. The actual mine life and precise length of each phase will depend on the quantity of aggregate that can be sold each year.

This is a challenging project due to limited footprint of the property and environmentally sensitive areas in close proximity. This results in limited waste and overburden stockpile locations. The mine plan presented by YES is achievable and meets both the client’s and the site’s environmental protection requirements.

3.2 Additional Requirements for the Technical Report

3.2.1 Mining Operations

The Swamp Point deposit will be mined as an open pit operation using loaders and excavators to fill a small truck fleet with the waste/overburden material for stockpiling and to load a mobile crushing plant with the sand gravel material for processing. All waste and overburden is temporally stockpiled on the upper elevations of the property. Phase One of the operation is a combination of site preparation and commissioning of the process plant and is expected to last 2 years.

During this 2-year period, the pre-stripping of phase 2 along with the plant expansion and conveyor placement will need to be completed. Phase One construction will also involve transport of mobile operations equipment to the initial extraction area, construction of a crossing over South Beach Creek, installation of piles and other related structures for the marine facilities, construction of the mine perimeter road, set-up of the fuel storage facility, construction of the water storage and initial settling facilities, construction of the lay down and load out areas, construction of the fresh water pipeline from Reservoir Lake, and mooring of the Phase One temporary Floating Camp. Initial operations (i.e. sand and gravel extraction) are expected to begin on land while construction of the marine facilities is still in progress. Additional overlap of construction and operations will occur in the later stages of Phase One, when construction and installation associated with the infrastructure needed for full-scale operations is undertaken.

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Phase 2 mining starts in year 3 with the wash/crushing plant expanded and relocated to this area along with the installation of the conveyor system used to transport sand and gravel products down to the stockpile areas at the bottom of phase 1 in place of a larger truck fleet.

Pit walls are mined at a 1:1 slope ratio with benches, and when they reach final pit wall location are capped and reclaimed with the stockpiled organic material to a 2:1 final slope.

Phases 2 through 5 (incorporating Year 3 through to Year 15 of the PFS Mine Plan) will be full production phases, separated on the basis of the excavation locations and elevations within the overall pit limit. Phase 2 production will begin following the addition of a Processing Plant with higher capacity during the end of the second year of mine life. By that time, the smaller Phase One Processing Plant will have created sufficient space for the larger plant to operate efficiently, and sufficient stockpile space to store approximately 75,000 t of product. This quantity is enough to fill one Panamax (70,000 dwt) size ship.

In years 7 to 9 of the mine plan all of the stockpiled material located on the top elevations of the property will need to be moved to locations within the mined pit area or to reclaim to permit stripping for the final pushback. This will require the movement of ~550,000 m^3 in each of these years.

3.2.2 Markets and Economics

Aggregate is the largest non-fuel mineral commodity produced in North America. Primary potential markets for aggregate from Swamp Point are cities along the west coast of North America, especially the San Francisco Bay area, Los Angeles and San Diego. Some additional potential exists to supply regional aggregate market needs in Prince Rupert, southeast Alaska and elsewhere in the Pacific.

The west coast U.S. market has emerged as a major new opportunity for BC based aggregate producers. Existing local sources of supply in the San Francisco, Los Angeles and San Diego metropolitan regions are becoming exhausted and it is extremely difficult, if not impossible, to permit new aggregate operations in these areas. Consequently, aggregates are now being sourced from quite distant areas, including by water from B.C., by truck from the Central Valley area of California, and by rail from Nevada and Arizona. The net effect of these developments has been a significant increase in the delivered price of aggregate. This trend is expected to continue, although as more distant sources are developed, competition may serve to reduce the rate of increase in delivered prices, especially as regards the underlying price of the aggregate.

Ascot has been actively pursuing potential markets for aggregates since acquiring the Swamp Point project in 2004, building on earlier work by 647680 BC Ltd. in 2003. In 2004, Ascot commissioned Golder Associates to prepare a valuation analysis of the Swamp Point property. This exercise included a preliminary market study. This study identified California as the principal market for the project based on the relatively high price for aggregates and the constraints on supply in this market (Golder Associates, May 2004).

Key considerations in assessing the market potential for the Swamp Point project include the availability of self-unloading “Handysize”, “Handymax” or “Panamax” size vessels of 30,000 – 70,000 dwt capacity; the availability of suitable dock space in the target markets; the ability of Ascot to penetrate vertically integrated markets; and relative shipping costs for seaborne aggregate shipments versus rail shipment of aggregate from inland regions.

Negotiations will be required with shipping companies to develop arrangements for long-term, secure charter arrangements of suitable vessels. It is understood that various shipping companies have been contacted and these companies have indicated an interest in the project. Dock space in the target market areas is generally privately held by the major aggregate and construction materials distributors in the region. It will be essential to secure long-term off-take agreements with these companies to ensure that adequate dock storage space is available.

3.2.3 Environmental

Based on the Project effects assessments and environmental management plans described in Sections 5 and 4 respectively of the Environmental Assessment Application, the report states that:

The Swamp Point Aggregate Mine is not likely to cause significant adverse residual environmental, heritage, socio-economic, socio-community, effects to the Nisga'a Nation and the Metlakatla and Lax Kw'alaams First Nations, or other effects. This conclusion is based on the determinations of significance presented in the Application, and takes into account successful implementation of the technically and economically feasible proposed mitigation measures.

There are unavoidable localized effects on some environmental resources (mainly terrestrial), however the proposed mitigation measures are considered to reduce the residual effects to acceptable levels. Almost all predicted effects are considered reversible, with duration primarily limited to the life of mine. Irreversible effects identified are limited to minor flow changes in Donahue Tributary and permanent changes to site terrain. The latter is unavoidable at any mining development, and mitigation measures have been presented to address post-mine terrain stability and visual effects.

3.2.4 Capital and Operating Cost Estimates

The capital cost and operating cost estimates reflect an accuracy level of ±20%, consistent with a Pre-Feasibility Study level of engineering effort and have been based in third quarter 2005 United States dollars, using a CDN$1/US$0.85 exchange rate where applicable. No allowances are included for escalation or exchange rate fluctuations.

The capital cost estimates for the Swamp Point including infrastructure, mining, process plant, materials handling, shiploader, marine facilities and sustaining capital.

Two capital cost estimates have been generated for two separate project scenarios. The capital cost estimate options considered are:

- **Ascot Owns (100%) Equipment** – Ascot procures new mining mobile equipment for the project during Phase 1 - initial production including mobile equipment replacement during the life of mine.
- **Contractor Supplied Equipment** – Mining contractor supplies a permanent mining fleet and associated equipment during initial production.

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Operating costs for the Swamp Point include mining, process plant, shipping, general and administrative (G&A) and royalty costs.

3.2.5 Economic Analysis

Preliminary economic analyses were carried out on the following two scenarios - **Ascot Owns (100%)** and **Contractor Operated**.

These economic analyses are preliminary in nature and include a measured mineral resource. Classification of a probable reserve will occur upon receipt of Letters of Intent from potential suppliers. A clearer indication from specific customers is required to support a reserve classification.

Payback for the project is defined as the period of time (measured in years) that elapses before the costs of the project are fully recovered. Interest is not included in the payback calculation.

Payback includes all capital costs incurred during the implementation phase + operating costs of the project from Year 1 and concurrent revenue from initial aggregate sales.

Payback period for the two options ranges from 3.7 to 3.4 years.

3.2.6 Mine Life

Mining activities will last a minimum of 15 years before the gravel resources are depleted. The first and second years are expected to have low production levels, while higher production rates are expected during the third to fifteenth years. The maximum annual production level will be 3.3 Mt/a. Actual production rates will be dependent on product sales.

Phase One contains approximately 3,500,000 t of sand and gravel products, and will require approximately two years to mine with a 300 t/h plant. Phases Two through Four will result in the production of 30 Mt of product, and will take at least an additional 9 years to mine at minimum. Phase Five has resources of approximately 11 Mt of material, however production rates will be lower during the last year of production because of greater focus on final reclamation during that phase. Assuming maximum possible production, all of the sand and gravel resource will be mined out and the reclamation process will be almost complete by the end of the fifteenth year. Actual mine life will be dependent upon whether annual product sales reach the 3.3 Mt/year maximum.

3.3 Recommendations

3.3.1 Environmental Assessment

Project certification is a critical milestone in proceeding with the overall development of the project.

3.3.2 Geology

Potential customers need to be surveyed to determine whether additional information or more sample testing would be necessary in order to pre-qualify the Swamp Point materials (Golder report).

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Conducting a pilot processing run (either large or small scale) of Swamp Point material may provide a useful means of assessing the projected quality of processed aggregates from this site. Resolving items (e.g. projected particle shape) may prove to be important to some potential customers (Golder report).

Test samples from the exploration program and comparison with samples obtained from small test run could serve as a basis for comparison of the relative change in this aspect of the aggregate's quality.

3.3.3 Mining

Develop a mining block model to establish a comprehensive mine plan.

It would be prudent to produce additional iterations of the mine plan and/or phase options in the final feasibility stage of the project.

The final perimeter road should be modified to reduce any areas that have a grade greater than 15%, and if possible reduce it to a maximum of 12%. It would be worth determining the benefits of placing the perimeter road to its final location from the start.

Commence detailed engineering on mining to firm up on capital and operating costs.

Execute a trade off study on the use of an overland conveyor versus trucks, to move material to the stockpile areas in Year 2. Considering that the site will have a 3-truck fleet that is not fully utilized, trucking may provide a cost saving benefit to the project and provide more flexibility in the operation.

Further studies are required to reduce re-handling of aggregate and waste material.

Removal of stockpiles and stripping in Years 7 to 9 will be a major undertaking. It will require stockpiling of material within the mined pit limit for re-handling during reclamation. The mine plan should be studied further to establish optimal solutions. An option to consider would be sub-phasing the final pushback to allow part of the pit to move to the final wall, producing a greater open area for reclamation.

3.3.4 Marine Structures

Commence detail engineering on the marine structure to firm up on capital and operating costs.

Proceed with procurement of a shiploader and materials handling equipment.

3.3.5 Shipping

Proceed with the establishment of shipping contracts to develop accurate shipping costs.

3.3.6 Infrastructure

Detail engineering and design in order to firm up on capital and operating costs.

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3.3.7 Optimization Studies

Optimal production range based on reliable supply contracts to be established.

3.3.8 Marketing

Secure letters of intent from potential customers to enable the project to proceed to feasibility study and detail engineering phases.

4. INTRODUCTION AND TERMS OF REFERENCE

4.1 Introduction

This technical report was prepared in overall compliance with the requirements of National Instrument 43-101 and is to be used as a supporting document to be filed with the British Columbia and Alberta Securities Commissions and the TSX Venture Exchange. This report is based on the Pre-Feasibility Study (PFS) completed on the Swamp Point Aggregate Project (Swamp Point) in December 2005 and the PFS report Rev. 1 dated January 12, 2006. A few of the chapter headings have been modified from the recommended 43-101 table of contents, to better reflect issues related to an aggregate project.

Swamp Point is a sand and gravel deposit that is located within the Coast Mountain ranges approximately 50 km south of Stewart, BC on the east side of the Portland Canal (latitude 55º 28' N; longitude 130º 02' W), which is a large fjord that separates British Columbia from the Southern Alaska panhandle on the northern coast of British Columbia. The sand and gravel deposit consists of a 150m high terrace on the east side of the Portland Canal, which slopes toward the coastline. Elevations on the property range from sea level to 160 m. East of the property, the slope steepens abruptly along the flank of 1300 m high Mount Tournay. Two sand beaches – referred to as North and South Beach - are located in the southern part of the property. A low rocky outcropping up to 15 m high separates the beaches. In this area, there is a limited width (10 m) sub tidal bench, beyond which there are steep submarine slopes and deep-water conditions. North of this area, there is a higher rocky ridge, and the slope from the coastline to approximately 100 m elevation is steep to locally vertical.

The evaluation and development of an aggregate property is similar to that of conventional "Mineral Property" but also requires the additional scrutiny of the guideline set out in Section 1.5 of the Companion Policy 43-101CP, which deals with Non-Metallic Mineral Deposits and specifically Subsection (a) which deals with industrial minerals. The CIM standards defines an industrial mineral as "any rock, mineral or other naturally occurring substance of economic value, exclusive of metallic ores, mineral fuels and gemstones; that is one of the non-metallic minerals". It further states, "Before a tonnage and quality and/or value per tonne estimate of an industrial mineral deposit can be classified as a mineral resource, the qualified person preparing the tonnage and quality estimate must recognize that there is a viable market for the product or that a market can be reasonably developed".

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4.2 Terms of Reference

Ascot Resources Ltd. (Ascot) commissioned Hatch Ltd. (Hatch) in December 2004 to produce a feasibility study on the Swamp Point Aggregate Project (Swamp Point). During design development and preliminary economic analysis, it was decided to produce a preliminary feasibility (pre-feasibility study) report at this time, as there are no supply contracts in place for the aggregate product and no firm shipping agreements have been established.

The mine design, production plans, and economic analysis are based on a reasonable estimate of potential markets. However, actual production planning and final mine design will not occur until a letter of intent or tentative contract for aggregate sales and shipping have been secured. A complete feasibility study will then be completed based on these known economic parameters.

The mine design of this PFS is based on a measured mineral resource. The measured mineral resource could be re-classified and upgraded to a Probable Reserve upon securing aggregate product sales and long term shipping contracts.

This PFS report on the Swamp Point aggregate property, covers all aspects of the project, including:

- Review of the PFS level mine design, mine plan and production activity schedule prepared by Yukon Engineering Services (YES). The drawings produced illustrate pit development over time with necessary haul roads, water diversions and mining stockpile locations.
- Development of a PFS level design of the requisite materials handling, ship loading facilities and shipping necessary for a 2 – 3 million tonnes per annum (tpa) aggregate production facility. This study was conducted in two phases by Sandwell Engineering Inc. (Sandwell). Phase 1 was based on available information identifying options, conceptual layouts and an order of magnitude cost estimate for the port facilities. Phase 2 included a site investigation, preliminary designs and refined cost estimates. The work included an evaluation of the most suitable site for a marine facility capable of loading Handymax and Panamax 30,000 to 75,000 t vessels, design of the marine structure, shiploader and stockpile management and loading facility. The facility will also be capable of loading onto barges. This work took into account the design and engineering elements required by Transport Canada.
- Compilation of a comprehensive PFS document integrating all reports, estimates and drawings supplied by other consultants.
- Development of capital and operating cost estimates to an accuracy level of approximately ±20% with information provided by other consultants.
- Preliminary assessment of project economics incorporating a cash flow and financial analysis for the project.
- Provision of advice and information required by Ascot for the Environmental Assessment and permitting of the project.

Ascot commissioned numerous experienced consultants to perform specific technical studies for the Environment Assessment (EA) Certificate Application. The EA Certificate Application for the project was accepted by the British Columbia Environmental Assessment Office on December 8, 2005, starting a 180 day review period.

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Roles & Responsibilities of Consultants Responsible for Preparation of the Swamp Point Aggregate Mine EA Certificate Application:

Company	Key Individuals	Professional Status	Roles and Responsibilities
Ascot Resources Ltd.	Hans Q. Smit	P.Geo.	Project Manager; Senior Review, Geology; Nisga'a Nation and First Nations Consultation; Public Consultation
Ecos Environmental Consulting Inc.	Sylvia Van Zalingen	P.Ag. R.P.Bio.	Application Coordination and Compilation; Editorial and Review (most sections); Reclamation Plan, Environmental Management Plan; Preliminary SEPSC Plan (portions); Air Quality Management Plan; Misc. introductory and summary sections; Executive Summary.
	Raymond Carrier	P.Ag. R.P.Bio.	Application Coordination; Field Support; Public, First Nations, and Stakeholder Consultation; Land and Marine Tenure and Use; Heritage and Cultural Resources; Nisga'a Nation and First Nations; Navigable Waters Issues; Misc. information collection and report assistance.
Water Management Consultants	David Sellars	P.Eng.	Coordination, Climate, Hydrology and Hydrogeology Assessment; Senior Review, Hydrology Assessment and Water Management Plan.
	Roderick Smith	P.Eng.	Senior Review, Hydrogeology Assessment
	Morgan Garrett	P.Eng.	Climate, Hydrology and Hydrogeology Assessments; Water Management Plan.
McElhanney Consulting Services Ltd.	Jessica Chaplin	R.P.Bio.	Freshwater Quality and Aquatic Biological Assessments (excluding fisheries).
	Lisa Torunski	R.P.Bio.	Freshwater Quality, Benthos, and Periphyton Assessments.
	Chris Schell	R.P.Bio.	Freshwater Fisheries Assessment.
G3 Consulting Ltd.	Gregory Thomas	R.P.Bio.	Coordination of Marine Ecosystem Assessment, Marine and Reservoir Lake Bathymetry; Senior Review, Marine Assessment.
	Nina Munteanu	R.P.Bio.	Marine Ecosystem Assessment.
Ardea Biological	Laurence Turney	R.P.Bio.	Terrestrial Ecology Coordination, Compilation and Senior Review; Wildlife Assessment; Ecosystem and Reclamation Mapping; Terrestrial Ecology Effects Assessment.
Dave Yole Consulting	David Yole	P.Ag.	Terrain, Soils and Ecosystem Assessment; soils aspects of SEPSC Plan and Reclamation Plan.
WildFor Consultants Ltd.	Lisa Mahon	R.P.Bio.	Bird Assessment (including marine birds).
Gentian Botanical Research	Paula Bartemucci	R.P.Bio.	Rare Plants and Ecosystems Assessment.
IQuest Research	Christine Ogryzlo		Socio-Community Conditions and Socio-Economic Conditions.
Hatch	Roy Howes	PQS	Coordination, Mine Plan and Pre-Feasibility Study.

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Company	Key Individuals	Professional Status	Roles and Responsibilities
Yukon Engineering Services Ltd.	Jerry Quaile		Mine Design; Mine Plan (excluding marine facilities); upland components of Fuel Management and Spill Contingency Plan.
	Eric Nyland	E.I.T.	Mine Design; Mine Plan.
Sandwell Engineering Inc.	Bill Wong	P.Eng.	Marine Facilities Design; Senior Review of Marine Facilities, Marine Services, Marine Spill Response and Contingencies; and Shipping sections.
	Katrina Dodds	M.Eng.	Marine Facilities Design.
	Captain John Swann	MMFG SNAME	Review of Marine Facilities Design; Shipping sections.
Golder Associates	Fred Shrimer	P.Geo.	Materials Testing subsection.
Graff Engineering Inc.	Bruce Graff	P.Eng.	Waste Management; Health and Safety Plan.
Trow Associates Inc.	James Wetherill	P.Eng.	Geotechnical Input to Mine Plan; most Natural Hazards Assessments.
Mountain View Silviculture Ltd.	Mark Adamson	R.P.F.	Visual Resources Assessment

For preparation and completion of the PFS, Ascot commissioned numerous experienced consultants to perform specific technical and economic studies. Hatch commissioned Sandwell to perform engineering studies on the marine facility design, materials handling and shipping.

The companies are listed below with their respective responsibilities:

Company	PFS Title	Responsibilities
Golder & Associates	Golder	Sand and Gravel Testing.
Water Management Consultants	WMC	Hydrological and hydro geological modelling
Yukon Engineering Services	YES	Mine design Site and plant engineering Mine capital and operating cost estimates Water pipeline design
Sandwell Engineering Inc.	Sandwell	Marine facility design Shiploader design and Materials handling Shipping studies
ECOS Environmental Consulting	ECOS	Environmental assessment and permitting
Trow Engineering	Trow	Geotechnical assessment
Hains Technology Associates	Hains	Marketing and Economics Assessment

During the production of this PFS report, Ascot undertook a number of site programs to develop a baseline for the project. Field surveys were carried out at site during the period March to September 2005 to generate data to support the PFS engineering studies. The field survey work included:

- Drilling with a Becker Hammer drill for geological investigations and to obtain sample material

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- Test pitting using an excavator.
- Geotechnical assessment.
- Meteorological data collection
- Environmental assessments
- Soil surveys
- Reclamation planning
- Bathymetry

Qualified professional (QP) authors have all worked on specific aspects of this project and have visited the property and are independent of Ascot. The lead authors for the various sections and sub-sections are summarised as follows:

Section	Description	Qualified Professional
3	Summary – (except Environmental covered under sub-sections 3.2.3 and 3.3.1)	Keith Watson, P. Eng in collaboration with Fred Shrimer P.Geo and Don Hains P. Geo.
4	Introduction and Terms of Reference	Keith Watson, P. Eng
5	Reliance on Other Experts	Keith Watson, P. Eng in collaboration with Fred Shrimer P.Geo and Don Hains P. Geo.
6	Property Description and Location	Keith Watson, P. Eng
7	Accessibility, Climate, Local Resources, Infrastructure – sub-sections 7.1 to 7.7	Not Required (part of EA Application report)
	Accessibility, Climate, Local Resources, Infrastructure – sub-sections 7.8 to 7.15	Keith Watson, P. Eng
8	History	Keith Watson, P. Eng
9	Geology Setting – sub-section 9.1 to 9.5	Fred Shrimer, P.Geo
	Geology Setting – sub-section 9.6	Fred Shrimer, P.Geo in collaboration with Keith Watson, P. Eng and Don Hains P. Geo.
	Geology Setting – sub-section 9.7	Not Required (public disclosure)
10	Mineral Resource Estimate – sub-sections 10.1, 10.3 and 10.5	Keith Watson, P. Eng
	Mineral Resource Estimate – sub-section 10.2	Fred Shrimer, P.Geo
	Mineral Resource Estimate – sub-sections 10.4 and 10.6	Don Hains, P.Geo
11	Interpretation and Conclusions – sub-section 11.1	Fred Shrimer, P.Geo
	Interpretation and Conclusions – sub-section 11.2	Don Hains, P.Geo
	Interpretation and Conclusions – sub-section 11.3	Keith Watson, P. Eng

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Section	Description	Qualified Professional
12	Recommendations – sub-section 12.1	Not Required (part of EA Application report)
	Recommendations – sub-section 12.2	Fred Shrimer, P.Geo
	Recommendations – sub-sections 12.3 to 12.7	Keith Watson, P. Eng
	Recommendations – sub-section 12.8	Don Hains, P.Geo
13	Additional Requirements for Technical Report – sub-sections 13.1, 13.5 to 13.8	Keith Watson, P. Eng
	Additional Requirements for Technical Report – sub-sections 13.2 and 13.3	Don Hains, P.Geo
	Additional Requirements for Technical Report – sub-section 13.4	Not Required (part of EA Application report)

For the above-mentioned sections, each author contributed to the interpretations, conclusions or recommendations within their specific areas of expertise.

4.3 Definitions of Terms

The following definitions are used in this report.

4.3.1 Aggregate

Aggregates may be derived from sand and gravel deposits or from bedrock sources. Aggregate is crushed stone, gravel and/or sand having properties and characteristics appropriate for use as construction material. In general terms, aggregates are used for the construction of infrastructure, such as roads, buildings, highways, airports, pavement, and concrete. Its properties include strength, porosity and density such that it provides satisfactory durability, weathering and load-resistance as required for construction. Aggregate can range from low-cost products such as “common” fill, structural fill, road aggregate (grade fills, sub-bases, road bases), to a higher-priced, premium-quality materials, including asphalt aggregate (used for production of asphalt pavement), concrete aggregate (both sand and stone), drain rock, and specialty materials, such as railroad ballast, decorative stone, etc.

4.3.2 Mineral Property

Mineral property refers to any right, title or interest to property held or acquired in connection with the exploration, development, extraction or processing of minerals which may be located in, on or under the surface of the property, together with all plants, equipment and infrastructure owned or acquired for the exploration, development, extraction and processing of minerals in connection with such properties. Such properties shall include, but not be limited to, real property, unpatented mining claims, prospecting licenses, reconnaissance permits, reconnaissance licenses, exploration permits, exploration licenses, development permits, development licenses, mining licenses, mining leases, leasehold patents and patented claims.

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4.3.3 Mineral Resources

The term Mineral Resources, Measured Mineral Resource, Indicated Mineral Resource, and Inferred Mineral Resources and their usage have the meaning, ascribed by the CIM Standards on the Mineral Resource and Reserves Definitions and Guidelines adopted on August 20, 2000 (CIM Bulletin October 2000). These definitions may be amended by CIM from time to time, and included by reference in NI 43-101.

4.3.4 Qualified Person

An individual who:

1. Is an engineer or geoscientist with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of the above.
2. Has experience relevant to the subject matter of the mineral project and technical report; and
3. Is in good standing of a Professional Association.

Refer to NI 43-101, Part 1 section 1.1 Definitions.

4.3.5 Technical Report

A report prepared, filed and certified in accordance with NI 43-101 + form 43-101F1 Technical Report as outlined in NI 43-101 - Part 1 Section 1.2 Mineral Resource; Part 4, 6 and 8.

4.4 Purpose of Technical Report

The main purposes of this report are to:

- Provide a summary of information collected to date.
- Disclose the latest mineral resource estimate.
- Provide technical support for the 2005 Pre-Feasibility Study to secure market related contracts that will enable Ascot to move forward in the preparation of a bankable feasibility study.

4.5 References and Sources of Information contained in this Technical Report

Information discussed in this report draws on several past reports including:

No	Title	Date	Author
1	Technical Report and Recommendations on the Swamp Point Aggregate Property	July 15, 2004	Golder Associates Ltd. and H. Smit
2	Environmental Assessment Project Description	April, 2005	Ascot Resources
3	Environmental Assessment Certificate Application	November 2005	ECOS
4	Golder Report on Sand and Gravel Testing, Swamp Point	November 2005	Golder Associates Ltd.

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5	Pre-Feasibility Study (Rev. 1)	January 2006	Hatch

4.6 Extent of Field Involvement of Qualified Persons

Mr. Fred H. Shrimer, P. Geo. was present on site in November 2002 and during the initial set-up of the first drilling and test pitting program, on March 4 and 5, 2003. In March 2005, Mr. Shrimer was present during the fieldwork conducted by Ascot.

Mr. S. Keith Watson, P.Eng., is a Professional Engineer employed by Hatch. Mr. Watson visited the property on September 28, 2005 during a one day site visit, which included an aerial reconnaissance of the property by helicopter during arrival and departure. Mr. Watson's field visit also included examinations of the drill holes and test pit locations, roads, beach access areas and general site conditions such as locations of streams and peat conditions on the property.

Mr. Don Hains, P. Geo. visited the property on June 4, 2004. Mr. Hains conducted visual inspection of aggregate type and quality, all the drill hole and test pit locations completed at that time, roads, beach access and general site conditions such as locations of streams and peat conditions on the property, as well as an aerial reconnaissance of the property by helicopter during arrival and departure.

5. RELIANCE ON OTHER EXPERTS

5.1 Golder Associates

Mr. Fred Shrimer, P. Geo. has reviewed data produced by the personnel contracted to 647680 BC Ltd. and Ascot during the field program and has relied on the truth and accuracy thereof.

5.2 Hains Technology Associates

Mr. Don Hains P. Geo. has reviewed the data contained in the PFS report and prepared an independent marketing analysis for this project.

5.3 Hatch

Mr. Keith Watson, P.Eng. reviewed Yukon Engineering Services (YES) quantity determinations of the aggregate source based on 1 m contour mapping from 1:10,000 GPS controlled and targeted photogrametry. YES noted that the accuracy of the mapping becomes hampered where the ground surface is not visible on the photos. Dense tall tree cover, as exists to a limited extent on the site, can introduce error into the digital terrain model in those areas.

The 2003 drill holes were survey-located by a third party contractor. Elevation comparisons between the surveyed elevations of the drill holes and the digital terrain model are acceptable. Additional, more detailed field surveys would be required in order to further refine the volume calculations of the aggregate deposit, though this is not recommended at this time.

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The seismic refraction survey and the drill logs demonstrate some correlation, however in many instances the drilling was unable to extend to bedrock contact, and as a result uncertainty of the full depth of the aggregate deposit may vary from those developed for the determination of quantities. Similarly, the thickness of overburden above the granular deposit may vary from the limited seismic and borehole information available.

In addition, Mr. Keith Watson, P.Eng. reviewed YES design to verify that methods and procedures applied in establishing a mine plan for the project, meets expectations for a Pre-Feasibility report. A specific requirement in preparing a PFS report is that the mining engineer visits the property.

5.4 General

The abovementioned authors are satisfied with the quality of information, conclusions and estimates contained in the PFS report, which is consistent with the intended level of accuracy as well as the circumstances, and constraints under which the mandate was performed. The PFS report is preliminary in nature and is based on a **measured mineral resource**.

Therefore the geology, marketing and mine volume and planning information contained in this Technical Report is preliminary to a pre-feasibility study level of accuracy.

With respect to legal, environmental and political issues relevant to this Technical Report, the authors have relied on the following information provided by others, who are not qualified persons, to prepare this report:

- Environmental Assessment Application report November 2005 – sub-section 3.2.3; 3.3.1; 7.1 to 7.7; 12.1; 13.4.

6. PROPERTY DESCRIPTION AND LOCATION

6.1 Property Location

The Swamp Point aggregate property is in a remote location of northern British Columbia, approximately 880 kilometres northwest of Vancouver and approximately 50 kilometres south of the tidewater port of Stewart, BC. The area of the proposed development is 61 hectares and is situated on the east side of the Portland Canal (centered on latitude 55º 28’ N; longitude 130º 02’ W), which is a large fjord that separates British Columbia from the Southern Alaska panhandle on the northern coast of British Columbia. The port city of Prince Rupert is approximately 130 kilometres south of Swamp Point and is the closest major supply centre with an airport that has regular scheduled flights to and from Vancouver.

Figure 1 shows the property’s location, with access by boat, helicopter or float plane. There is no site access by road, and none is planned. Rough roads built to support logging transect the property. Small barges are able to land on the South Beach (tidal conditions permitting) and the South Beach has a road connected to other roads on the property.

Deep tidewater occurs close to the shoreline allowing access for large freighter vessels.

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6.2 Description

Ascot owns 100% of Licence of Occupation number 740560 which covers the sand and gravel deposit on which the project will be based, Foreshore Licence number 740744 which covers part of the foreshore area beside the deposit and two mineral claims which in part underlie the gravel deposit.

The property is within the boundaries of the North Coast Land and Resource Management Plan (NCLRMP). The NCLRMP process has not been finalised, however no protection-designated areas have been identified for the Swamp Point region.

The Swamp Point will load gravel and sand onto ocean going freighters and barges at the site for shipment to customers along the Pacific coast of North America and possibly other destinations. An optimal production of 3.4 million tonnes of aggregate per annum is planned.

Engineering and environmental work was initiated during 2003. Golder Associates Ltd. was involved with site investigations during 2003 and 2004 and continues to have a primary responsibility towards materials testing of aggregate on the property.

A consortium of consulting firms has implemented environmental studies and monitoring since September 2004 under the direction of Ascot and ECOS Environmental Consulting Inc.

An Environmental Assessment Certificate will be required for the Project as it constitutes a reviewable project pursuant to Part 3 of the *Reviewable Project Regulations* (B.C. Reg. 370/2002) as the Project will have a production capacity exceeding the threshold of 500,000 tonnes per year. The screening version of the Environmental Assessment Certificate Application was submitted in October 2005 and the final Application was accepted on December 8, 2005. Detailed information on potential environmental effects of the project, and planned mitigation strategies, can be obtained from this document.

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Figure 1: Property Location

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The intention is to obtain necessary certificates and permits by May 2006. Construction and initial mining operations is expected to cover phase one during the period 2006/2007. By second quarter of 2007 initial mine operations will be established and second phase of mining to reach full production is scheduled to start in 2009. This implementation schedule is dependent on permitting. There are no contracts secured for the product, and no contracts to ship the product currently in place. However, the development scenario and economic models in this Pre-Feasibility study will be applicable to the project should permitting delays or securing contracts result in a later commencement date.

6.3 Survey

There has not been a legal survey of the property boundaries. Property boundaries are established by a description and map attached to the Licence agreements.

In September 2004, airphoto targets were established on the ground and surveyed by differential GPS. The area was subsequently flown and airphotos and an orthophoto produced. Drill holes and other locations have been located by hand-held GPS. A differential GPS survey was conducted in 2005 to accurately determine locations in the vicinity of the proposed shiploader and the crossing of South Beach Creek.

6.4 Royalties

This Swamp Point property is subject to two royalties. A royalty of CDN$1.00 per cubic metre is payable to the British Columbia Provincial Government under the terms of the Licence agreement. At an exchange rate of US $0.85 per CDN$1.00 and an insitu density of 2.2, this equates to US $0.39/tonne.

A second royalty is due to 648680 B.C. LTD. under the agreement whereby Ascot acquired the property. This royalty is based on the price of product at Swamp Point. Shipping costs are an allowable deduction from the price receiving customers pay, but production and administration costs are specifically non-deductible. The royalty is 5% on the first 7 million tonnes, and then 8% on any additional tonnes.

7. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

7.1 Topography, Elevation and Vegetation

Swamp Point is located on the Portland Canal within the Coast Mountain ranges. The sand and gravel deposit consists of a 150 m high terrace on the east side of the Portland Canal, which slopes towards the coastline. Elevations on the property range from sea level to 160 m above sea level. East of the property, the slope steepens abruptly along the flank of 1300 m high Mount Tournay. Two sand beaches – referred to as North and South Beach - are located in the southern part of the property. A low rocky outcropping up to 15 m high separates the beaches. In this area, there is a limited width (10 m) sub tidal bench, beyond which there are steep submarine slopes and deep-water conditions. North of this area, there is a higher rocky ridge, and the slope from the coastline to approximately 100 m elevation is steep to locally vertical.

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The site is primarily covered by immature coniferous (cedar and hemlock) and deciduous vegetation with a wet muskeg area in the central part of the property. Almost all of the area has been previously logged, and only in an area of steep slopes above the shoreline in the northwest part of the property is any mature forest left standing. This area is not part of any planned development. At least three eras of logging are evident. Large, old tree trunks and logs attest to early logging, probably by A-frame from water as is typical along the coast. Most of the area was clear-cut within the last twenty to thirty years, and the pre-existing roads were built at this time. A small area above the north beach was logged recently.

7.2 Access to Property

Access to the Swamp Point Project site is by boat, float plane or helicopter. There is no access to site by road, and none is planned. Rough roads built to support logging transect the property. Small barges are able to land on the South Beach (tidal conditions permitting) which has a road connected to these other roads on the property.

Deep tidewater occurs close to the shoreline allowing access for large freighter vessels.

7.3 Proximity to Population Center and Nature of Transport

There are no existing communities in the immediate vicinity of the Swamp Point aggregate mine (See Territories in Figure 2). The nearest community is located in the town of Stewart, 50 km to the north at the end of the Portland Canal.

Stewart has a long history associated with the mining community, having been the settlement and service center for the Granduc and Premier Gold mines, as well as many other mines that have operated in the region during the past century. Stewart and local areas have experienced a population decline of approximately 23% between 1996 and 2001 resulting from an economic downturn in local resource industries. In 2001, there were only 661 residents in the area.

Hyder, Alaska is a small village adjacent to Stewart, and as of 2002 had approximately 100 residents. This small community has historically helped serve the mining sector in the area, but now relies primarily on summer-based tourism activities.

Communities along the Nass River (river mouth approximately 50 km south / southeast of the site) include the Nisga'a Nation communities of New Aiyansh, Gitwinksihlkw (Canyon City), Laxgalts'ap (Greenville), Gingolx (Kincolith). Nass Camp is a very small non-First Nation community that is also found in the Nass Valley. Of these, only New Aiyansh has a population in excess of 500 people. Communities along the coast north of Prince Rupert include Lax Kw'alaams and Metlakatla.

The largest community in the North Coast region is Prince Rupert, with a population of approximately 14,000 people. It is located approximately 130 km south of Swamp Point. Prince Rupert is the deepest natural ice-free harbour in North America and a major industrial and marine supply centre. Terrace is located approximately 136 km southeast of Swamp Point (direct line), and has a population of approximately 12,000 people. The Regional District of Kitimat-Stikine encompasses the mine site. The population in 2001 census was 40,875 with a total land base of approximately 93,570 km^2. Major centers in this Regional District include Terrace and Kitimat.

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Open house events and discussions with local representatives from these communities took place during June 2005.

7.4 Nisga'a Nation

The Nisga'a Nation, Canada and British Columbia entered into the *Nisga'a Final Agreement* on 11 May 2000. The *Nisga'a Final Agreement* is a treaty and land claims agreement within the meaning of sections 25 and 35 of the *Constitution Act, 1982.* Specific rights and obligations of the Nisga'a Nation, British Columbia and Canada are identified within the *Agreement.*

The Nisga'a Nation has certain interests in the immediate vicinity of the Swamp Point Project, and along its shipping route within Portland Canal and Portland Inlet, mandated by the Nisga'a Final Agreement, including:

- Specific properties owned in fee simple;
- Commercial recreation tenure area;
- Guide outfitter area; and
- Specific angling guide license streams.

In addition, under the *Nisga'a Final Agreement,* the Nisga'a Nation and Nisga'a citizens have certain rights over the Portland Canal and Pearse Island including:

- Rights to harvest wildlife and migratory birds;
- Rights to harvest fish and aquatic plants; and
- Rights of access.

The *Nisga'a Final Agreement* also establishes a number of joint Nisga'a / provincial / federal committees to facilitate the planning of certain activities in areas that include the Portland Canal, Portland Inlet and Pearse Island, such as:

- Joint Fisheries Management Committee, mandated to facilitate cooperative planning and conduct of Nisga'a fisheries and enhancement initiatives in the Nass Area.
- Wildlife Committee, mandated to facilitate wildlife management within the Nass Wildlife Area.

Besides its rights and obligations under the *Nisga'a Final Agreement,* the Nisga'a Nation and its associated corporations hold other tenures in support of its activities within the Nass Area and Nass Wildlife Area. The Nisga'a Nation holds a *foreshore lease* at Xmaat'in (Dogfish Bight) and a l*icense of occupation* at Wales Pass.

The Nisga'a Lisims Government (NLG) is an active participant in the Swamp Point Aggregate Mine Working Group on behalf of the Nisga'a Nation. Ascot is required by the Nisga'a Lisims Government to actively consult with the Nisga'a Nation regarding effects of the Project on the Nisga'a Nation rights identified above. Ascot has been conducting this consultation (refer to Section 2 of the Application) and will continue to do so.

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Ascot will continue to meet with representatives from the Nisga'a Nation during the Application review period and throughout the mine life. The scope and frequency of future meetings will be discussed prior to initiating construction activities.

7.5 First Nations

First Nations in the general area of Swamp Point include the Tsimshian First Nations of Lax Kw'alaams and Metlakatla. The communities of both Lax Kw'alaams and Metlakatla continue to rely on resources from the sea, and both communities want to be ensured that this Project will not affect their ability to continue to do so.

The Lax Kw'alaams and Metlakatla First Nations have expressed concerns about potential effects to marine resources that originate near the proposed mine site and/or resources found along the shipping lane. Ascot has designed the project and has developed mitigation strategies and management plans to address these concerns. Ascot will request that Vessel Traffic Control from Prince Rupert organize an information meeting to clarify how vessel traffic is managed between Triple Island and Stewart. Additional information will be sought regarding the laws of the sea and how various responsibilities are assigned to shipping companies, the ship's Pilot, the ship's Captain and the company chartering these vessels.

Ascot will continue to meet with representatives from the Lax Kw'alaams and Metlakatla First Nations during the Application review period and throughout the mine life. The scope and frequency of future meetings will be discussed prior to initiating construction activities.

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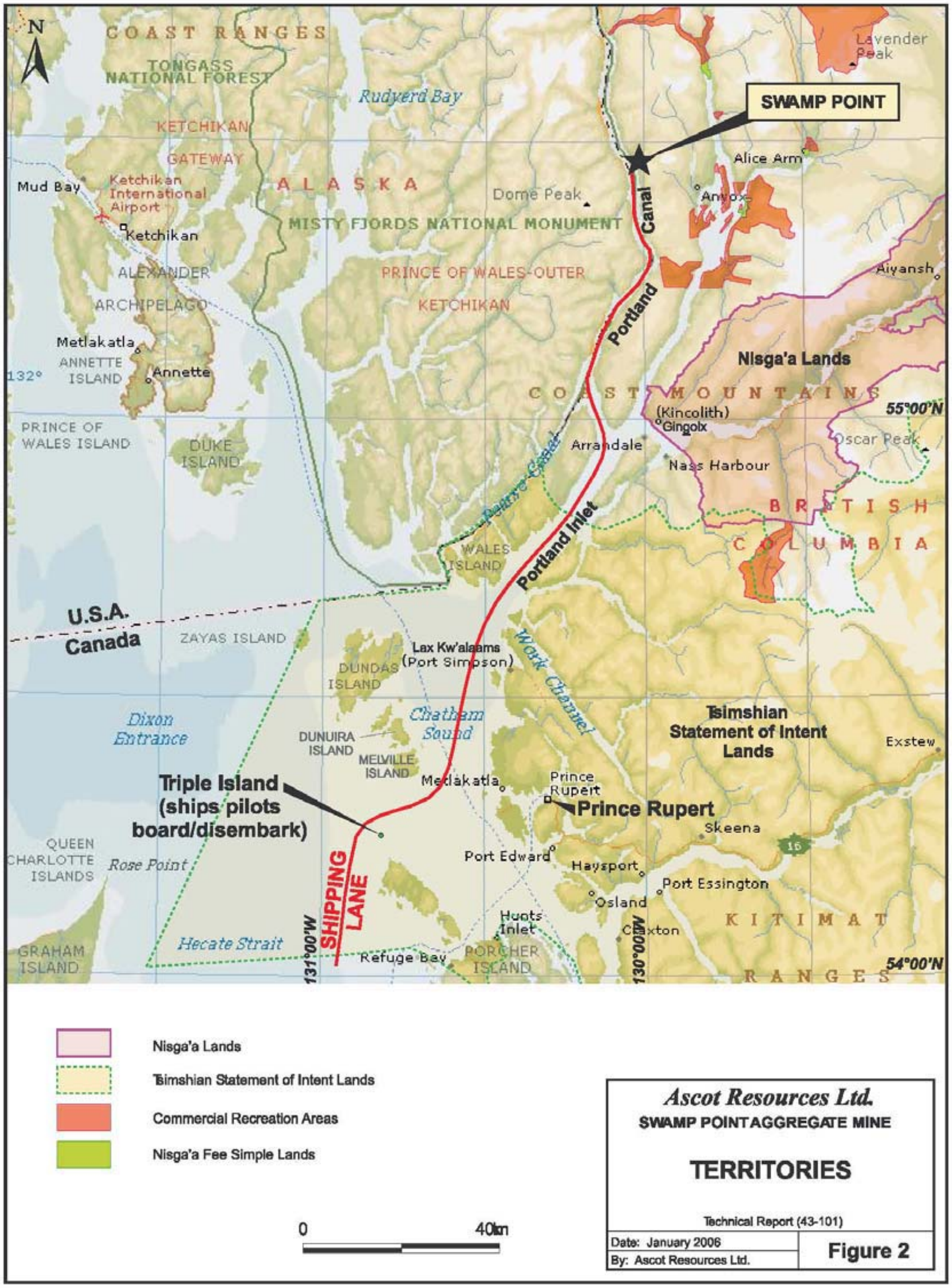
Figure 2: Territories



7.6 Climate

The Swamp Point property is in a region characterized by a maritime climate, with warm winters, cool summers and heavy precipitation, and operations are possible all year round. January and July are the coldest and warmest months of the year respectively with temperatures averaging –5°C and 14°C. The average annual precipitation ranges between 1,800 and 2,000 mm per year with the majority falling as rain during the fall months (September through November). The annual snowfall is approximately 540 mm per annum.

Precipitation can be very high at times, with the record 24-hour rainfall being 124 mm and the record snowfall being 105 cm. Winter snow pack depth varies year by year, because some years the average temperatures are above freezing for much of the winter. The average snow pack depth in Stewart is approximately 1 m (www.climate.weatheroffice.ec.gc.ca). Observations in 2004 and 2005 to date indicate that snow levels at Swamp Point are lower than at Stewart. An automated weather station was installed at Swamp Point in January 2005.

7.7 Mining Rights

The Swamp Point aggregate property is owned by Ascot Resources Ltd. (Ascot). Ascot is a publicly traded junior mineral exploration company listed on the TSX Venture Exchange (TSXV-AOT). The company was incorporated in British Columbia in 1986 for the purpose of exploring and developing precious and base metal properties. Ascot's primary holding at present is its 100% interest in the Swamp Point Property in British Columbia. The company's assets consist of mineral properties, cash and investments. The company funds its operations either through the sale of shares of the company or through the sale of its investments. Ascot has one investment being its 4,632,333 shares Cardero Resources Corp. (TSXV-CDU).

The head office of Ascot is located in Vancouver:

Ascot Resources Ltd.
Suite 900 – 475 Howe Street
Vancouver, British Columbia V6C 2B3
Telephone: 604-684-8950
Fax: 604-684-9877
Website: www.ascotresources.ca

The Officers of Ascot are John A. Toffan, President and CEO and Robert A. Evans, Secretary and CFO. Swamp Point is managed by Ken M. Carter, P.Geo. Director and Hans Smit, P.Geo. Further information on Ascot and its projects can be obtained from Ascot's website.

Ascot acquired Swamp Point in 2004 from 647680 BC Ltd.; a private company controlled by major shareholders and directors of Ascot. The acquisition included a 100% undivided interest in License of Occupation # 740560, which is approximately 97 hectares in size and includes the area underlain by the gravel deposit. The acquisition also included License of Occupation # 740744, covering approximately 5.9 hectares in the area required for ship and/or barge loading facilities. The licenses are administered by the B.C. Ministry of Agriculture and Lands.

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Ownership of two four-unit mineral tenures underlying the aggregate deposit (GM and Key) was transferred to Ascot as part of the agreement. These were converted to cell claims in July 2005 under the new Mineral Title Online system. Douglas Edwin Eacrett and Teck Cominco Ltd own other mineral rights underlying the deposit. The mineral claims that exist below the aggregate deposit cannot prevent the extraction of materials above bedrock.

Figure 3 shows a parcel of land designated L494 within the area of Ascot's Swamp Point License of Occupation 740560. Ownership of this lot reverted back to the Crown in 1918 due to non-payment of taxes (Golder Associates and Smit, 2004).

Licence 740560 grants Ascot a licence of occupation for the purpose of quarrying, digging or removal of gravel and uses ancillary to quarrying such as sorting, crushing and stockpiling. Licence 740744 grants Ascot a licence of occupation for development of a deep sea loading facility for a gravel quarry upland. Neither licence grants exclusive use of the land. Ascot will apply for a lease prior to initiating development as this does give exclusive use to the land. Surface rights as outlined above provide sufficient proof of ownership to both property and deposit.

Prior to initiating construction, Ascot will require a Mine Permit and other permits. These can be acquired after the Project's Environmental Assessment Certificate has been issued.

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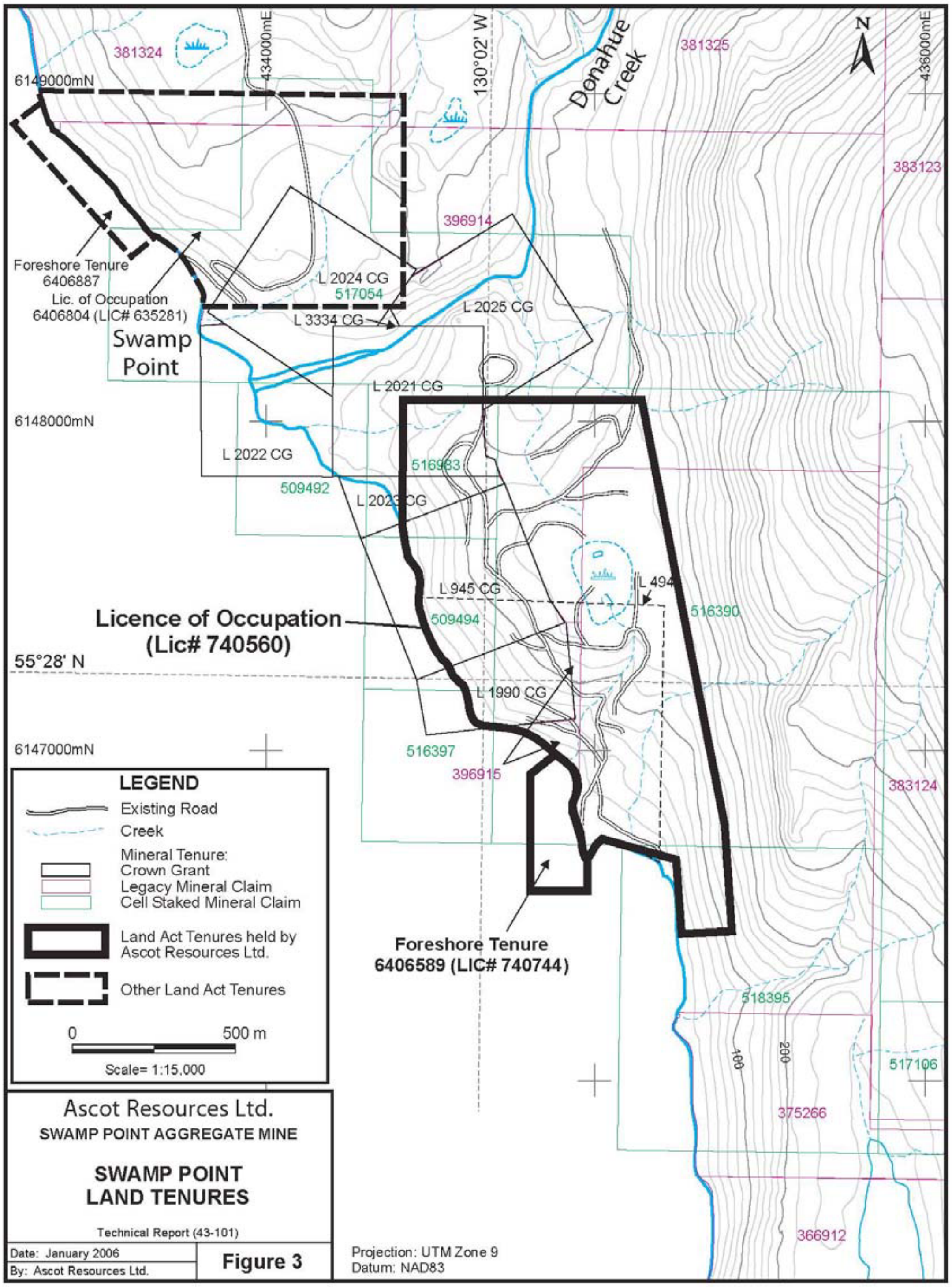
Figure 3: Swamp Point Land Tenures



7.8 Process Plant

The Phase One processing plant will consist of a gravel crusher, a screening plant, and a wash plant. The plant will sort materials, reduce the size of cobbles and larger rocks (to a maximum of 50 cm diameter) via crushing, and then wash the materials. Due to working space limitations during initial mine development, the Phase One Processing Plant will be significantly smaller than the plant used during full operations (Phases Two through Five).

The full operations include processing plant modules designed specifically for Swamp Point. The Processing Plant will be portable and therefore will not require a building enclosure, and will be powered by a diesel electric generator located at the Laydown Area.

The plant will be constructed in a manner that allows it to be operated in several different configurations. There will be duplication of all components except the jaw crusher and control tower van, allowing any one or number of components to be turned off and still allow the processing to continue. This will provide some redundancy and as a result more reliability.

As noted above, if this plant is used for Phase One, the complete proposed plant will not be required due to the lower production level. Only one of each of the components will be purchased and shipped to the site in order to achieve the lower Phase One production.

Another benefit of using duplicate components is that if a breakdown were to occur, all production would not stop. With all types of plants, a breakdown at Swamp Point could be very time consuming and expensive, due to the remoteness of the site.

The Swamp Point Aggregate Mine Processing Plant will consist of:

- 1 – power van c/w control tower;
- 1 – 20" x 48” primary jaw crusher;
- 2 – XC1400 54” cone crushers;
- 2 – 6’ x 20’ double deck Screens;
- 2 – 6’ x 20’ triple deck screens with wash capability;
- 2 – 42” sand screws; and

Various feeders, conveyors, stackers and surge bins.

7.9 Shiploader and Materials Handling

The shiploading and materials handling systems begins at the product stockpiles and ends at the shiploader telescopic spout, where the products drop into the ship’s holds or onto a barge.

The materials handling system will consist of 48” wide conveyor belts – the number and length of each section of belt conveyor will depend on the selected location(s) of the product stockpiles, which will change with the mine plan. The conveyor system will transport products from the stockpiles to the shiploading system. During the Conceptual Phase of this study, the location of the product stockpiles was located about a kilometre to the east of the shiploading system. For the initial phase of the operation, the product stockpiles will now be located in an area closer to the mining area, immediately to the north of the North Beach shoreline.

The major components of the system will include the following:

- An overland conveyor system, consisting initially of two sections 48-inch wide belt conveyors, with a design capacity of 2500 t/h, to carry products from the stockpiles to the shiploader conveyor system;
- Two (2) 48-inch wide by 150 ft long portable conveyors to transport products from the stockpiles to the overland conveyor – to reduce the travel distance for mobile equipment used in reclaiming products;
- A receiving hopper at the tail end of the overland conveyor for products from the portable conveyors;
- A 48-inch wide ship loading conveyor system, with a design capacity of 2500 t/h, to receive products from the overland conveyor system;
- A radial shiploader with a design capacity of 2500 t/h of aggregates;
- Marine structures for supporting the shiploader and for the berthing and mooring of the ships and ocean-going barges to be loaded with products.

7.10 Power Supply

Electricity will be generated on site with three diesel electric generators. The two primary generators will each have a capacity of one MW, and will be located at the Laydown Area (see drawing in section 14). The Operations Camp will have a separate 125 kW generator located at the camp.

7.11 Water Supply

Fresh water will be supplied by Reservoir Lake located approximately 1 km southeast of the mine area. Reservoir Lake will be used to supply the mine with the fresh make-up water required for the wash plant component of the Processing Plant. A pipeline will be installed from Reservoir Lake to the Fresh Water Storage Pond at the mine site.

The primary fresh water supply for the Project will be Reservoir Lake, which will in turn be augmented by a pipeline diversion from Steep Creek and an interceptor ditch near the Fresh Water Storage Pond. Water will be piped from Reservoir Lake to the mine site. During Phase One, the water supply pipeline from Reservoir Lake will be routed to the Fresh Water Storage Pond.

7.12 Infrastructure

Slurry wash water will be piped from the Processing Plant to the Process Water Settling Ponds for settlement. In the case of slurry going to a settlement pond that is lower than the Processing Plant, the slurry will be piped and not pumped.

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The Process Water Settling Ponds will be constructed in three cell configurations to maximize retention time and settlement of fine sediments. The first two cells are expected to seal quickly with settled sediments as process water is circulated through the cells. The third cell will be lined with an impervious material to improve water retention.

Runoff Settling Ponds will be constructed to collect overland flow from within the mine development area, and prevent any discharge of sediment-laden water to the receiving environment.

The Mine Perimeter road will be the longest road at the mine site, and will extend approximately 1.8 km from the Laydown Area to the Fresh Water Storage Pond. It will be constructed in 2 stages; the first at the beginning of the operation to provide the primary access to the Operations Camp, the soils, sub-soils, peat, and mine waste stockpiles; and the second stage being in the second half of year 2 to allow access to the bottom of Phase One and to widen the section from pit bottom to camp to full width

Ancillary infrastructure at the Swamp Point aggregate mine will include camp facilities (both the temporary Floating Camp and the longer term Operations Camp); Shop and Warehouse; fuel storage tanks; refuelling pad; electrical generation facilities, incinerator, and an office trailer. All of these facilities except the camps will be located at the Laydown Area.

7.13 Solid Waste

Solid waste management will begin as soon as construction is initiated. The incinerator will be brought to the site at the beginning of construction, and will be used daily for putrescible wastes. It will be placed at a temporary location until the designated site on the Laydown area has been prepared. Similarly, a temporary location will be used for storage of recyclables, non-recyclable inert refuse, and any hazardous wastes until the permanent (i.e., for mine life) locations are available.

The temporary Floating Camp used during the initial constructions stage of Phase One and during final site decommissioning will have a self-contained septic system that will discharge macerated sewage to a well-flushed area of at least 18 m in depth. The permitting requirements for this discharge will be the responsibility of the camp owner. Outhouses will be used at the mine site until the Operations Camp and Laydown Area septic systems and associated facilities are complete. Outhouses will be situated well away from aquatic habitats, and the bottom of the pit toilet will be at least 1 m above the highest groundwater level. The soils on this property are well suited for pit-toilets.

The wastewater disposal systems for the Operations Camp, Laydown Area, and Maintenance Shop will be engineered, constructed, and maintained under the direction of a registered professional, and will meet requirements of the *Health Act* (RBC 1996) Chapter 179 and the Sewage System Regulation (B.C. Reg. 326/04). Wastewater for the mine will come from washroom discharge and grey water from the cooking, laundry and shower facilities.

The Operations Camp sewage system will be sized for 40 persons on-site at any one time, and consist of an appropriately sized septic tank followed by discharge of effluent to ground (subsurface) via absorption field. As this project will have less than 100 persons, the company will not be required to obtain an Effluent Permit for this discharge, but must comply with the *Health Act* (RBC 1996). A smaller, similar type sewage system will be developed at the Laydown Area.

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7.14 Personnel

Total manpower on site has been estimated at 38 (i.e. 32 personnel including camp staff on site at any time + 6 personnel in the corporate office in Year 3).

Ascot will take steps to maximize local hiring through possible measures such as developing a recruitment plan; identifying skills and training needed for employment; and circulating job descriptions to the various communities and organizations.

Ascot will also maximize work opportunities for local contractors through possible measures such as identifying project components that could be targets for local businesses; preparing an annual business opportunities forecast; and maintaining a local contractor and supplier database.

7.15 Mine Waste

All of the mine waste materials will be stored on the phase 4 mining area and will be moved to previously mined areas on the slopes and floor as these areas are cleared of marketable aggregate. The reclamation of the walls and floors of the mined areas will be an ongoing activity. As the floor of the pit gets lowered the walls will be replaced with mine waste that will be used to reclaim it. Some of the materials will be placed along these walls as they are easy to reach and the materials will be placed there directly from the stripping activities ongoing. In this manner the movement of some materials more than once will be avoided.

There is a significant cemented layer in the upper section of the sand and gravel deposit that is unsuitable as a product or for use in reclamation as a growth medium. This material will be salvaged separately and stored in the Mine Waste Stockpile along with silt removed from the Process Water Settling Ponds.

The small project development area, in combination with significant combined depths of soils and overburden requiring removal, requires a progressive reclamation plan be completed during the life of mine. The total development area is only approximately 61 ha, and total depths of overburden (soils and subsoils) exceed 1 m over most of the site.

There are no suitable storage sites outside the excavation and infrastructure areas. Salvaged soils, subsoils, and mine waste (combined cemented materials and wash water silt) must be initially stored in an area to be mined later in mine life (i.e. Phase Four mining area). Materials must be placed and/or spread over completed mine areas as early as possible in the mine life to minimize double handling. Some double handling will be unavoidable. Between Mine Phases Three and Four, mine waste materials will be re-located to the mined out Phase Three area and used to build up the stockpile storage area to elevation 36 m ASL. Remaining soils, subsoils, and mine waste will also be relocated to the mined out Phase Three area and stockpiled separately for use at the end of Phases Four and Five. Mine waste materials will be used to create post-mine pit slopes of 2:1 horizontal:vertical gradient applied to the pit floor.

Where possible, soils handling will be kept to a minimum. Soils and subsoils will be salvaged separately, and trucked to the designated stockpile locations for separate storage. There will be four separate stockpiles:

1) soils desirable for use in reclamation;

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2) better quality subsoils and soils that are unsuitable as top dressing but that have some value as subsoil;
3) product stockpile of organics (peat), which would be used in reclamation if not sold; and
4) a mine waste stockpile comprised of the cemented materials and wash water silt. Over-size rock and larger rocks salvaged from stony surface soils will be piled separately.

8. HISTORY

During the period 1916 to 1922, limestone was produced at Swamp Point property from two workings located near the shoreline in the northwest part of what is now Ascot's License of Occupation #740560. The limestone was used for flux at the Anyox copper smelter. A reported 260,000 t were produced (Minfile 103O 017).

The Swamp Point area has been thought to contain a gravel deposit for several decades. Mapping carried out by the B.C. Geological Survey (OF-2001-19) consisting of air photo interpretation and topographic mapping review identified the possible occurrence of a sand and gravel deposit in the Swamp Point area.

Preliminary site surveys were conducted between the 1970s and early 2000's. These site surveys generally involved walkover surveys and near-surface sampling. Limited testing of samples was carried out following these site surveys. Rick Kasum and Gerry Morrison acquired a Licence of Occupation in 1999 over part of the Swamp Point area, and optioned it to Lafarge Canada Inc. Lafarge did not do any significant on site work, and subsequently dropped all interest in the Licence.

Through an agreement with Kasum and Morrison dated October 1, 2002, rights to this licence and a foreshore licence were acquired by 647680 BC Ltd. Subsequently 647680 BC Ltd. applied for new licences, which covered the existing licences plus additional areas surrounding the licences. The current licences were granted in 2004. Golder Associates Ltd. and Smit (2004) were unable to find any formal detailed exploration work on the property prior to the involvement of 647680 BC Ltd.

Exploration of the Swamp Point area was initiated by 647680 BC Ltd. in October 2002. Air photographs and topography were analyzed and a preliminary cross-sectional model of the deposit was developed. In November 2002, a three-day aerial and ground survey was conducted across the lands of interest and samples of material were obtained from shallow hand-dug excavations and bank exposures. These were evaluated in a program of laboratory testing to assess engineering properties of the materials. This preliminary testing indicated that the materials had potential for use as aggregate and a program for further evaluation of the property was developed.

A geophysical survey of the target area was conducted in December 2002. Seven seismic lines totalling 4.2 km were completed. The geophysics indicated a significant body of unconsolidated sediments south of Donahue Creek, with seismic velocities consistent with a granular deposit. The zone was indicated as having a maximum thickness of some 95 m, which was centered on the flat-topped muskeg zone.

In March 2003, 9 Becker drill holes totalling 402 m in depth were completed and 4 test pits using a tracked excavator were excavated. Hole depths ranged from 10 to 84 m. Information obtained from the

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drilling and test pits generally confirmed the inferred geology from earlier phases of site reconnaissance. Approximately 10,000 kg of material from the drill holes and test pits was transported to Vancouver for testing.

Testwork consisted of characterization of grain size distribution, augmented by a series of standard engineering index tests. Results provided preliminary indications that the sand and gravel material is suitable for production of aggregate, meeting typical Canadian and American specification requirements.

Preliminary environmental and engineering studies were initiated in 2003. Environmental studies were expanded to an EA level of baseline assessment in August 2004.

Ascot acquired all of 647680 BC Ltd.'s interest in the property in September 2004. Ascot continued the environmental baseline studies and started collecting other data required for environmental assessment. A scoping level study of project economics was completed in 2004. The positive conclusion from this study resulted in Ascot starting project engineering and a pre-feasibility study in 2005.

To further evaluate the property, a second phase of drilling was undertaken by Ascot in March and April of 2005. Thirteen holes totalling 596 m were drilled using a Becker Hammer drill. Most holes were drilled using a 23 cm diameter drill, and the balance with a 16.5 cm diameter drill. Eleven holes were drilled to better define the volume of the deposit and to collect additional samples for materials testing.

In the area above North Beach, a water well was drilled for testing potential ground water quantities and two monitoring wells were installed. One of these wells was installed in a hole drilled for materials testing. In addition, five test pits between 4 and 7 m deep were excavated to obtain sample material.

Approximately 20,000 kg of material from the 2005 drill holes and trenches were sent to the Golder lab in Surrey, BC for materials testing. A similar amount of material was stored in Prince Rupert pending further requirements for additional testing of materials. Testwork on this material is ongoing. Results to date continue to show that the sand and gravel material is suitable for production of aggregate meeting typical Canadian and American specification requirements.

Swamp Point entered the BC Environmental Assessment Process following submission of the Project Description in April 2005. The screening version of the Environmental Assessment Certificate Application was submitted in October 2005 and the final Application was accepted on December 8, 2005.

9. GEOLOGY SETTING

9.1 Regional Geology

The Swamp Point area is underlain by the western margin of a 14 by 10 km roof pendant within the Tertiary Coast Plutonic Complex. The rocks are commonly correlated with the Lower Jurassic Hazelton Group and are comprised of mafic and intermediate volcanics interbedded with felsic tuff, siltstone, silty argillite, fine grained sandstone and limestone. The sequence strikes 010 to 035 degrees and dips 40 to 85 degrees southeast. Regional metamorphism has resulted in variable foliation and mafic rocks have been chloritized to greenstone and chlorite-hornblende schist. The pendant is surrounded on the north and south sides by large Tertiary intrusions.

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Mineralization in the area includes several quartz veins containing copper, gold, and silver located to the south of the Swamp Point aggregate deposit. A total of 126,000 t were reportedly produced from the Outsider vein located 2 km south of the property. The Anyox copper mine, smelter and town site were located 15 km east southeast of the property.

A limestone deposit at Swamp Point was mined for flux for the Anyox smelter from 1916 to 1922. Mining was from two quarries located between the northwest part of the aggregate deposit and tidewater. In this area, a 60 m thick bed of white to dark bluish- grey, medium to coarse-grained limestone strikes 360° and dips steeply to the east. The bed is folded and cut by a few thin dykes. Reported production was 260,000 t (BC Ministry of Energy, Mines and Petroleum Resources – Minfile).

9.2 Property Geology

9.2.1 Bedrock Geology

Bedrock exposure at Swamp Point is mostly limited to the shoreline and the steep slopes in the northwest part of the property. A small number of outcrops occur in the valley in the north-central part of the property. Rocks exposed along the shoreline in the south part of the property were described in the field as black rusty weathering argillite and massive, green fine grained volcanic (and/or intrusive). Limestone occurs in the northwest part of the property. Bedrock at the bottom of drill holes drilled through the aggregate deposit was described as foliated dark metasediment. A sample from the rocky point in the south part of the property that was sent for petrographic analysis was described as a fine grained hornblende schist.

Foliation on the property strikes north to NNE with moderate to steep east dips.

9.2.2 Surficial Geology

In 2005, Charlotte Mougeot of Gartner Lee Ltd. prepared a surface geology map using air photography, previous reports, notes from Ascot personnel, borehole information, and a field visit. As well, a stratigraphic model was prepared using exposures, borehole data, existing maps, and interpretation of the depositional environment of the property area. The following description has been taken from a report produced by Gartner Lee Ltd. for Ascot dated May 2005 and titled, "Quaternary Geology of the Swamp Point Area, BC".

The Swamp Point area is described as a glaciofluvial-deltaic complex. Glaciofluvial deposits appear to compose most of the terrace or plateau-like landform at Swamp Point and form most of the estimated resource of the Swamp Point property. This material was observed in sections, road cuts, in test pits, and correlated to most of the sand and gravel intervals described in the 2003 and 2005 boreholes.

On the nearly level portion of the property, the sand and gravel are overlain by organic material. On the slopes facing the coast and roads, they are overlain by re-deposited or colluviated sand and gravel. They are composed dominantly of sand and pebbly sand, moderately well sorted, moderately well stratified. Composition is dominated by medium sand, with some coarser and finer sand; a very low silt content (less than 3% according to borehole description); and gravelly to pebbly beds.

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The deposit is anticipated to contain a low amount of silt, occasional beds of cobbly gravel and a low occurrence of boulders. This composition should be fairly consistent, with the proportion of finer sand increasing towards the southwest. Boulder rich intervals are likely to be linked to the proximity of the rock wall (rock fall) or bottom or till layers overlying the bedrock.

As the ice retreated inland, east of Mount Tournay, it left a layer of boulder and clay-rich till, called here basal till, at the interface between rock and ice. This material is probably unsorted, unstratified and can contain boulder to clay-size material. It is possible that marine or glacio-marine sediment may be mixed in this package. The bedrock surface is expected to be variable and therefore thickness of the till filling in depressions and covering an irregular shaped surface would also likely be variable.

During the retreat, the glacier released huge quantities of melt water. It is likely that the ice sat for an indeterminate amount of time near or at a saddle or pass located north and east of the property boundary. At that time, debris that had accumulated on top and within the ice became saturated and flowed from the ice toward the coast. These debris flows could also be call supraglacial till, and indeed could represent a complex assemblage of re-sedimented till. Boulders, gravel pockets and till pockets could be included in this package. For simplicity's sake this sedimentary package is called debris flow. Such units were observed in sections, and may correlated with intervals of thin and discontinuous coarse to cobbly gravel with higher clay content encountered in boreholes.

These sediments were deposited rapidly as partially to fully saturated gravity flows or slides. There is little to no evidence of sorting by water and faint fabric can be present. They consist of boulder rich, massive to very poorly sorted clay, and silt to boulder size material. Occasional, very thin lenses of silty sand to gravelly sand are visible in sections. On sections, the approximate composition by volume of material includes traces of or low clay content, 15 to 35% silt, 20 to 35% sand, 20 to 25% pebbles and cobbles, and 10% boulders. Boulders and cobbles tend to be subangular to subrounded. Contact with underlying units is well defined but not erosive. Such deposits could be classified in a very general manner as till, as they are directly deposited by the ice, and have been called flow tills, glacial debris flow, supra-glacial till and several other names, depending on the specific sedimentary features observed and specific sedimentary environment inferred from these detailed features.

It is highly likely that debris flow deposition re-occurred during deglaciation at the same time as melt water carried sediments away from the ice, and therefore, thin (less than 4 to 5 m), discontinuous intervals of poorly sorted, unstratified clay to cobbles intervals can be found anywhere at any depth in the study area. However, it is more likely that these debris flow sediments would be more common nearer the ice (in direct contact or short distance from the ice front) and therefore they are more likely to be present toward the northeast portion of the property, close to the saddle of bedrock, uphill from Donahue Creek, where an ice front probably stayed long enough to deposit the glaciofluvial sediments discussed below.

The next set of sediments deposited in the study area consists of glaciofluvial sediments or sediments transported and deposited by melt water. Ice contact sediments have a different composition than ice-proximal, intermediate, and distal sediments.

Ice-contact sediments, as their name indicates, were deposited directly at the front or very near the front, side or bottom of the ice by melt water. The coarsest material, boulders and cobbles are deposited (or dumped) very quickly while water carries away gravel sand and silt. Pockets of unsorted sediments can be found in ice contact sediments, mixed with the very coarse to bouldery, unsorted to poorly sorted,

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mostly unstratified sediment. This package of sediment was not observed in sections and could be difficult to differentiate from a till unit in borehole data, if that till unit did not have a high fines content. It is highly likely that this sedimentary package was located very close to the saddle or pass. Most of the very large size fractions of material transported, (and washed of fines) by the melt water would have been dropped very near the ice.

Ice-proximal glaciofluvial gravels are sediments transported by meltwater a short distance away from the ice. They show signs of poor sorting and poor stratification by water, and are composed dominantly of coarse gravel with a minor sand fraction. This was not observed in section and not correlated with borehole intervals.

Further away from the ice, the energy of the water is much lower and therefore the size of material that it carries is smaller: dominated by sand and pebbles, sediments have a low silt content as there is sufficient carrying capacity to transport the finer-sized material such as silt or clay further away. These types of intermediate glaciofluvial deposits are likely the type that was described for significant intervals in most boreholes, and observed test pits and sections. Sections and test pits show poorly to moderately well stratified beds of moderately well to well-sorted fine to medium sand, with poorly developed bedding dipping gently toward the coast and occasional poorly defined sedimentary features associated with an alluvial fan system or delta. The poor stratification and narrow range of grain sizes, ranging from fine sand to pebbles, dominated by medium-grained sand and the near absence of silt, suggest a lack of channelling of the water, and water with low carrying capacity but sufficient energy to carry fines further downstream.

The silt and fine sand content will likely increase southeastward and upwards in section, as meltwater flow energy decreased, further from its source, the retreating glacier.

As deglaciation continued, the ice retreated further inland and at some point drainage did not escape over the pass but behind it. Water was diverted in the drainage system located in the next valley system east of the coast. This rapid interruption of flow would explain the absence of a distal, well sorted, well stratified, and silt-rich sedimentary package associated with an increased distance from the source of water – the melting glacier.

9.3 Metal Leaching/Acid Rock Drainage

9.3.1 Introduction

The proposed Swamp Point Aggregate Mine will involve extraction of sand and gravel only. The sand and gravel deposits are underlain by bedrock, which may locally be exposed in the southeast and northwest portions of the final pit. However, the total maximum area of potential exposure is small (less than 0.9 ha) compared to the total area of the excavation (60 ha), and the bedrock will not be mined but remain as the original sub-surface expression of the natural contact. Some possibility for small bedrock cuts exists along the access road to the Operations Camp, the Laydown Area, and the Loadout Pad.

The potential for metal leaching/acid rock drainage (ML/ARD) from gravel deposits is expected to be extremely low since the materials have been weathered, eroded, transported, and deposited under geological conditions and would therefore be completely leached of any soluble components by natural processes. The "Draft Manual of Guidelines and Recommended Methods for the Prediction of Metal

Leaching and Acid Rock Drainage at Minesites in British Columbia" (Price, 1997) states that "No testing is required on unconsolidated materials as glaciofluvial and fluvial deposits, derived from wide areas, having little opportunity for either sulphide or trace element concentration or deposition." Nonetheless, some testing of the aggregate for ML/ARD potential has been completed to confirm their characteristics.

The following sections are focused on characterization of bedrock in the area although as indicated above the bedrock exposure is expected to be at most 1.5% of the total mine area. Discussion of ARD in relation to the sand and gravel is given in section 9.4.4.15.

9.3.2 Geological Background

The bedrock and surficial geology of the deposit has been described in Section 9.2. Bedrock strata immediately underlying the gravel deposits are sedimentary and volcanic rocks of Jurassic age. Regionally these rocks are mineralized with copper, zinc, silver, and gold. A search of B.C. MINFILE indicates that a small past producing mine (Outsider) and three prospects (Eagle-May Queen, Princess, Blue Bell) are located within 5 km to the south of Swamp Point (Table 1).

Table 1: MINFILE Listing for the Immediate Vicinity of Swamp Point

MinFile #	#	Name	Status	Commodities
103O	009	FRIDAY	Past Producer	Silica
103O	17	SWAMP POINT	Past Producer	Limestone
103O	18	OUTSIDER	Past Producer	Copper, Silver, Gold, Silica, Zinc
103O	19	STAR	Past Producer	Not listed
103O	20	SWAMP POINT S&G	Past Producer	Aggregate
103P	40	COMSTOCK	Showing	Copper
103P	43	EAGLE - MAY QUEEN	Developed Prospect	Copper, Zinc
103P	48	PRINCESS	Developed Prospect	Copper, Gold, Silver
103P	242	BLUE BELL	Developed Prospect	Copper, Silver, Gold

The gravel deposits are derived from rock to the east, which includes granite, sediments, and metavolcanics in the catchment area of Donahue Creek. There are no documented mineral occurrences in this area.

9.3.3 Methods

Eight samples of bedrock from outcrops were submitted for various analyses to assess ML/ARD potential of Swamp Point materials. The samples were analyzed for ABA, an element scan and whole rock oxides.

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9.3.4 Results

The locations of the rock outcrop samples are shown in the PFS Drawing No. 3-1 in Appendix A. Seven of the samples were either suspected basalt, argillite or schist. One sample of mixed limestone and schist was collected.

The samples are characterized by a range of sulphur concentrations (0.07 to 2.65%). Sample 150007 containing 2.65% sulphur was a restricted 10 cm wide structure in schist showing visible copper and iron sulphide minerals and copper staining. Nearby unmineralized schist (150006) contained lower sulphur (0.36%). Other higher sulphur concentrations were associated with two argillite samples (150003 and 150005, 1.03% and 0.87% total S, respectively) collected from the south end of the property. Nearby basalt samples had much lower sulphur concentrations (150002 and 150004, 0.07% and 0.08% total S respectively). An argillite sample collected to the southeast of the ultimate pit area had sulphur of 0.11%. The mixed limestone/schist sample (150009) collected from near a former small limestone quarry contained 1.36% total S. Natural oxidation was shown by the presence of detectable sulphate in some samples and depressed pH (5.6) in one sample.

Except for the limestone sample, neutralization potentials were low (less than 17 kg $CaCO_3$/t) and the rock did not show detectable fizz with hydrochloric acid. Carbonate contents are low (less than equivalent to 8 kg $CaCO_3$/t).

To evaluate potential for ARD, NP/AP and TIC/AP are shown. TIC/AP is a conservative indicator of ARD potential since carbonate is the accepted reactive component of neutralization potential. In terms of NP/AP, the argillite samples from the south end of the property had NP/AP and TIC/AP less than 1 indicating potential for ARD. The pH of 5.6 in one sample indicated that natural weathering had produced some acidity. The basalt samples had NP/AP above 5 but TIC/AP below 1. Since the AP was very low, the lack of carbonate was not likely to result in the basalt having potential for ARD. Of the two schist samples, sample 150007 had potential for ARD and sample 150006 was of uncertain potential for ARD.

Element concentrations were variable and to some degree correlated with sulphur content. The basalt samples showed typical background concentrations. Zinc concentrations were somewhat elevated above global background concentrations in the argillite and schist. Copper concentrations in the schist were above global background.

9.3.5 Discussion

The results indicate that schist and argillite in the area may have potential to generate ARD or leach zinc under neutral pH conditions. Basalt appears to be less mineralized though this conclusion is based on limited sampling.

Aggregate mining is expected to result in very limited exposure of bedrock. The metal leaching / acid rock drainage (ML/ARD) assessment indicates that the development should avoid exposure of bedrock and that any excavation will require monitoring and contingency plans to ensure that any waste rock and cut faces are managed to avoid drainage impacts.

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Due to the background sulphide mineralization in the schist and argillite, it is expected that groundwater presently in contact with the rock may contain elevated iron concentrations and possibly acidity and metals such as copper and zinc.

9.3.6 Monitoring & Mitigation

Since no bedrock excavation is currently contemplated, mitigation plans for management of rock cuts and waste rock are not needed. In the event that any bedrock excavation is found to be a requirement as mining progresses, the rock would be visually characterized and samples collected and tested for total and soluble metal content and ARD potential. Based on the results, an appropriate management strategy would be designed.

9.4 Deposit Description

9.4.1 Introduction

The Swamp Point deposit is a sand and gravel deposit comprised of approximately 50% gravel, 47% sand, and 3-4% silt. The deposit, which was formed as a result of glacial outwash, is weakly to poorly stratified. Discontinuous lenses of more silt-rich and till-like layers occur in the deposit, but the extent of these is not expected to be significant. Till-like lenses are more common along the eastern and northern edges of the deposit. The deposit becomes finer grained overall in a southward direction. Boulders ranging from 0.5 to 3.5 m in diameter were observed at surface and encountered in drill holes and test pit excavations.

Petrographic work indicates that the sediments, which form the deposit, are comprised of predominantly intrusive rock (granite-granodiorite and diorite-gabbro) and fine-grained metamorphic rocks (phyllite, schist, amphibolite, gneiss), with lesser amounts of volcanic (basalt-andesite with some rhyolite-dacite) and other rock types.

9.4.2 2002-2003 Site Investigations

Exploration of the Swamp Point area was initiated by 647680 BC Ltd. in October 2002. Air photographs and topography were analyzed and a preliminary model of the landform was developed. In November 2002, a three-day aerial and ground survey was conducted across the lands of interest and samples of material were obtained from shallow hand-dug excavations, and from bank exposures. These were evaluated in a program of laboratory testing to assess engineering properties of the materials. This preliminary testing indicated that the materials had potential for use as aggregate and a program for further evaluation of the property was developed.

In order to begin the process of developing a model of the geometry and extent of possible granular resources at the site, a geophysical survey of the target area was conducted in December 2002. Seven seismic refraction lines totalling 4.2 linear kilometers were completed. The geophysics indicated a significant body of unconsolidated sediments south of Donahue Creek, with seismic velocities consistent with that of a granular deposit. This area was indicated as having a maximum depth of some 95 m of granular materials, and was centered on the flat-topped muskeg zone.

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To augment and refine the data generated in the geophysical survey, a program of drilling was undertaken in March 2003. A total of nine Becker drill holes totalling 402 m were completed and 4 test pits using a tracked excavator were excavated. Drillhole depths ranged from 10 to 84 m, while test pit excavations were on the order of 5 m depth. Information obtained from the drilling and test pits generally confirmed the inferred geology from earlier phases of site reconnaissance. Approximately 10,000 kg of material from the drill holes and test pits was transported to Vancouver for testing.

9.4.3 2005 Site Investigation

To further evaluate the property, a second phase of drilling was undertaken by Ascot in March and April of 2005. Thirteen holes totalling 596 m were drilled using a Becker Hammer drill. Most holes were drilled using a 23 cm diameter drill, and the balance with the 16.5 cm diameter drill. Eleven holes were drilled to better define the volume of the deposit and to collect additional samples for materials testing.

In the area above North Beach, a water well was drilled for testing potential ground water quantities and two monitoring wells were installed. One of these wells was installed in a hole drilled for materials testing. In addition, five test pits between 4 and 7 m deep were excavated to obtain sample material.

Approximately 20,000 kg of material from the 2005 drill holes and trenches was sent to the Golder Materials Engineering Laboratory in Surrey, BC for assessment testing. A similar amount of material was stored in Prince Rupert, BC pending further requirements for additional testing of materials.

9.4.4 Testing Evaluations

In order to evaluate the suitability of the deposit for the production of commercial-grade aggregates, which would be acceptable in the construction market, tests were conducted in accordance with recognized standards for the evaluation of construction aggregates. The standards which were used include not only the Canadian Standards Association (CSA) procedures for concrete aggregates and B.C. Ministry of Transportation (MOT) tests for aggregate, but also those of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), and those of the California Department of Transportation (CALTrans). This more extensive range of testing procedures was carried out considering the potential marketing of the aggregates to US destinations, where the Canadian standards might not be recognized.

Some testwork was completed in 2002 on samples collected from surface. A more detailed test program was initiated in March 2003 using material from the 2003 drill holes and test pits. This was supplemented by a second set of testing of material from the 2003 drill holes in late 2004 and 2005 after Ascot acquired the property.

Detailed reports supporting all the test results were prepared by Golder Associates Ltd. (Golder) and Levelton Engineering Ltd. (Levelton), and form the basis of the results and test procedure descriptions outlined below. These test programs enabled an assessment of the granular materials in the deposit for their potential for use as aggregate.

The materials testwork is still ongoing at the time of writing, and updates will be provided as this work continues. The expectation is that the long-term testing will be completed by Fall 2006.

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The following test procedures were conducted, with results as discussed below:

9.4.4.1 Sieve Analyses – 138 Tests

This test is a basic standard procedure, which determines the grain size distribution for the material. In this method, a sample of the material is dried and then shaken through a progressively finer series of sieves. Once sieved, the amount of material retained on each sieve screen is determined, and an overall grain size distribution is calculated using these data. In addition to the plot of the grain sizes, the amounts and percentages of gravel, sand and silt are important data produced in this test, and are relevant in the assessment of a potential aggregate deposit. In some cases, samples were further analyzed using the Hydrometer method (ASTM D 422), specifically to test fine-grained particle fractions.

The individual sieve analyses are presented in Appendix III of the Golder November 2005 report. Review of the individual gradations indicates that considerable variability exists between samples taken from individual drill holes, and further, between some drill holes. This reflects the mapping of the deposit which indicated considerable variation in sediment texture, silt contents, sand, gravel and cobble contents over the length and depth of the granular deposit. Similarly, the Fineness Moduli (FMs) of the fine portions of the samples also exhibited variability.

The results indicate that sediments range from well-graded, clean sands and gravels to silty sands with a little gravel, through to moderately well-graded sands with some gravel. In cases where the sediment textures were characterized by very coarse material, i.e., boulders and coarse cobbles, the sampling was unable to represent such materials adequately, and in these cases, it may be assumed that the results are understated.

However, in general, the samples were comprised of materials, which averaged about 50% gravel, 47% sand, with an average of 3% silt.

9.4.4.2 Relative Density and Absorption – 38 Tests

The density of the coarse and fine fractions of the granular material – relative to the equivalent volume of water – may be determined using this test. In addition, a measure of the porosity of the materials is also obtained. These data can be used as indicators of other physical properties, and are needed to provide mix designs for concrete and asphalt.

The results of the relative density testing of the coarse and fine fractions of the samples selected for testing illustrate the variability within the sediments that comprise the deposit, but also exhibit a degree of consistency, with values in the 2.73 – 2.84 (SSD basis) range for coarse fractions, and 2.59 – 2.76 (SSD) for the fine fractions.

Absorption values ranged from 0.57 % to 1.12% for the coarse fractions. The fine fractions of the samples had absorption values that occurred in a larger range, from 0.60% to 2.86%. While most specifiers do not have set limits or ranges for absorption, in general usage, high absorptions tend to indicate potentially poorer-quality materials. Aggregates with higher absorptions may require adjustment of the cement or binder content for concrete and asphalt mixes, and for concrete, adjustment of the water content.

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The fine fraction samples from DH-05-17 and DH05-18 had the highest absorption values, all greater than 2%. These results were verified by repeating the tests.

9.4.4.3 Durability Index – 36 Tests

This test provides a means of assessing the physical quality of the aggregate in an abrasion / attrition test environment, and examines the ability of the material to generate fines.

The Durability Indices (D_f for fine fractions and D_c for coarse fractions) ranged from the mid-60s to the high-80s. Typical requirements for Highways Construction for Degradation or Durability are 30 to 35% minimum.

These values are consistent with generally acceptable ranges for aggregate products. Considering that the data were for materials that have not been processed, the expectation would be that production aggregates should exhibit similar quality or better, when compared with these test results.

9.4.4.4 Degradation Test – 3 Tests

This is a test similar to the Durability Index, but is done in accordance with British Columbia Ministry of Transportation standards.

The samples submitted for this test were from the 2003 drilling program. The Degradation values were 83, 84 and 84 for the samples tested. Typical specifications for BC MoT are not less than 35; hence, the samples satisfy this requirement.

9.4.4.5 Flat & Elongated Particles – 11 Tests

This test assesses particle geometry to characterize the amount of flat, elongated or both flat and elongated particles in aggregate. Calipers with specific proportions are used in the analysis.

Generally, only small amounts of flat particles were identified, ranging up to 12% of the finer gravel fractions. On average, flat particles represented about 2 – 5% of the samples tested. Elongated particles were less common, generally less than 2% of the samples tested. No particles that were both flat and elongated were identified in the test samples.

Excessive amounts of flat and elongated particles can be problematic for certain aggregate applications, such as concrete (pumping, placing, consolidation, finishing) and asphalt (placing, consolidation), and thus the proportion of these particles is relevant for aggregates produced from materials that include rock types which are characterized by parallel alignment of minerals, such as schists, phyllites, and other metamorphic rocks.

Since the Swamp Point gravels include variable amounts of these rock types, monitoring of these particles may be important.

9.4.4.6 Sand Equivalent – 13 Tests

The test measures the amount of silt and clay-like fines in a sample of aggregate. The test is conducted by vigorous shaking of a sample in a water-filled container, and measuring the sediments generated.

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The SE values for the aggregates tested generally ranged from 72 – 89, with a few low values in the 30 - 40 range.

Generally, the results indicate satisfactory values for aggregate materials. Considering that the samples would be considered as equivalent to "pit run" (i.e., unprocessed) materials, the overall range of SE values is considered to indicate satisfactory quality. The low values suggest that poorer-quality materials are present within the deposit. Zones with lower quality materials present, when encountered, are likely to require additional processing in order to produce suitable-quality aggregate products.

9.4.4.7 Cleanness Value – 12 Tests

Cleanness Value measures the amount of fines in a sample of aggregate, and is a CalTrans test method.

The Cleanness Values for the coarse aggregate fractions of the samples were found to range from mid-80s to 100. These CVs are indicative of overall good quality for these materials.

9.4.4.8 Organic Impurities – 14 Tests

This is a screening test that determines the level of organic contamination in a sample of fine aggregate that might interfere with the set of concrete.

Organic Impurities (OI) tests were run on the fine fractions of a selection of samples. The results typically ranged from "0" to "3", thus generally indicating satisfactory quality with respect to organic impurities for concrete fine aggregates.

A few OI values which exceeded "3" were recorded; these suggest that some horizons within the deposit contain potentially injurious amounts of organic material.

This in turn indicates that such sediments will require washing in order to remove the organic materials. The suitability of sands to be used as concrete fine aggregates will need to be verified prior to such use.

9.4.4.9 Sulfate Soundness – 33 Tests

This test, which utilizes either magnesium or sodium sulfate solutions, involves repeated cycles of soaking and drying of the aggregate material in a solution saturated with easily crystallizing salts. The amount of material lost after the crystals have formed in cracks and fissures and pores of the sand or gravel particles is measured, and compared with the known performance of reference aggregates. The intent of the test is to simulate freezing-thawing conditions, and predict the resilience of the aggregate as a general indicator of competence and durability.

The criteria commonly used in ASTM and CSA for coarse and fine aggregates in the Sulfate Soundness are 12% and 15% maximum loss respectively for use as concrete aggregate.

The Swamp Point aggregates were found to satisfy these requirements, as the results of the sulfate soundness tests ranged from 1 - 5% loss for the coarse fractions and 4 – 10 % loss for the fine fractions. Thus, the data obtained in this test suggest that the sand and gravel materials tested herein would be suitable for production of aggregate.

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9.4.4.10 Petrographic Examination – 21 Tests

In this procedure, the relative amounts of various rock and mineral types, which comprise a sand or a gravel sample, are determined by an engineering geologist, in accordance with ASTM C 295 or CSA A23.2-15A. Using standard geologic nomenclature and descriptions, the sample is also classified on the basis of physical and mechanical characteristics, enabling the assessment of projected engineering properties of the material. This step often involves the calculation of a "Petrographic Number," which provides an index of the aggregate's physical-mechanical quality.

The geological composition of the material comprising the deposit is that of mixed lithology sand and gravel, in which volcanic rock and granite-diorite account for between half and three-quarters of the rock type mix, with metamorphic rocks comprising the balance. The rocks are generally un-weathered, strong and have good shape and surface texture characteristics.

Petrographic testing of samples of rock obtained from the Key 1 & 2 claims was carried out in 2002, to characterize these materials and provide a preliminary assessment of the suitability of the rock for use as aggregate. The rock samples were identified as fine-grained hornblende schists.

The sand and gravel samples collected in 2002, 2003, and 2005 exhibited variable compositions, in terms of proportions of various rock and mineral types. Generally, however, the samples were found to be composed of granitic and volcanic igneous rocks types, metamorphic rocks (including schist, phyllite, slate, amphibolite and gneiss), and minor sedimentary rocks. The fine fractions were composed of fragments of these rock types, as well as the minerals, which compose these rock types

PN values for the coarse fractions of the samples tested ranged from 104 to 149. These PNs are indicative of material of overall "Good" physical-mechanical quality.

Reference to CSA A23.2-15A, Attachment A2, indicates the following limits for PNs for coarse aggregates:

Table 2: PNs for Coarse Aggregates

Suggested PN limits for aggregate quality classifications	
Product Type	**PN Limit**
Concrete class C1, C2, F1	125 maximum
Other concrete classes	140 maximum
Shotcrete	125 maximum
Railroad ballast	125 maximum
Granular base	150 maximum
Select granular sub-base	160 maximum

Review of the data indicates that the coarse aggregate PNs would qualify the Swamp Point coarse fractions for use as aggregates consistent with those noted above.

Further petrographic work is in progress. Updates presenting the results of the pending petrographic work will be provided when completed.

9.4.4.11 Los Angeles Abrasion ("LA Rattler") – 9 Tests

This is a mechanical wearing test in which a sample of coarse aggregate is placed in a steel drum, along with a charge of steel balls, and rotated for a set number of revolutions. This produces an abrading action, which induces loss of the material through impact and abrasion. The loss generated for each material is taken as an indicator of the material's competence and strength, and is used for qualification of a variety of aggregate products. The output of the test is "percent loss".

Testing in accordance with test method ASTM C 131 (small-size coarse aggregates) of selected coarse fraction samples was carried out for samples from the 2003 exploration program.

Results ranged from 19% loss to 27% loss, after 500 revolutions, with most results being in the low-20% range. These losses indicate compliance with typical standards for LA test losses, for aggregates to be used in road construction, as highway aggregates, asphalt aggregate or in most concrete applications.

9.4.4.12 Concrete Prism Expansion – 26 Tests

This is a test designed to assess the Alkali-Aggregate Reaction ("AAR") potential of concrete aggregates. It is based upon the expansion of samples of concrete that are made using the aggregate under test, utilizing a standard concrete mix design with specially-selected elements that are intended to "compress" or accelerate the usual long timeframe required for AAR to appear in service.

A series of samples were selected from the 2003 and 2005 drill holes for evaluation in this test method. This is one of two test procedures that have been used to assess the potential of the sand and gravel at Swamp Point for the development of a deleterious reaction in concrete called "Alkali-Aggregate Reaction" (AAR). (Previous work using the Accelerated Mortar Bar test indicated that the Swamp Point materials have a reaction potential that ranges from "non-reactive" to "reactive". Hence, the longer-term and more definitive Concrete Prism Expansion test was run on a series of Swamp Point sand and gravel samples from both the 2003 as well as the 2005 exploration programs.)

For samples from the 2005 drilling program, this test will not be completed until summer or fall 2006; however, interim data may be provided which could be of assistance in gauging the projected range of expansion levels for the aggregates.

Earlier testing of samples from the 2003 drilling program was initiated early this year, and those data are now at or nearing the 39-week reading period. Currently, expansion data for these samples to the age of 26 to 39-weeks indicate expansion levels on the order of 0.005 – 0.020%. While a projection of the data to the 52-week is not a definitive assessment tool, the current levels of expansion exhibited in the samples suggests that the materials will not be classified as "potentially reactive".

It may be noted that in California, the accepted 52-week limit for the Concrete Prism test is 0.04% linear expansion. Aggregates which exhibit an expansion level above this value are considered to be "potentially alkali-reactive" and will require additional measures when used in concrete, in order to suppress the reaction, or they are prohibited for use in reaction-sensitive concrete mixes.

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Should the aggregates prove to have expansions that exceed 0.04%, it may be necessary to conduct supplementary Concrete Prism tests, using a supply of Supplementary Cementing Materials (SCMs) such as fly ash or silica fume, or other materials as directed by local usage by concrete producers in the target market areas.

One combination of Swamp Point aggregates (from DH03-3 and DH03-7) was tested using a 20% replacement of cement with fly ash, as an assessment of the effects of fly ash to suppress potential ASR expansion. This test, now to the age of **39** weeks (i.e. the standard comparative measurement is at the age of 52 weeks), has exhibited the following expansion trends:

Table 3: Comparison of CPT results for Standard and "Fly Ash-Mitigated" Tests

Combined Coarse and Fine Aggregates, DH03-3 (29-119') & DH03-7 (0-70')	
Standard Test	Using 20% Fly Ash Replacement
0.014%	0.005%

Review of these data indicates the relative effects of reduction of linear expansion resulting in the fly ash-mitigated test samples.

9.4.4.13 Concrete Compression – 26 Tests

This is a standard test for cylindrical samples of hardened concrete. Samples are subjected to a load applied in compression, until failure occurs. The maximum load is used to calculate a compressive strength for the sample.

In conjunction with the Concrete Prism Test mixes, a series of concrete cylinder specimens were prepared and tested in compression. Although the determination of compressive strength was not the primary reason for these tests, useful information may be obtained from a review of those data, since all the Concrete Prism test mixes were batched using a uniform standard mix design, using the same cement content and water/cementing materials ratio. The primary variables in the mixes were the aggregates.

As noted earlier, the CPTs utilized a standard concrete mix design, and a consistent water-cementing materials ratio. For each CPT conducted, compression test samples were tested at 7-, 28- and 56-days. The results of these tests are summarized in Table 4:

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Table 4: Compression Test Data

Mix	Aggregate	Compressive Strength (MPa)		
		7 days	28 days	56 days
CP 001-05	CA: DH 03-2 9’-169’ FA: Sechelt Sand	36.0	38.5	40.8
CP 002-05	CA: Blubber Bay Quarry FA: DH03-1, 49’-67’	34.1	38.1	42.2
CP 003-05	CA: Blubber Bay Quarry Limestone FA: DH 03-6 159’-185’	36.0	40.9	44.1
CP 004-05	CA: DH 03-4 99’-196’ FA: Sechelt Sand	33.9	39.0	40.0
CP 005-05	CA: DH 03-3 29’-119 & DH 03-7 0-79’ FA: DH 03-3 29’-119 & DH 03-7 0-79’	32.4	38.7	41.4
CP 006-05	CA: DH 03-3 29’-119 & DH 03-7 0-79’ FA: DH 03-3 29’-119 & DH 03-7 0-79’ & 20% fly ash	24.0	34.5	38.1
CP 017-05	CA: DH 05-10 29’-47’ FA: CN Sand	26.9	39.0	39.2
CP 018-05	CA: DH05-11 14'-99’ FA: CN Sand	30.1	41.4	46.0
CP 019-05	CA: DH 05-18 29'-89’ FA: CN Sand	30.2	40.7	43.0
CP 020-05	CA: DH05-14 14'-34’ FA: CN Sand	33.3	41.3	41.7
CP 021-05	CA: Blubber Bay Quarry Limestone FA: DH05-10 29'-47’	29.6	37.3	39.9
CP 022-05	CA: Blubber Bay Quarry Limestone FA: DH05-11 14'-99'	31.0	36.7	38.7
CP 025-05	CA: Blubber Bay Quarry Limestone FA: DH05-14 14'-34	27.9	38.4	41.2
CP 026-05	CA: Blubber Bay Quarry Limestone FA: DH05-18 29'-89'	31.8	38.9	40.1
CP 033-05	CA: DH05-20 0'-79' FA: Hanson Sand	33.3	43.8	to come
CP 034-05	CA: DH05-12 99'-189' FA: Hanson Sand	35.7	42.3	to come
CP 035-05	CA: DH05-20 129'-179' FA: Hanson Sand	33.7	41.2	to come
CP 036-05	CA: DH05-20 79'-129' FA: Hanson Sand	34.9	39.4	to come
CP 037-05	CA: Blubber Bay Quarry Limestone FA: DH 05-12 99'-189'	33.8	41.5	to come

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Mix	Aggregate	Compressive Strength (MPa)		
		7 days	28 days	56 days
CP 038-05	CA: Blubber Bay Quarry Limestone FA: DH 05-20 0-79'	32.9	37.6	to come
CP 039-05	CA: DH 05-19 0-69' FA: Hanson Sand	34.1	40.8	to come
CP 040-05	CA: DH05-19 69'-129' FA: Hanson Sand	34.6	42.0	to come
CP 041-05	CA: Blubber Bay Quarry Limestone FA: DH 05-19 0-69'	33.3	to come	to come
CP 042-05	CA: Blubber Bay Quarry Limestone FA: DH 05-20 129'-179'	30.8	to come	to come
CP 043-05	CA: Blubber Bay Quarry Limestone FA: DH 05-19 69'-129'	36.5	to come	to come
CP 044-05	CA: Blubber Bay Quarry Limestone FA: DH 05-20 79'-129'	35.0	to come	to come

Review of these data indicates that the Swamp Point aggregates, when used in various coarse aggregate/fine aggregate-cement combinations, produced compressive strengths consistent with satisfactory-quality aggregates.

9.4.4.14 Accelerated Mortar Bar Test – 41 Tests

This short-term (14-day) test is often used as a screening test for the determination of Alkali-Silica Reaction (ASR) potential of aggregates. In the test, samples of aggregate are crushed and screened to achieve a fine aggregate grading, then mixed with water and cement to produce a mortar, which is then formed into bars. The mortar bars are then placed in a sodium-enriched solution and stored at 80° C, to accelerate a response.

While it is considered to be a "harsh" test, its results are nonetheless useful, since the relative degree of expansion potential of aggregates can be compared with other aggregates of known performance (either in the field or in other laboratory tests, such as the Concrete Prism Test), and thus be analyzed in context.

The Swamp Point sand, gravel and rock samples produced 14-day expansions that range from 0.07% to 0.25%. At the time of writing, some AMBTs are still underway, and results from these tests will be forwarded as they are completed.

To place the AMBT data in context, it has been found that many BC aggregates exceed the limits for this test: in fact, over 80% "fail" this test. Nevertheless, many of these aggregates are or have been used with success as concrete aggregates. Provided that the concretes made using the aggregates are designed in accordance with appropriate mitigated designs, such as may be determined using CSA A23.2-27A and -28A, many aggregates that exhibit modest reaction potential may be used even for ASR-sensitive concrete, with no deleterious expansion.

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For further information on AAR testing of aggregates in British Columbia and in the Pacific Northwest, the following publications may be consulted.

British Columbia:

http://article.pubs.nrc-cnrc.gc.ca/ppv/RPViewDoc?_handler_=HandleInitialGet&journal=cjce&volume=27&calyLang=eng&articleFile=l99-058.pdf

Pacific Northwest:

http://pubs.usgs.gov/bul/b2209-k/b2209k.pdf

9.4.4.15 Acid-Base Accounting Tests – 18 Tests

These analyses are based upon the chemical analysis of the soil or rock materials. The testing data is used to determine the proportion of potentially acid-generating and potentially acid-neutralizing material in the samples, and provides a characterization of the sample to generate deleterious levels of acid drainage. The testing may be carried out for the purposes of assessing the acid-generating potential of materials that are exposed as a result of mining or excavation activities (e.g., as in exposed rock faces within mines, or along roadways), or for materials that are imported into environmentally-sensitive areas for use as construction materials (e.g., road aggregates, structural fill).

A number of samples were selected to characterize the Swamp Point sand and gravel materials with respect to their potential for production of levels of acid that are deleterious to habitats and organisms. Acid-Base Accounting tests were conducted to assess this potential.

Acid generation is a naturally occurring process, which has the potential to negatively impact the receiving environment. Acid generation occurs when sulphur bearing rocks (either sulphides or elemental sulphur) are exposed to weathering. Acidity is generated from the oxidation of sulphur and precipitation of ferric iron. Acid rock drainage (ARD) is the process by which the ferric oxide is entrained by water creating an acidic aqueous medium. 18 samples were submitted from various drill holes for these analyses.

Methods

Eighteen (18) samples were collected (over a period of two field seasons) from various drill holes at Swamp Point. The samples were submitted to ALS Chemex for Acid Base Accounting (ABA) analyses. The fundamental principles for acid base accounting are the determination of the neutralization potential (NP) and the calculation of the acid potential (MPA) of a sample. The difference between the two values, the net neutralization potential (NNP), and the ratio (NP:MPA) enable the classification of the sample as potentially acid-consuming or -producing.

No regulations or guidelines are currently written for acid generation on construction material: results herein are compared to the BC Ministry of Employment and Investigation Guidelines outlined in "*Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia"* (Price, 1998). The suggested guidelines are listed in Table 5 as follows:

Table 5: Acid Rock Drainage Screening Criteria (Price, 1998)

Potential for ARD	Initial Screening Criteria	Comments
Likely	NPR <1	Likely acid generating, unless sulphide minerals are non-reactive.
Possible (uncertain)	1<NPR<2	Possibly acid generating if NP is insufficiently reactive or is depleted at a rate faster than sulphides.
Low	2<NPR<4	Not potentially acid generating unless significant preferential exposure of sulphides along fractures planes, or extremely reactive sulphides in combination with insufficiently reactive NP.
None	NPR >4	

Equally important in characterizing acid generating potential is the determination of paste pH and a sulphur species analysis (including total sulphur, sulphate sulphur, and sulfide sulphur).

The relationship between these two parameters are as follows: if sulphide sulfur content is less than 0.3% and paste pH is greater than 5.5 the material may be classified as non-acid generating (Price, 1997), except where the rock matrix consists of base-poor minerals (e.g., quartz), or where the sulphide minerals contain metals that may leach under weakly acidic to alkaline conditions.

Geologic Background

Petrographic examinations were carried out to characterize the dominant lithologies of gravel and sand fractions of the samples retrieved from Swamp Point. The sand and gravel from Swamp Point is composed of a mixture of lithologies found in roughly equal to slightly varying proportions.

The dominant lithologies are igneous volcanic (intermediate to mafic composition), igneous intrusive (granite/diorite/gabbro), and low- to medium-grade metamorphic (slate/phyllite/schist) rock particles. Trace sulphide material (pyrite) was observed in approximate 5% of the igneous rocks (both intrusive and volcanic). The metamorphic rocks examined had iron oxide coatings (due to weathering) on up to 10% of the particles. The occurrence of iron oxide was found to decrease with depth of drill hole.

Results

The acid generating potential of ten samples from 2003 and eight samples from 2005, acquired through drilling at Swamp Point, was assessed by Golder by means of Acid-Base Accounting (ABA) test methods. A summary of the test results is provided in Table 6.

Table 6: Summary of Results for Swamp Point

Borehole ID	pH	Net-NP	Total Sulphur (%)	NPR (NP:MPA)	ARD Potential*
TP 2, 2.0-4.0 m	7.8	9	.06	5.9	None
DH03-1 (19'-29')	8.4	9	.05	7.0	None
DH03-2 (129'-139')	9.1	10	.04	8.8	None
DH03-3 (9'-29')	8.1	8	.01	25.6	None
DH03-4 (59'-99')	8.6	10	.1	4.2	None (low?)
DH03-5 (59'-69')	8.5	9	.1	3.8	Low
DH03-6 (119'-159') A	9.2	19	.06	11.2	None
DH03-6 (119'-159') B	9.2	17	.05	12.2	None
DH03-7 (69'-79')	8.9	10	.02	17.6	None
DH03-8 (19'-49')	8	7	.06	4.8	None
DH05-10 (9'-29')	8	8	.06	5.3	None
DH05-11 (59'-69')	8.8	12	.05	9.0	None
DH05-12 (119'-139')	8.7	12	.04	10.4	None
DH05-13 (19'-29')	8.2	9	.06	5.9	None
DH05-19 (0'-9')	7.6	8	.03	9.6	None
DH05-19 (29'-39')	8.1	9	.05	7.0	None
DH05-20 (9'-19')	8.2	8	.02	14.4	None
DH05-20 (69'-129)	8.8	9	.02	16.0	None

* per (Price, 1997), which categorizes samples with NPR > 4 as having “no” ARD potential, samples with NPR 2 - 4 as having a "low" ARD potential, samples with 1<NPR<2 as having a "possible" ARD potential, and samples with NPR < 1 as having a “likely” ARD potential.

Discussion

Most of the results from samples tested for acid generating potential, for Swamp Point, showed “no” potential, with the exception of one sample (DH03-5 @ 59’-69’), which rated “low”, and a suspect sample (DH03-4 @ 59’-99’) that rated “none”.

The Non-Acid generating samples reported paste pH values ranging from 7.8 to 9.2. The total sulphur values ranged from 0.06 to 0.01 %. The maximum potential acidity (MPA) ranged from 1.9 to <0.5 $CaCO_3$ eq/tonne. The net-neutralization potential (NNP) value ranges from 7 to 19 kg CO_3/tonne.

As noted in the table in Table 7-6 above, the net potential ratio (NPR) for these samples ranges from 4.8 to 25.6, giving these samples a rating of “no” acid generating potential (Price, 1997).

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DH03-4 (59'-99') rated "no" acid generating potential (NPR=4.2) but is suspect due to a high total sulphur (0.1%) and a moderate NNP (10 kg CO_3/tonne value).

DH03-5 (59'-69') reported paste pH value of 8.5, total sulphur of 0.1 %, an MPA of 3.1 $CaCO_3$ eq/tonne and an NNP of 9 kg CO_3/tonne. The NPR value calculated for this sample is 3.8, giving this sample a "low" acid generating potential rating (Price, 1997).

ABA - Summary

ABA results indicate that most of the samples are classified as having "no" ARD potential based on NPR classification and on low sulphide sulphur contents.

The sample from DH03-4 (59'-99') rated "no" ARD potential based on NPR, however had high sulphide sulphur contents and low neutralization potential, and is therefore considered suspect.

The only sample to rate "low" ARD potential was DH03-5 (59'-69') this was based on NPR and high sulphide sulphur contents.

Variability of the NPRs is likely related to the amount of metallic minerals in the samples, and the amount of carbonate material in each of the samples. As the relative proportions of these materials changes from location to location within the deposit, the NPR is likely to also vary.

Some of the bedrock materials tested by Ascot showed some potential for acid generation. However, the anticipated exposure of these rocks due to excavation and development is understood to be minimal.

9.4.4.16 Proctor (Moisture-Density) Tests – 4 Tests

The Moisture-Density Relationship (or "Proctor") test (ASTM D 698) measures the maximum achievable density of a soil/aggregate material at various moisture contents, and at a specific energy of compaction. It is commonly used in testing of fill compaction during construction, as a part of the QC regime, but can also be used for other purposes.

Four Standard Proctor tests were conducted in accordance with ASTM D 698, to evaluate the compactibility and maximum dry density characteristics of sand and gravel samples from Swamp Point.

Maximum Dry Density values for the samples were as follows:

Table 7: Maximum Dry Proctor Density Values

	Maximum Dry Density (kg/m^3)	Rock-Corrected Max. Dry Density (kg/m^3)**
DH03-4, 29-39'	2270	2450
Sample 1	2040	2134
Sample 2	2055	2126
Sample 3	2269	2433

The samples had satisfactory compaction characteristics in this test. The maximum dry density values given above provide a range of "typical" density values that might be achieved for aggregate materials produced from the Swamp Point deposit.

The values may also be analyzed, together with the Bulk Density and Relative Density values, to calculate Conversion Factors for various aggregate products as well as in-situ density in the formation(s) that comprise the deposit.

9.4.4.17 Bulk Density – 3 Tests

The test is conducted by placing and nominally compacting samples of soil or rock or aggregate in a container of a known, calibrated volume. Its output is the density of soils or aggregates in various conditions of compactness, and for a variety of purposes. Among these are the conversion of volume to mass, which in turn may be used as a basis for payment.

Bulk Density tests were conducted in accordance with ASTM C 29. The purpose of this testing was to assess the loose or lightly compacted density of the sand and gravel materials. The results obtained in this test are listed in Table 8 below.

Table 8: Bulk Density

	Maximum Dry Density (kg/m^3)
Sample 1	1917
Sample 2	1883
Sample 3	2031

9.4.4.18 Moisture Content – 13 Tests

Moisture content determinations were conducted for selected field samples, as well as for prepared "typical" aggregate samples. The purpose of the tests was two-fold:

1. To determine the site moisture condition of sand and gravel samples.
2. To determine the projected possible moisture content of processed aggregate products at the point of shipping.

The in-situ moisture tests gave results that ranged from 5.1% to 13.4% moisture by mass. However, the samples were collected during a period of heavy rainfall, and thus are considered to have been biased towards higher-than-expected moisture conditions.

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The "typical" aggregate product moisture modeling tests are given in the appended report, and gave average moisture contents as follows:

Table 9: Moisture Content

Product	Moisture Content (% by mass)
¾" x No. 4 clear	2.1
¾" x ⅜" clear	1.1
¾" graded	6.3
Pit Run	9.2
Sand	18.2

The expectation would be that some amount of variation would be observed as a result of changing seasons, product variability, and other factors.

9.5 In-situ Density and Volume-to-Mass Conversion

The conversion of volume to mass is required in aggregate property analyses and management periodically, for the following purposes:

- to enable the determination of amount of material mined and shipped
- to assist in inventory control
- to serve as a basis for royalty payments
- to calculate projected reserves

While the process is inexact, the science that is used can be of assistance in reducing the error and the derivation of a relatively reliable set of Conversion Factors. For the purposes of determination of in-situ volume/tonnage, a number of factors should normally be considered, including but not limited to:

- overall variability within the texture of the granular materials making up the deposit.
- measured gradations of sections sampled within the deposit.
- proportion of sand, gravel, cobbles, boulders and silt.
- amount of organic material in the deposit.
- compactness of the formations.
- specific gravity of the sediments.
- bulk density of the sediments.
- consistency of the index test data for deposit.

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The interplay of the factors listed above may result in significant variability of volume-mass conversion.

Testing undertaken to-date to estimate in-situ density conversions, to enable an estimate of in-situ tonnage of potential raw sand and gravel materials that could be mined and processed to become aggregate, has included:

- Bulk Density
- Specific Gravity (Relative Density)
- Standard Proctor
- Moisture Content
- Sieve Analysis
- Field Density testing using the Nuclear Densometer

The specific gravity (SG) of coarse fractions of the Swamp Point samples was noted to be as high as 2.84, which exceeds typical Lower Mainland British Colombia SG values by a notable amount. This reflects a higher content of mafic geological components in the Swamp Point sands and gravels. (This is often also observed in Vancouver Island aggregates).

The compactness of the native in-situ sediments comprising the deposit has been assumed to be roughly equivalent to or slightly lower than the compactness of a sample when subjected to Standard Proctor test.

The average maximum dry density determined through Proctor testing of four samples was 2285 kg/m^3. Considering that the formations at Swamp Point actually contain considerable amounts of small to large boulders – material which could not be represented adequately in samples taken from site due to size – the in-site density values could likely be considered to be higher as well, and could be increased by an estimated additional 5 – 10%. This would give a density value of 2446 kg/m^3.

Allowing for error, variability and less compact conditions, reduction of this value by 10% would result in a conversion factor of 2.2.

This value would be considered appropriate for calculation of in-situ density of the Swamp Point formation only, and would not be appropriate for application in volume-mass conversion of materials that have been disturbed or processed. Hence, this value would not be applicable to any materials that have been removed from their in-situ condition, processed, stockpiled or transported. This value was used for determination of in-situ tonnage of the gross volume of the deposit.

9.6 Data Verification

Review of data generated in the Materials Testing Programs was carried out to ensure the reliability of the test results. Independent checks on the testing typically involved a minimum of three stages of review and cross-checking. This level of quality control protocol is consistent with that normally carried out in engineering materials testing practice. Both the Golder and Levelton laboratories involved in the testing programs are certified to CSA Category II.

Resource calculations were completed by Yukon Engineering Services (YES), and independently checked by Hatch Ltd.

Estimated capital and operation costs generated by YES and Sandwell Engineering were checked by Hatch Ltd. and found to be reasonable.

The summary of capital cost estimates for the Swamp Point and operating cost estimates presented in the PFS reflect an accuracy level of ±20%, consistent with a Pre-Feasibility Study level of engineering effort.

Preliminary market analysis was completed by Golder in 2004, Ascot in 2004 and 2005 and Hains and Associates in 2005. The conclusions of these analyses are consistent.

9.7 Adjacent Properties

Highbank Resources Ltd. has an agreement with Portland Canal Aggregates Corporation whereby it can acquire a 100% interest in Licence of Occupation 6406804, located on the north side of Donahue Creek (see Figure 3). Highbank believes that the site has the potential to host a multi-million ton aggregate deposit for future shipping via a deep-water load-out facility (www.highbankresources.com). Highbank reports that it has completed test pits using a tracked excavator, delivered 5,500 kg of material for testing and completed 2 km of seismic surveys.

10. MINERAL RESOURCE ESTIMATE

10.1 Introduction

Various consultants provided mineral resource estimate information. The consultants responsible for the preparation of the sections below are listed in Table 10:

Table 10: Mineral Resource Estimate

Section	Description	Consultants	Qualified Professional
10.2	Resource Quality	Golder Associates	Fred Shrimer, P. Geo
10.3	Resource Quantity	YES / Hatch	Keith Watson, P.Eng
10.4	Resource and Reserve Estimation	Hains Technology	Don Hains, P.Geo
10.5	Development Status and Schedule	Hatch	Keith Watson, P.Eng
10.6	Market	Hains Technology	Don Hains, P.Geo

10.2 Resource Quality

The Swamp Point deposit is comprised of sand and gravel units that are indicated to have a volume of some 20 million cubic meters, averaging 50% gravel, 47% sand and 3% silt. The engineering quality of the granular materials is judged to be consistent with that suitable for use as commercial-quality

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aggregates, on the basis of the testing completed to-date. Its applications may include uses such as road aggregates, structural fill aggregates, asphalt aggregates, and concrete aggregates.

Variable quality of the sand and gravel is indicated, as is typically encountered in natural glaciofluvial deposits. This variability is apparent from engineering test data. On the basis of the testing data, processing of the sand and gravel is expected to be necessary. Such processing is projected to be capable of producing aggregates of suitable quality for the intended applications.

The make-up of the sediments lithologically is fairly diverse, with variable amounts of granitic, volcanic, metasedimentary rocks, phyllite, schist and other rock types comprising the sand and gravel. As noted above, the engineering geology of the sand and gravel is variable, but generally appears suited to the manufacture of aggregate products.

10.3 Resource Quantity

The Swamp Point aggregate deposit preliminary design, utilized the 2002 seismic refraction survey, the 2003 geotechnical drilling program (where the drilling confirmed the bedrock depth), and field observations of surface bedrock and organic thickness exposures. The 2005 geotechnical drilling program information was used to confirm the limits of the useable deposit, as well as in the case of DH03-8, and DH05-12, confirmation of a greater depth of possible pit development.

The 2003 drill holes were survey-located by a third party contractor. Elevation comparisons between the surveyed elevations of the drill holes and the digital terrain model are acceptable. Additional, more detailed field surveys would be required in order to further refine the volume calculations of the aggregate deposit, though this is not recommended at this time.

The seismic refraction survey and the drill logs demonstrate some correlation, however in many instances the drilling was unable to extend to bedrock contact, and as a result uncertainty of the full depth of the aggregate deposit may vary from those developed for the determination of quantities. Similarly, the thickness of overburden above the granular deposit may vary from the limited seismic and borehole information available. The general parameters for the source development, included optimizing the extraction of those aggregates averaging less than 5½% fines, using a nominal backslope to the excavation of 2H:1V. The backslope was achieved by incorporating a temporary benched backslope encompassing 20 m wide benches every 20 m of pit depth, with 1H:1V working faces as extraction proceeds.

The quantity determinations of the Swamp Point aggregate resource have been based on 1 m contour mapping from 1:10,000 GPS controlled and targeted photogrammetry. Accuracy of the mapping becomes hampered where the ground surface is not visible on the photos. Dense tall tree cover, as exists to a limited extent on the site, can introduce error into the digital terrain model in those areas. The accuracy of the topographic information is not considered critical to determining the resource. The bedrock profiles that were developed with the seismic (and in some cases from drill holes and bedrock at surface) were not done in isolation. Rather they are relative to the surface topography. All of the data is depth-related and not absolute in terms of elevation. If the topography is in error, then this same error is applied to the bedrock strata. So any consistent error is compensatory. Localized errors are the only real opportunity for inaccuracies caused by the topographic information. Field review of the site and

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assessment of the contours suggest that the mapping is good and that localized errors are not easily discernible.

10.3.1 Quantity Determination

Quantities for the pit development were tabulated using EMXS™ surface compiler and QuickSurf™ surface modeling software. The site 1 m contour topography mapping utilized for quantity determination, was based on 1:10,000 GPS controlled and targeted mapping. The site mapping was reviewed during a site inspection by Mr. Jerry Quaile of Yukon Engineering Services, resulting in a level of confidence in the data for the previously logged areas. Some variations in topography were noted in the areas of original growth in the vicinity of the proposed load-out facility; however, no adjustment of the data was made.

Two subsurface layers were developed based on the seismic refraction survey, the first being the interface between the waste overburden and granular aggregates, and the second being the bedrock. With the limited seismic information, additional data encompassing the drill logs and the surface outcrop observations were used to supplement the surface determinations. In addition, input from geologist Hans Smit and geomorphologist Charlotte Mougeot regarding the trends of the bedrock geometry were used to characterize the bedrock surface between the seismic lines and drill holes in the vicinity of DH03-6 and DH03-8 as well as through the central area of the deposit where drill holes did not achieve bedrock depths.

Total volumes for the granular aggregate were determined between the lower overburden surface and the bedrock surface, where encountered, or the pit floor where not encountered. This volume is bounded by the designed backslopes and yields a quantity of 20,524,842 m^3. As a confirmation of the available granular aggregate, EMXS™ software was used to extract cross-sections, at 10 m intervals, of the surfaces, and tabulate the end areas of the extracted cross-sections. Using an average end area calculation, the volume determination of the granular aggregate is 20,646,446 m^3; a very good correlation.

The volumes of mine waste and overburden were determined by using EMXS™ to tabulate the volume between the original ground topography and the developed top of the granular aggregate bounded within the proposed extraction limits; this volume being 1,340,044 m^3. An average end area calculation for overburden was used, as the material is more closely represented by the surface topography, and may be characterized by depth from original ground surface.

In order to separate the various waste overburden materials, calculations were performed based on the seismic information, borehole logs, air photos and field observations by third parties. The volume of peat materials were determined as an area of 66,850 m^2 with a depth of 1.8 m resulting in a volume of 120,330 m^3. The remaining area of the pit development was determined to be 522,350 m^2 with a depth of 0.75 m of organic material resulting in a volume of 391,762 m^3. The remaining 857,952 m^3 of waste overburden, would represent the cemented till materials which will be stockpiled for pit reclamation and flattening the pit slopes.

Keith Watson P.Eng. reviewed the estimation procedures and assumptions used in developing the estimates of resource quantities and is in agreement with the methodologies employed and results shown.

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10.3.2 Annual Processing Volumes

Following the determination of the total pit volumes, the annual volumes of materials to be processed were tabulated based on equipment productivity of the selected equipment fleet. The equipment fleet was identified based on the capacity of the crushing and washing processes. Material processing was tabulated on a limited capacity start-up during the first two years of operation. The limited output is governed by space available for setup and stockpiling of materials within the development site. During the first two years, a 300 tonne/hr rated plant operating at 90% efficiency for 6050 hours for year one and 7040 hours for year two would produce 1,633,500 tonnes and 1,900,800 tonnes respectively of product (742,500 m^3 and 864,000 m^3 respectively based on a conversion of 2.2 tonnes/m^3).

At year 3 of the development, sufficient room becomes available to increase the crushing and wash processing to a capacity of 540 tonnes/hr which results in the ability to produce 3,421,440 tonnes per year (1,555,200 m^3 based on a conversion of 2.2 tonnes/m^3). A reduction in productivity of 0.25%/year for year 3 and on has been assumed to account for reductions in equipment reliability and performance.

10.4 Resource and Reserve Estimation

Don Hains P.Geo. has reviewed the estimation procedures and assumptions used in developing the estimates of mineral resources and mineral reserves. Mr. Hains is in agreement with the methodologies employed in estimation of the mineral resources. Mr. Hains has also reviewed the mine planning and economic analysis conducted in connection with the PFS for the Swamp Point project. Based on the information available, Mr. Hains would classify 45.8 million tonnes of material as a Measured Resource in accordance with the CIM Mineral Resource and Mineral Reserve classification system. Mr. Hains is of the opinion that the Measured Resources would be classified as Probable Reserves upon receipt by Ascot of Letters of Intent for supply of aggregate at the price levels projected in the PFS.

10.5 Development Status and Schedule

The Environmental Assessment Application process is due to be finalised in early 2006. Permitting certificates are expected during the second quarter of 2006.

There are a number of milestones proposed for the development of this project. These milestones include:

- Issuance of Project Environmental Assessment Certificate and required permits.
- Establish a suitable contract arrangement for the supply of aggregate.
- Appoint a Contractor for initial mining development.
- Establish a shipping contract.

Once permitting is in place mobilization, construction and initial mining operations can commence. Marketing, final engineering, construction and initial mining operations are expected to be undertaken during the period 2006 / 2007. By second quarter of 2007 initial mine operations will be established and second phase of mining to reach full production is scheduled to start in 2009.

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A realistic implementation schedule has been established. However, it is neither based on contracts for product sales nor shipment in place. Securing these contracts may take longer than anticipated in this schedule. If this is the case, construction will be delayed, although the development sequence and economic analysis will remain the same. The main anticipated changes will be cost and product price updates over time.

The schedule is based on the understanding that no major issues are brought forward during Environmental Assessment.

Implementation of this project is dependent on a number of milestones. The first task will be to obtain the necessary permitting certificates. Thereafter, sales and shipping contracts need to be secured. Once aggregate contracts are determined and reach approval stage, construction and initial implementation plans can be finalized. This will require detailed engineering, in order to prepare tender documents and to appoint a mining contractor for the initial stages of mining (Phase One). Production during Years 1 and 2 are expected to be less than 2 Mtpa.

Full production commences during Phase Two and mining will continue through phase three, four and five to completion of mining after Year 15.

Final reclamation and mine closure plans will be implemented during Phase 5 of the Life of Mine Plan.

10.6 Market

Aggregate is the largest non-fuel mineral commodity produced in North America. Primary potential markets for aggregate from Swamp Point are cities along the west coast of North America, especially the San Francisco Bay area, Los Angeles and San Diego. Some additional potential exists to supply regional aggregate market needs in Prince Rupert, southeast Alaska and elsewhere in the Pacific.

The west coast U.S. market has emerged as a major new opportunity for B.C. based aggregate producers. Existing local sources of supply in the San Francisco, Los Angeles and San Diego metropolitan regions are becoming exhausted and it is extremely difficult, if not impossible, to permit new aggregate operations in these areas. Consequently, aggregates are now being sourced from quite distant areas, including by water from BC, by truck from the Central Valley area of California, and by rail from Nevada and Arizona. The net effect of these developments has been a significant increase in the delivered price of aggregate. This trend is expected to continue, although as more distant sources are developed, competition may serve to reduce the rate of increase in delivered prices, especially as regards the underlying price of the aggregate.

Ascot has been actively pursuing potential markets for aggregates since acquiring the Swamp Point project in 2004 building on earlier work by 647680 BC Ltd in 2003. In 2004, Ascot commissioned Golder Associates to prepare a valuation analysis of the Swamp Point property. This exercise included a preliminary market study. This study identified California as the principal market for the project based on the relatively high price for aggregates and the constraints on supply in this market (Golder Associates, May 2004).

Reference – Swamp Point Project, Valuation of Aggregate Reserve, Portland Canal, BC, Golder Associates Ltd., May 2004: Internal company report.

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Key considerations in assessing the market potential for the Swamp Point project include the availability of self-unloading "Handysize", "Handymax" or "Panamax" size vessels of 30,000 – 70,000 dwt capacity; the availability of suitable dock space in the target markets; the ability of Ascot to penetrate vertically integrated markets; and relative shipping costs for seaborne aggregate shipments versus rail shipment of aggregate from inland regions.

Negotiations will be required with shipping companies to develop arrangements for long-term, secure charter arrangements of suitable vessels. It is understood that various shipping companies have been contacted and these companies have indicated an interest in the project. Dock space in the target market areas is generally privately held by the major aggregate and construction materials distributors in the region. It will be essential to secure long-term off-take agreements with these companies to ensure that adequate dock storage space is available.

11. INTERPRETATION AND CONCLUSIONS

11.1 Geology

The Swamp Point project is comprised of a deposit of sand and gravel units that are indicated to comprise some 20 million cubic meters of granular material, averaging 50% gravel, 47% sand and 3% silt. The engineering quality of the granular materials is consistent with that suitable for use as commercial-quality aggregates, and may include uses such as road aggregates, structural fill aggregates, asphalt aggregates, and concrete aggregates.

Variable quality of the sand and gravel is indicated, as is typically anticipated for natural glaciofluvial deposits. This variability is also apparent from test data. Processing of the sand and gravel will be required, and is projected to enable the production of aggregates of quality suited to the intended applications.

The thickness of the sand and gravel units is indicated, on the basis of drilling and geophysical surveys, to be up to 95 m in places. Structure within the deposit is as discussed in Gartner-Lee (2005). Sediment sizes range from fines to very large boulders, with the latter occurring towards the eastern portion of the deposit, and being less common towards the western and southern parts of the deposit.

The make-up of the sediments lithologically is fairly diverse, with variable amounts of granitic, volcanic, metasedimentary rocks, phyllite, schist and other rock types comprising the sand and gravel. The engineering geology of the sand and gravel is variable, but generally appears suited to the manufacture of aggregate products.

The presence of groundwater within the sand and gravel formation was not observed in the drillholes, which were advanced in locations across the site.

Bedrock structures include a buried N-S ridge along the west-centre of the site, which may have assisted in containing the thickest portion of the deposit. This zone also contains the bog deposit, which caps that portion of the deposit.

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Bedrock crops out in a number of locations in and around the site, and exposures include metamorphic rocks (phyllite, schist, gneiss), basalt, argillite and limestone.

11.2 Marketing

Test results indicate aggregate material from Swamp Point should be suitable for use in most potential applications and target markets. The overall quality of the coarse and fine aggregates is considered to be very good. The potential for alkali-aggregate reactivity is very low and concrete batch designs are available to alleviate any potential adverse conditions, should they arise. Additional test work focussed on concrete batch designs incorporating Swamp Point material, locally sourced California cement and typical California batching procedures is indicated.

Market research conducted to date has been positive and the potential to develop profitable markets for aggregate from Swamp Point is high. Analysis of production and shipping costs indicates material from Swamp Point should be cost-competitive on a delivered price basis with locally sourced aggregate in the San Francisco Bay area and in the Los Angeles market. Opportunities should also be available in the San Diego market area, but on a more limited scale.

Detailed market studies are required to more firmly define the market potential, customer base and product prices. Specific analyses of market conditions in the San Francisco Bay area, Los Angeles area and San Diego area are required. Detailed analysis of shipping options and review of port facilities and other logistics requirements at receiving terminals is required and is an integral part of the market studies. Market research should focus on specific regional major target consumers and products with the objective of securing letters of intent and/or sales contracts.

11.3 Mine Plan

Development of the Swamp Point project is contingent on Ascot securing contracts for the sand and gravel products.

The Swamp Point deposit contains a measured mineral resource of ~46 Mt. The Swamp Point Aggregate Mine has been designed with mining development in five phases over a minimum projected mine life of 15 years. A maximum production rate of 3.3 Mtpa is planned. The actual mine life and precise length of each phase will depend on the quantity of aggregate that can be sold each year.

This is a challenging project due to limited footprint of the property and environmentally sensitive areas in close proximity. This results in limited mine waste and overburden stockpile locations requiring the multiple rehandling of most of this material. The mine plan presented by YES is achievable and meets both the client's and the site's environmental protection requirements.

12. RECOMMENDATIONS

12.1 Environmental Assessment

Project certification is a critical milestone in proceeding with the overall development of the project.

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12.2 Geology

Potential customers need to be surveyed to determine whether additional information or more sample testing would be necessary in order to pre-qualify the Swamp Point materials (Golder report).

Conducting a pilot processing run (either large or small scale) of Swamp Point material may provide a useful means of assessing the projected quality of processed aggregates from this site. Resolving items (e.g. projected particle shape) may prove to be important to some potential customers (Golder report).

Test samples from the exploration program and comparison with samples obtained from small test run could serve as a basis for comparison of the relative change in this aspect of the aggregate's quality.

12.3 Mining

Develop a mining block model to establish a comprehensive mine plan.

It would be prudent to produce additional iterations of the mine plan and/or phase options in the final feasibility stage of the project.

The final perimeter road should be modified to reduce any areas that have a grade greater than 15%, and if possible reduce it to a maximum of 12%. It would be worth determining the benefits of placing the perimeter road to its final location from the start.

Commence detailed engineering on mining to firm up on capital and operating costs.

Execute a trade off study on the use of an overland conveyor versus trucks, to move material to the stockpile areas in Year 2. Considering that the site will have a 3-truck fleet that is not fully utilized, trucking may provide a cost saving benefit to the project and provide more flexibility in the operation.

Further studies are required to reduce re-handling of aggregate and waste material.

Removal of stockpiles and stripping in Years 7 to 9 will be a major undertaking. It will require stockpiling of material within the mined pit limit for re-handling during reclamation. The mine plan should be studied further to establish optimal solutions. An option to consider would be sub-phasing the final pushback to allow part of the pit to move to the final wall, producing a greater open area for reclamation.

12.4 Marine Structures

Commence detail engineering on the marine structure to firm up on capital and operating costs.

Proceed with procurement of a shiploader and materials handling equipment.

12.5 Shipping

Proceed with the establishment of shipping contracts to develop accurate shipping costs.

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12.6 Infrastructure

Detail engineering and design in order to firm up on capital and operating costs.

12.7 Optimization Studies

Optimal production range based on reliable supply contracts to be established.

12.8 Marketing

Secure letters of intent from potential customers to enable the project to proceed to feasibility study and detail engineering phases.

13. ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORT

13.1 Mining Operations

The Swamp Point deposit will be mined as an open pit operation using loaders and excavators to fill a small truck fleet with the waste/overburden material for stockpiling and to load a mobile crushing plant with the sand gravel material for processing. All waste and overburden is temporally stockpiled on the upper elevations of the property. Phase One of the operation is a combination of site preparation and commissioning of the process plant and is expected to last 2 years and includes:

- Initial construction for Phase One operations (both upland and marine),
- Initial operations at a reduced production rate, in order to create sufficient development space for full scale infrastructure and product storage;
- Additional construction and installations to enable full-scale production.

During this 2-year period, the pre-stripping of Phase Two along with the plant expansion and conveyor placement will need to be completed. Phase One construction will also involve transport of mobile operations equipment to the initial extraction area, construction of a crossing over South Beach Creek, installation of piles and other related structures for the marine facilities, construction of the mine perimeter road, set-up of the fuel storage facility, construction of the water storage and initial settling facilities, construction of the lay down and load out areas, construction of the fresh water pipeline from Reservoir Lake, and mooring of the Phase One temporary Floating Camp. Initial operations (i.e. sand and gravel extraction) are expected to begin on land while construction of the marine facilities is still in progress. Additional overlap of construction and operations will occur in the later stages of Phase One, when construction and installation associated with the infrastructure needed for full-scale operations is undertaken.

Phase Two mining starts in year 3 with the wash/crushing plant expanded and relocated to this area along with the installation of the conveyor system used to transport sand and gravel products down to the stockpile areas at the bottom of phase 1 in place of a larger truck fleet.

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Pit walls are mined at a 1:1 slope ratio with benches, and when they reach final pit wall location are capped and reclaimed with the stockpiled organic material to a 2:1 final slope.

Phases Two through Five (incorporating year 3 through to year 15 of the PFS Mine Plan) will be full production phases, separated on the basis of the excavation locations and elevations within the overall pit limit. Phase Two production will begin following the addition of a Processing Plant with higher capacity during the end of the second year of mine life. By that time, the smaller Phase One Processing Plant will have created sufficient space for the larger plant to operate efficiently, and sufficient stockpile space to store approximately 75,000 t of product. This quantity is enough to fill one Panamax (70,000 dwt) size ship.

In years 7 to 9 of the mine plan all of the stockpiled material located on the top elevations of the property will need to be moved to locations within the mined pit area or to reclaim to permit stripping for the final pushback. This will require the movement of ~550,000 m^3 in each of these years.

13.2 Markets and Economics

13.2.1 Introduction

Aggregate is the largest non-fuel mineral commodity produced in North America. Primary potential markets for aggregate from Swamp Point are cities along the west coast of North America, especially the San Francisco Bay area, Los Angeles and San Diego. Some additional potential exists to supply regional aggregate market needs in Prince Rupert, southeast Alaska and elsewhere in the Pacific.

The west coast U.S. market has emerged as a major new opportunity for BC based aggregate producers. Existing local sources of supply in the San Francisco, Los Angeles and San Diego metropolitan regions are becoming exhausted and it is extremely difficult, if not impossible, to permit new aggregate operations in these areas. Consequently, aggregates are now being sourced from quite distant areas, including by water from B.C., by truck from the Central Valley area of California, and by rail from Nevada and Arizona. The net effect of these developments has been a significant increase in the delivered price of aggregate. This trend is expected to continue, although as more distant sources are developed, competition may serve to reduce the rate of increase in delivered prices, especially as regards the underlying price of the aggregate.

Ascot has been actively pursuing potential markets for aggregates since acquiring the Swamp Point project in 2004, building on earlier work by 647680 B.C. Ltd in 2003. In 2004, Ascot commissioned Golder Associates to prepare a valuation analysis of the Swamp Point property. This exercise included a preliminary market study. This study identified California as the principal market for the project based on the relatively high price for aggregates and the constraints on supply in this market (Golder Associates, May 2004).

Key considerations in assessing the market potential for the Swamp Point project include the availability of self-unloading "Handysize", "Handymax" or "Panamax" size vessels of 30,000 – 70,000 dwt capacity; the availability of suitable dock space in the target markets; the ability of Ascot to penetrate vertically integrated markets; and relative shipping costs for seaborne aggregate shipments versus rail shipment of aggregate from inland regions.

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Negotiations will be required with shipping companies to develop arrangements for long-term, secure charter arrangements of suitable vessels. It is understood that various shipping companies have been contacted and these companies have indicated an interest in the project. Dock space in the target market areas is generally privately held by the major aggregate and construction materials distributors in the region. It will be essential to secure long-term off-take agreements with these companies to ensure that adequate dock storage space is available.

13.2.2 California Markets

The total California market for aggregates in 2004 was 213 million tonnes. Of this amount, demand in coastal California markets is estimated at 150 million tonnes. The greater Los Angeles area is the largest coastal market at 85 million tonnes, followed by the San Francisco Bay are at 23 million tonnes and the San Diego area at 8 million tonnes.

The major part of the market is for concrete aggregate for residential construction, followed by concrete aggregate for highway and road construction. Most aggregate sales are to large public construction projects, with approximately 60% of all aggregates used in California destined for public works projects. Table 11 and Table 12 illustrate the end use distribution of aggregate consumption in California, and the regional significance of the coastal market, and especially the Los Angeles region market.

Table 11: California Aggregate Market by End Use 2004

End Use	California %	California (MM t/yr)	Los Angeles (MM t/yr)
Residential Housing	30	64	24
Highways & streets	27	57	17
Dam, canal, airports & other construction	13	28	7
Commercial buildings	10	21	22
Non-construction uses, landscape, specialty sand	7	15	3
Water and sewer facilities	5	10	1
Other buildings	4	9	5
Hospitals, schools & colleges	2	5	4
Rip rap for railroad ballast, transit facilities	2	4	1
Total	**100**	**213**	**84**

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Table 12: California Aggregate Market by Type of Customer 2004

Aggregate Type	California (MM t/yr)	Coastal California (MM t/yr)	Los Angeles (MM t/yr)
Road Base	53	25	14
Concrete aggregate	79	65	37
Coarse concrete aggregate	9	6	3
Asphalt aggregate	25	18	10
Coarse asphalt aggregate	4	3	2
Round rock aggregate	1	1	1
Construction fill	28	20	11
Concrete products	4	3	2
Other	10	9	5
Total	**213**	**150**	**85**

Source: Hanam Canada Corporation

In recent years, significant volumes of sand and gravel have been exported from British Columbia to California in large Panamax size vessels and ocean-going barges. The primary destination has been the San Francisco Bay area, but shipments to the Los Angeles and San Diego markets are also being made. California imports of sand and gravel were reported to be approximately 2.0 million tonnes in 2003, 2.18 million tonnes in 2002 and 820,000 tonnes in 2001. Imports in 2003 were at a lower level than 2002 due to the completion of a number of major projects. 2004 imports are anticipated to approximate the 2003 levels.

The rapid increase in sand and gravel exports from B.C. to U.S. west coast markets is illustrated in Table 13. These data also illustrate the fact that there can be significant variations in shipment levels from year-to-year due to the project-oriented nature of the market. At present, the United States is the only destination for B.C. sand and gravel exports.

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Table 13: Sand and Gravel Exports from BC 2000 – 2004 ($CDN '000)[1]

Destination	2000		2001		2002		2003		2004	
	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel
California	$1,112	$6,136	$484	$5,539	$3,314	$18,703	$5,315	$7,899	$6,099	$4,042
Washington	-	$2,270	-	$5,004	$28	$2,423	$29	$1,991	$156	$3,428
Oregon	-	$27	-	$9	$9	$4	-	$19	$13	$30
Alaska	$22	$56	$186	$64	$319	$114	$72	$411	-	$531
Hawaii	-	-	$4	-	-	-	-	-	-	$5
Sub-total[2]	$1,134	$8,489	$675	$10,617	$3,670	$21,244	$5,417	$10,320	$6,268	$7,505
Total U.S. imports from BC[2]	$1,134	$8,668	$675	$11,103	$3,670	$21,389	$5,417	$10,503	$6,275	$8,457

Source: Statistics Canada

1. rounded to nearest whole value
2. totals may not add due to rounding

The major coastal markets exhibit significantly different characteristics in terms of supply patterns and potential for aggregate sourcing from British Columbia. These differences are summarized below:

13.2.3 San Francisco Bay Area

Demand for aggregate in the San Francisco Bay area is estimated at 23 million tonnes for 2005. Demand in the area is met by seaborne imports from British Columbia (primarily from Sechelt), from dredged sand from the bay (more than 2 million tonnes per year) and from local sand and gravel and crushed stone operations in the Clayton, Santa Cruz, Pleasanton, Sunol and as much as 40 miles north of Sacramento. In this latter case, material can be barged down the Sacramento River to terminals on the Bay.

The Bay area market is characterized by several features. These include:

1. A shortage of deep draft (>40 ft depth) berths to handle Panamax size vessels,
2. A distinct division in the market into four sub-regional markets: west (San Francisco Peninsula, Redwood City), north (San Rafael), east (Richmond and Oakland), and south (San Jose),
3. The dominance in the market of major vertically integrated aggregate, cement and ready-mix producers having ownership interests in deep water key port facilities.

13.2.4 Los Angeles Area

The Los Angeles region is anticipated to consume about 85 million tonnes of aggregates in 2005. The market is dominated by six major suppliers, with numerous smaller producers. Hanson Building Materials, Vulcan Aggregates, Cemex Cement, Granite Construction and United Rock Products are large, vertically integrated producers servicing both their internal and open market requirements. Robertson Ready Mix and sister company Owl Rock (both owned by Mitsubishi Cement) primarily supply material for captive demand. In total, there are about 40 significant aggregate suppliers in the area and the market

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is very competitive. Construction demand for aggregate is strong and many companies are interested in new sources of supply.

Local aggregate supply is derived from quarries in the surrounding Topatopa, San Gabriel and Santa Ana Mountains and from sand and gravel pits quarrying the San Gabriel River bed. While there are a significant number of pits and quarries, development and zoning pressures are increasing and restrictions on quarrying activity are forcing aggregate suppliers to develop sources more distant from Los Angeles. For example, it is now economic to rail aggregate from pits near Palm Springs, over 100 miles from Los Angeles. Seaborne imports of aggregate are limited to servicing the market within approximately 40 miles of the discharge terminal.

Port facilities in the Los Angeles area are limited. The Port of Long Beach and Port of Los Angeles are oriented to container shipments and have very limited bulk storage facilities. It is more than likely that a privately owned and operated dock facility will be required to competitively service the market.

13.2.5 San Diego Area

The aggregate market in the San Diego area is estimated at about 8 million tonnes in 2005 for crushed rock, gravel and sand. Of this, about 2 million tonnes is sand for ready mix concrete. Regional quarries supply crushed rock and a significant amount of manufactured sand to adjacent ready mix plants. Marine sand is also an important component of the local sand supply mix. Most of the ready mix plants are located about 14 miles from the port, making imported sand expensive. However, premium prices are available for high quality sand. Port facilities in the San Diego area are somewhat limited, but there is sufficient deep water to handle 50,000 dwt vessels.

13.2.6 Other Markets

Historically, southern B.C. aggregate producers serviced the Puget Sound market centered on Seattle and Tacoma with shipments from operations at Sechelt, Earles Creek, Texada Island, Jervis Inlet and Victoria. Material was generally barged in small lots of 5,000 tonnes to 10,000 tonnes. Aggregate from Swamp Point is unlikely to be price competitive in these markets. However, Swamp Point could be competitive in serving the southern Alaska market and perhaps Hawaii. The focus in these markets would be the supply of high quality sand and specialty coarse aggregate products, which are not locally available.

The ability of the Swamp Point project to capture a share of the regional B.C. market for aggregate will be a function of transportation costs. The Swamp Point project is well positioned to service the northwestern B.C. coastal markets such as Prince Rupert and Alaska panhandle markets such as Ketchikan and Juneau. However, these markets are quite small. Larger volume markets are to be found in the southern coastal areas around Vancouver, Victoria, and Surrey-Langley. These markets are currently serviced by sand and gravel operations in the region, especially at Sechelt, Egmont, Victoria and Texada Island. Transportation costs are relatively low, while projected freight costs from Swamp Point would be relatively high, rendering Swamp Point material only marginally competitive in most cases. Overall, the potential to develop significant sales volumes within the regional B.C. market is estimated to be relatively low. Therefore, the focus of market activity for the Swamp Point project must be on export opportunities to the west coast U.S., especially California.

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13.2.7 Prices

Prices for aggregate are a function of the general availability of aggregate, the application, and transportation costs. Aggregate prices are high in regions with few sources of supply and for applications requiring a high degree of quality control such as concrete stone and concrete sand. Transportation costs affect the delivered price of the material and aggregates shipped to a specific market from distant sources are generally priced at a lower level, FOB pit, than aggregates sourced from facilities closer to the end user, other factors being equal. These price considerations are quite evident in the coastal California market, with aggregate prices being generally higher in the San Francisco area versus markets in the Los Angeles and San Diego regions. In its May, 2004 evaluation report, Golder reported the following data respecting regional pricing for aggregates in California (Table 14):

Table 14: Regional Prices for Aggregates in Coastal California – 2004 ($US/ton)

Location	Pit Run Gravel	¾" Road Base	Concrete Stone	Concrete Sand	¾" Clear Crushed
San Francisco area	$3.75	$8.07	$17.92	$19.25	$20.75
Los Angeles area	$2.75	$9.38	$12.33	$13.75	$12.19
San Diego	$7.23	$8.75	$11.32	$17.50	$11.10
Avg., $US/ton	$4.58	$8.73	$13.86	$16.83	$14.68

Source: Golder Associates Ltd.

Reported prices of aggregates in the target markets are currently lower than indicated in Table 14. Data reported in ENR (Nov. 7, 2005) show the following (Table 15):

Table 15: Regional Aggregate Prices ($US/ton, FOB pit)

Product	San Francisco	Los Angeles	Seattle
Concrete Sand	$7.68	$7.64	$7.80
Masonry Sand	$8.24	$8.21	$7.80
1 ½" – ¾" Gravel	$10.30	$10.26	$8.75
¾" – 3/8" Gravel	$10.40	$10.41	$9.25
Crushed stone, base course	$8.22	$8.20	$9.25
Crushed stone, concrete course	$8.37	$8.31	$9.25
Crushed stone, asphalt course	$8.77	$8.62	$10.00

Source: ENR, Nov. 7, 2005, p. 24-25

Delivery charges would, on average, add +$US 5.00/t to the indicated prices. Total delivered costs for aggregate are anticipated to increase rapidly in the next few years. Aggregate production and truck haul costs are increasing rapidly due to fuel cost increases, and newly licensed pits are significantly more

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distant from major demand centres than in the past. In fact, average prices for aggregate in the Pacific coast region are reported to have increased very rapidly in 2005. Aggregates Manager magazine reports year-to-date price increases for 13.1% for sand and 12.8% for gravel for the period July 2004 through July 2005 (Aggregates Manager, October 2005, p. 20-21). This rapid increase follows average year-over-year price changes for sand of +4.7% in 2003 and -0.4% in 2004 and average year-over-year price changes for gravel of 2.7% in 2003 and 6.2% in 2004.

Ascot is projecting an average delivered price of $US 14/ton for material delivered into the San Francisco Bay area. This price projection appears to be reasonable. Current delivered prices for sand and gravel from Sechelt, B.C. to San Francisco are approximately $US 10.80/ton, plus port costs of approximately $US 3.00/ton (stevedoring, dockage, land lease, weigh clerks, pile security, FEL operator). By comparison, the delivered price of sand and gravel concrete aggregate delivered to a typical job site or ready mix plant in the Bay area is about $16.20/ton. Similar prices prevail in the Los Angeles market area. Assuming aggregate can be delivered and landed from Swamp Point to the San Francisco and Los Angeles markets for approximately $US 14/ton, shipments should be price competitive within a reasonable distance of the receiving terminal.

13.2.8 Competition

The major B.C. suppliers into the west coast U.S. aggregate market are:

- Construction Aggregates Ltd.

  CAL, owned by Lehigh Northwest Cement Ltd., operates a very large sand and gravel operation at Sechelt. This facility has a current capacity of approximately 5.4 million tonnes and is capable of loading Panamax size vessels as well as barges of various sizes. Aggregate from Sechelt is recognized in California as premium quality and any competitor entering the market will have to match or exceed the specifications for aggregate from the Sechelt pit. CAL has a long-term supply arrangement with Hanson Building Materials for supply of aggregate into the California market.

  CAL also operates a large sand and gravel pit at Victoria. This facility is located on tidewater and is capable of loading barges. It may be closing in the near future due to resource depletion.

- Lafarge Canada Inc.

  Lafarge is based in Coquitlam, BC and operates a sand and gravel pit on tidewater at Earles Creek, BC (Egmont) BC and a limestone and diorite quarry on tidewater at Texada Island, BC. The Texada Island facility also produces crushed limestone for internal consumption in cement manufacture and as aggregate for both captive and export markets. The Texada Island facility is capable of loading large barges and Panamax size vessels.

- Jack Cewe Ltd.

  This company is based in Coquitlam and operates a sand and gravel pit on Jervis Inlet. It has a capability of loading barges, but not large vessels.

In addition to these companies, Polaris Minerals has recently received approvals for development of a major export-oriented crushed stone quarry on Alberni Inlet. The quarry, known as Eagle Rock Aggregate, is targeting the west coast market. Manufactured sand produced from the fines generated

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during rock crushing, will be a significant product. The Alberni Inlet facility will have the capability of handling Panamax size vessels. One of the investors in the project is a Norwegian-based shipping company. This company has agreed to construct the required vessels to handle cargo movements. Polaris has also secured its own deep-water dock space in the San Francisco Bay area and in the Los Angeles area. Polaris is also developing the Orca Sand and Gravel project at Port McNeil (completed EA).

Hanson Aggregates (West) Inc., based in San Francisco, has been actively searching for a BC coastal source of aggregates for some time. Hanson has an established supply relationship with CAL. It is not known if Hanson will eventually develop its own facility in B.C. or partner with one of the local producers.

Several other companies are known to be searching for opportunities to develop large-scale aggregate operations on the BC coast. These include a proposal to develop a facility on the Bear River by Stewart (in EA review process), Orca Sand and Gravel in Port McNeil and a project in Kitimat (does not require EA). All of these projects are targeting the California market. The Swamp Point project offers a number of competitive advantages in the form of a relatively high sand content, low environmental impact and ready access to deep tidewater. These factors should enable Swamp Point to produce material at prices competitive to other projects. The total combined capacity of the projects is relatively small compared to the overall size of the market. However, development of other deposits at the same time as the Swamp Point deposit could prolong the time it takes to build the market for the project to reach full production of 3.3 million tonnes per year.

13.3 Contracts

Ascot has been in discussion with a number of potential customers in the California market. Some of these have expressed interest in the project, but to date no letters of intent or draft contracts for aggregate supply have been completed. No contracts with potential product shippers have been completed.

13.4 Environmental Conditions

13.4.1 Climate, Hydrology & Hydrogeology

The Swamp Point property is located in a region characterized by a maritime climate, with warm winters, cool summers, and heavy precipitation. January and July are the coldest and warmest months of the year respectively with temperatures averaging -5°C and 14°C. The average annual precipitation is expected to be between 1,800 and 2,000 mm per year with the majority falling as rain during the fall months (September through November). The annual amount of precipitation as snow is approximately 540 mm per year.

The largest watershed in the immediate vicinity of the Swamp Point site is Donahue Creek. The main stem of this Creek is located approximately 500 m north of the northern edge of Ascot's License of Occupation (#740560). This watershed is approximately 7950 ha in size, and portions of it are glacially fed.

Donahue Tributary watershed is a relatively small watershed (~ 92 ha), which drains from the south into Donahue Creek approximately 870 upstream of the estuary. Approximately 10 ha of the proposed mine development drains into Donahue Tributary. Donahue Tributary Control is a sub-drainage on this system.

It has the largest area and typically provides the majority of flow to the Donahue Tributary Creek. The Donahue Tributary Control sub-drainage will not be affected by mining activities.

North Beach Creek watershed is the next watershed to the south, and is ephemeral in nature. The elevated bog (130 m ASL) in the center of the mine property comprises the headwaters for this creek.

South Beach Creek is the next adjacent watershed to the south, and is approximately 62 ha in size. Its headwaters are the western slope of the mountain immediately adjacent to the proposed mine. This Creek is also ephemeral in nature. Groundwater flow through the creek bed maintains a few pools along the creek channel during dry periods.

Steep Creek and Reservoir Lake are the two watersheds immediately to the south of Ascot's property. Steep Creek has two sub-drainages – Steep Creek (164 ha), and the Steep Creek Diversion (131 ha). The Steep Creek Diversion sub-drainage will have an intake structure installed on it, and water will be withdrawn for process wash water at the mine site. Reservoir Lake's watershed is approximately 136 ha in size, and it feeds Reservoir Lake, which is a small (7 ha) non-fish-bearing lake. The lake outlet feeds a small stream that plummets down a 35 m waterfall into Portland Canal approximately 2 km to the south of the proposed aggregate mine.

High flows in the creeks occur during the fall (September through November) and during the spring freshet (April through June). The creeks are very responsive to high intensity rainfall events. The longest period of low flows is expected to be in the winter months from December to March when temperatures remain low and most precipitation falls in the form of snow. However, there will be periods during these winter months when temperatures will rise and stream flows will increase in response to rainfall and snow melt. Additional shorter periods of low flows are expected to occur during the summer months of July and August when the frequency of storm events is typically low. During low flow periods in the winter and summer months, flows in the smaller creeks may reduce to near zero.

The expected effects of the Project on surface water hydrology are primarily related to changes in catchment area boundaries as a result of open pit development, and the diversion of surface water to supply the mine with wash water. The surface catchment of Donahue Tributary will be reduced by a small amount during the latter stages of operations, and this slight alteration will continue indefinitely through post-closure. This effect is not considered significant from a hydrologic assessment perspective.

Project development will result in a gradual concentration of flows within the open pit area, and will result in a single point of discharge to North Beach Creek. This effect is not predicted to be significant in terms of hydrologic impacts, as the total catchment to this point of discharge will still be relatively small (approximately 50 ha). The discharge channel will be constructed to design standards to withstand the additional predicted flows. All flows will go through a settling pond, which will be sized to minimize sediment discharge to the marine environment in accordance with provincial standards.

The other primary hydrologic effects of the Project will be (1) reduced flows in Steep Creek as a result of flow diversion via pipeline to Reservoir Lake; and (2) fluctuating water levels in Reservoir Lake as water is piped to the mine site Freshwater Storage Pond. These effects are not considered significant from a hydrologic perspective, as they are temporary in nature, neither involves an increase in flow or water storage, and no significant adverse effects are predicted to the creek channel or the lake bottom.

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The hydrogeological setting on site is dominated by the principal aquifer on site which is the sand and gravel terrace deposit slated for mining. The sand and gravel is recharged by precipitation and by runoff from the hillside to the east. Much of the sand and gravel is capped by organic silts and a cemented layer that impedes the recharge of the aquifer. The precipitation and run-off that does infiltrate the sand and gravel migrates downwards to the base of the deposit, and groundwater flow direction is then controlled by the topography of the underlying bedrock. There will be no blasting of the bedrock below the gravel deposit and therefore no changes to the groundwater divide for the various catchments are expected. As a result base flows from groundwater to adjacent creeks will be maintained or increased throughout operation and closure.

At closure, the mined area will be re-sloped with soil material having similar properties that control recharge as that which currently exists on site (i.e. the cemented overburden). Designed wetlands will catch surface runoff allowing additional time for groundwater recharge. It is expected that the effect on groundwater upon closure will be minimal.

13.4.2 Freshwater Quality & Aquatic Biological Assessment

The Swamp Point Aggregate Mine will not use any acidic, caustic, or toxic substances to process aggregates. Bedrock will not be disturbed, therefore the potential for acid rock drainage is minimal. The primary environmental concern in relation to freshwater quality and aquatic resources will be the potential release of sediments to the aquatic environment. The key locations where sediment release could potentially occur are at the Clear Arch Span crossing of South Beach Creek (during installation), and discharges of untreated mine runoff to surface waters during operations.

Measures to prevent surface erosion and control sediment release include ongoing reclamation and designed water management structures that will keep surface water which may contain sediments within the Open Pit area and direct the water to a settling pond where sediments will settle out prior to water discharge. A detailed Surface Erosion Prevention and Sediment Control Plan will be prepared prior to construction, and will include facility specific prescriptions. Assuming that the prevention and mitigation measures are effective as planned, it is unlikely that significant sediment release to the aquatic environment would occur.

A detailed Fuel Management and Spill Contingency Plan will be prepared prior to construction. Site planning and facility design have been designed to prevent hydrocarbon spills. All fuel storage and handling procedures will comply with all current legislation, and site planning and facility design will aid in the prevention of hydrocarbon spills. Assuming that prevention and mitigation measures are effective as planned, it is unlikely that hydrocarbon contamination of the freshwater receiving environment would occur as a result of the Project.

Fisheries values were found in South Beach Creek and Donahue Tributary; two small creeks that drain the mine area. South Beach Creek has approximately 60 m of fish habitat upstream of the marine environment. Donahue Tributary has approximately 260 m of fish habitat, all of which is outside the mine tenure boundary. The headwaters of the Donahue Tributary originate in the bog in the center of the tenure. Donahue Tributary continued to flow throughout the summer of 2005, largely due to the input from the Donahue Tributary Control watershed. Both South Beach Creek and Donahue Tributary Creek were found to contain Coho (Oncorhynchus kisutch). A single cutthroat trout (Oncorhynchus clarkia) and sculpin (Cottus sp.) were also found in South Beach Creek. Donahue Tributary contained Dolly Varden

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(Salvelinus malma) in addition to Coho. Some spawning and rearing habitat was found in both systems, though no spawning activity was directly observed.

Steep Creek consists of two sub-drainages. The larger sub-drainage (164 ha) will not be affected by the Project. A water intake structure will be installed on the smaller sub-drainage (131 ha), and the water will be piped to Reservoir Lake in Phases II to V. Dolly Varden, rainbow trout (Oncorhynchus mykiss), and coastrange sculpin (*Cottus aleuticus*) were captured in the outlet of Steep Creek. The sculpin and Dolly Varden were confined to the bottom 15 m of the channel. A few of the larger rainbow were located in pools up to 11 m further upstream in gradients usually not associated with fish habitat (29%). Flows to this system will be maintained through the mine life by the unaffected portion of the watershed.

Reservoir Lake is an elevated fishless lake that will be used as a source for process wash water. The lake outlet (Reservoir Lake Creek) flows to the south and west where it plunges down a 35 m waterfall into a pool immediately adjacent to the ocean. Coho salmon, rainbow trout, Dolly Varden, and coastrange sculpin were captured below the falls in Reservoir Lake Creek. The available fish habitat in the creek is limited to a 10 m long cascade at 10% gradient, downstream of two pools at the base of the falls that forms a barrier to fish. The total area of both pools combined is 4 m^2. Total fish rearing habitat was estimated to be 5 m^2, with approximately 0.5 m^2 of marginal spawning habitat at the tail end of the pools. All available fish habitat is located below forest growth, and is therefore assumed to be influenced by high high tides and storm swells seasonally.

Flow effects to fish in South Beach Creek, and Donahue Tributary are predicted to be negligible. Flow effects to the fish habitat at the base of Steep Creek and Reservoir Creek will be closely monitored and Ascot will actively mange water flows to ensure there is no Harmful Alteration, Disruption or Destruction of fish habitat.

No significant adverse effects are predicted for benthic invertebrates and periphyton in these creeks. Flows in North Beach Creek will be lost through much of Project development, however this is a small ephemeral stream that dries up for portions of the year and is not fish bearing. At closure, surface drainage from the Open Pit will be directed back to North Beach Creek and it is expected that, based on the somewhat increased post-mine catchment area, post-mine flows in this creek will be higher than existed pre-mine, and that benthic invertebrates and periphyton will re-colonize the system. Flow reductions will occur in Steep Creek and in the outlet of Reservoir Lake during the mine life. Some flow will continue in both creeks to support periphyton, benthic invertebrates and the limited amount of fish habitat found in the pools adjacent to the marine environment.

Design and mitigation measures are considered to address potential concerns related to Project water quality, sediments, benthic invertebrates, periphyton and fishery values. The Project is not expected to result in significant regional or site-specific effects to freshwater aquatic resources.

13.4.3 Marine Ecosystem

The proposed mine will have several components that will involve or interact with the marine ecosystem. Marine resources considered included marine mammals, marine birds, benthic habitat, marine fish, and the biophysical and chemical properties of the marine environment. The scope of these considerations was focussed around the proposed Marine Facilities and the Shipping Lane.

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Biophysical assessments in the vicinity of the proposed Marine Facilities were conducted in December 2004 using SCUBA divers. The biophysical assessment of sub-tidal and intertidal habitat was conducted along and adjacent to areas proposed for the ship loading and barge facilities. Baseline assessment work was conducted from the high-high water mark down to approximately 20 m below sea level along 12 transects. Information collected included physical site descriptions, flora and fauna relative abundance, substrate and potential habitat identification (e.g. salmon use).

The ocean floor where the Marine Facilities will be installed can be characterized by large areas of exposed bedrock, with intermittent areas containing cobble and some sand. Much of the subsea area slopes steeply, and at times consists of vertical cliffs. Vegetation in the area was dominated by rock kelp (Fucus) in the intertidal areas, with various species of green and red algae in deeper waters. Barnicles and mussels were the dominant sessile organisms found in the intertidal area, whereas low to moderate distribution of hermit crabs, snails, starfish, and sunstars existed in the subtidal zone. Serbellid worms, chitons, bivalves, limpets, barnacles, and hydrozoans also populated the Subtidal Zone.

During the initial construction phase, approximately 44 piles will be installed to support the various Marine Facilities on site. The piles will be installed using the drill and socket method. Piles are pounded approximately 10 cm into the bedrock, which creates a seal between the pile and the ocean floor. A drill is then placed inside the pile and is used to bore into the bedrock. Drill cuttings are circulated through the pile back onto the barge where they are contained. A pile pin is then placed into the drilled socket, and the pin and pile are grouted into place with concrete. This process prevents the release of drill cuttings and concrete to the marine environment.

Each pile will be approximately one meter in diameter, so approximately 44 m^2 of marine seabed will be used to secure the piles to the ocean floor. Given the limited value of observed habitat at the load out area and the small area involved, significant loss of marine habitat will not occur. The Best Management Practices for Pile Driving and Related Operations – B.C. Marine and Pile Driving Contractors Association (March, 2003) will be used to guide these operations. Prior to construction, a Letter of Advice will be sought from the Department of Fisheries and Oceans to help guide Ascot through this process. If divers are on site for the pile installation, sessile organisms will be moved out of the area prior to pile installation.

Berthing and de-berthing of ships will be conducted with the assistance of tugs or by ships equipped with high lift rudders and bow thrusters. Regardless of the ship's configuration, the main propeller will not be used while the vessel is at berth, therefore propeller wash during berthing and de-berthing will not be a concern. Once away from the berthing facilities, water depth and the distance to the shoreline will eliminate the possibility of benthic habitat being disturbed by propeller wash.

The Marine Facilities have been designed to have major structures a minimum of 10 m away from shore to allow passage of fish along the shoreline and to prevent shading along the shoreline, which could disrupt fish passage. The Ship Loader conveyor system will be greater than 10 m above the High High Water Mark, so shade will not be a concern from this structure.

Harbour Seals, Dall's Porpoises, Pacific White-Sided Dolphins, Killer Whales and a single Grey Whale have been seen in waters close to the proposed mine site. All of these species other than the Harbour Seals are transient. It is therefore anticipated that the Marine Facilities and shipping activities would have a minimal if any impact on these species.

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The Shipping Lane for this Project has been defined as the area between Triple Island and the Swamp Point Aggregate Mine. Pilots used to guide ships will embark and disembark at Triple Island. On northward voyages, each ship will pass between the northern tip of Stevens Island and the southern tip of the Melville Island group prior to entering Chatham Sound. The vessel will then pass between the mainland and Dundas Island while proceeding into Portland Inlet. Once in Portland Inlet, the ship will proceed into Portland Canal to the east of Pearse Island. Once in Portland Canal, Swamp Point is approximately 55 km to the north. When sailing from the aggregate mine, the opposite route will be taken. It is anticipated that vessels plying the Shipping Lane will have no effects on the marine ecosystem.

Vessel groundings and subsequent spills of aggregate and/or fuel to the marine environment pose an extremely remote risk to the marine environment in the Shipping Lane. The Shipping Lane is relatively simple to navigate, and numerous routine precautions such as constant radio traffic, use of ship's pilots, and using well maintained vessels will virtually eliminate the risk of a vessel grounding in the area. Ships will not travel close to shore and will travel at less than 14 knots. Therefore, the likelihood of injuring marine mammals is considered remote.

13.4.4 Terrestrial Ecology

A broad range of terrestrial studies were undertaken at Swamp Point to provide information on the terrain, soils, terrestrial ecosystems, rare plants and ecosystems, wildlife habitats for selected wildlife species, breeding birds, and amphibians. Soils mapping and Terrestrial Ecosystem Mapping (TEM) at a 1:5000 scale were completed for the area around the proposed development to provide information for mitigation and restoration purposes. Wildlife habitat assessments were conducted to aid in the development of habitat suitability maps and mitigation measures for selected wildlife species. Breeding bird surveys were undertaken to determine the species and extent of breeding birds within and adjacent to the proposed study area. Rare plants and ecosystems were assessed to determine if the proposed gravel extraction would affect any listed plants or communities. Amphibian assessments were completed to assess the species and habitats within the proposed development area, and to determine if any listed species were present. Qualified professional biologists and soils/terrain specialists familiar with the study area soils, ecosystems, vegetation, and wildlife species of interest conducted the studies.

During the construction and operation of the proposed Aggregate Mine, an area of approximately 61 ha will be modified. Based on the regional information available, the affected ecosystems at Swamp Point are widely represented outside of the Swamp Point area. There are no expected direct impacts to rare plants as the only species found were located outside of the proposed development area, within the old limestone quarry.

No significant terrain factors will be of concern in the proposed development area. Surface soil erosion will be assessed during construction, particularly in areas containing sensitive soil types close to creeks. Soil erosion, long-term soil fertility, and slope stability are not expected to be of concern because of the good quality of salvageable soil materials and relatively benign terrain and landscape expected at post-closure. Slopes in all reclaimed areas will be 2:1 or less in slope gradient (<45%). Once reclaimed, no areas will have exposed mineral soil subject to erosion. Once vegetation has become re-established at the reclaimed site, terrain stability and erosion issues are not expected to be significant. Post-closure monitoring will be conducted to meet the slope stability and reclamation requirements.

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A variety of wildlife species were considered for assessment to determine if the proposed aggregate mine would affect their habitat or populations. The initial list included species that are considered rare or endangered either by the Federal or Provincial regulators, as well as species of management concern by the public or First Nations. This listing was then evaluated using a number of criteria to determine if more detailed impact assessment procedures would be required. If the evaluation criteria were met, these species were identified as focal species and detailed project effects assessments were carried out and mitigation measures developed if required to reduce the effects on those species. Focal Species include the Western Toad, Bald Eagle, Great Blue Heron, Marbled Murrelet, Black Bear and Grizzly Bear.

Nesting habitats for the avian Focal Species was the primary concern. As the nesting habitats of Focal avian species are primarily located in mature or old growth forests and the site was previously clear-cut, no nesting habitat is expected to be removed by the mine. Noise originating from the mine may affect nesting activities in the area around the mine, however the amount of area of suitable habitat that could be affected is small, and not significant in a regional sense. Effects on a possible active eagle nesting site northwest of the development will be mitigated by restricting activity around the site.

Approximately 800 m^2 of known Western Toad spawning habitat will be lost when the bog complex on the top of the aggregate deposit will be drained. Alternate spawning habitat will be installed in one of the drainage ditches on the eastern margin of the mine-site to provide new habitat for the toads prior to draining the bog. Habitat utilization will be monitored, and eggs and/or tadpoles will be transplanted into this habitat to ensure colonization.

Both Black Bear and Grizzly bears utilize similar habitats in the Project area. The proposed development will affect a small amount of high value spring, summer and fall foraging habitats, but is not expected to affect any hibernation sites due to the lack of mature forest within the proposed development area. In the spring, the amount of high value habitat available during the construction and operation phases within the Swamp Point LSA, is 5.5 ha, a reduction of 3.1 ha from the pre-mine condition. During the construction and operation phases of the mine, high value summer habitats will be reduced by 3.2 to 47.1 ha, and high value fall habitats will be 16.6 ha, a reduction of 0.2 ha. The proposed reduction in habitat is not significant from a regional perspective.

There is a potential for human activity and food and wastes associated with the camp and proposed development to affect Black and Grizzly Bear habitat use, behaviour and individual bear survival. Interaction between bears and humans can lead to destruction of the bears and injury to people. All workers will be required to attend Bear Safety/Bear Aware programs prior to starting work on-site. A no-hunting and no-fishing policy will be instituted on-site which will ensure that wastes associated with these activities are not available as attractants to bears in the area. All food and camp wastes will be stored in a secure area and wastes will be incinerated daily to prevent bears from being attracted to them.

13.4.5 Land and Marine Tenure & Use

It is anticipated that there will be no significant effects to existing land and marine uses. Existing tenure holders in the area include a Trapper, a Guide Outfitter, and several sub-surface mineral claims. Removal of the sand and gravel deposit will not affect these uses.

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13.4.6 Heritage & Cultural Resources

The likelihood of archaeological resources being found in area that will be disturbed is low because significant food resources do not exist on site and the site has been previously disturbed through logging. Donahue Creek, located 500 m to the north of the site, is a significant salmon stream. Project activities will not affect Donahue estuary so no impacts to heritage or cultural resources found in that area will occur.

If heritage or cultural resources are found on site, the Mine Manager will order the cessation of any work that could impact those resources. The Nisga'a Lisims government, the Lax Kw'alaams and Metlakatla First Nations and the Archaeology Permitting Section of the provincial government will be notified of the discovered resources. Guidance and direction will be sought from these agencies to ensure that adverse effects to the identified resources are prevented or mitigated.

13.4.7 Socio-Community Conditions

The Swamp Point Aggregate Mine is expected to have a generally positive impact on the communities in the region, particularly Stewart and Nisga'a communities in the Nass Valley. Project benefits will be less noticeable in the larger communities of Terrace and Prince Rupert. The interaction between the project and socio-community environment has been assessed, based on Housing Costs/availability, Community Health and Demographic Change. The impact ratings range from minor and positive to moderate and positive.

The employment of 10 to 16 people for construction of Swamp Point Aggregate Mine and 20 to 50 people for the operating phases of the mine is unlikely to have a significant effect on housing in the local or regional area. The nearest community of Stewart has a considerable housing and infrastructure surplus. The community has made it clear that it can handle the population increase caused by the opening of new mines in the northwest. The Nisga'a villages in the Nass Valley are experiencing a housing shortage typical of many First Nations communities. However, it is expected that most of the Nisga'a people who find employment during construction or operations will already be resident in the Nass Valley, so this mine will not put added stress on the existing housing.

The physical well being of Stewart and the villages of the Nass Valley is expected to improve with the wages that will come from Swamp Point Aggregate Mine as many of the employees will come from those communities. Workers will be better able to provide food, housing, and clothing for families.

The numbers of people involved in construction and operation of the mine are not expected to affect the demographics of the region.

13.4.8 Socio-economic Benefits

The Swamp Point Aggregate Mine is expected to have a generally positive impact on the economy of the region, particularly Stewart and Nisga'a communities in the Nass Valley. Project benefits will be less noticeable in the larger communities of Terrace and Prince Rupert. The interaction between the project and socio-economic environment has been assessed, based on Employment Opportunities and Contract & Business Opportunities. The impact ratings are moderate and positive.

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The Swamp Point Aggregate Mine has been designed with development in five phases over a projected mine life of 18 years. The actual mine life and precise length of each phase will depend on the quantity of aggregate that can be sold each year, and cannot be predicted at this time. The number of employees will vary from 16 to 50 depending on the phase of the operation and the rate of production that can be achieved. Because it could take time to develop product markets, a gradual growth to full design production, and thus full employment potential, is likely.

Direct labour costs during full design production (3.3 Mt) are expected to exceed $3 M/a. Personnel to construct and operate the mine will be sourced from local communities as much as possible. Positive economic effects will result from temporary construction and permanent (for the life of the mine) operating employment, direct and indirect local and regional expenditures, and contracting opportunities

During construction and operation, the purchase of materials and services (e.g., catering and camp services) from local businesses and industries will have a positive economic effect at the local and regional level.

Ascot is committed to working with communities in the area to maximize local employment and contracting opportunities and ensure training opportunities for local employees.

13.4.9 Nisga'a Nation & First Nations

First Nations in the general area of Swamp Point include the Nisga'a Nation, whose present day communities are in the Nays Valley, and the Tsimshian First Nations of Lax Kw'alaams and Metlakatla.

The Nisga'a Nation is the only first Nation to have completed a modern treaty with the Federal and Provincial governments. The Project is within the Nass area, which approximates the Traditional Territory of the Nisga'a Nation. The Nisga'a Nation does not own any settlement lands or other land titles in the immediate vicinity of Swamp Point. Swamp Point is within the Nass Wildlife Area, established as part of the Nisga'a Final Agreement. Within the Nass Wildlife Area, the Nisga'a Nation has certain rights to harvest wildlife. They also participate in the management and conservation of wildlife through the Nass Wildlife Committee, which makes recommendations to the Provincial and Nisga'a Lisims governments.

The Nisga'a Final Agreement has provisions for Environmental Assessment and Protection. If a proposed project that will be located off Nisga'a Lands may reasonably be expected to have adverse environmental effects on residents of Nisga'a Lands, Nisga'a Lands, or Nisga'a interests, the Nisga'a must be fully apprised of the development. To fulfill this requirement, the Nisga'a Lisims government has been involved as a member of the Project Working Group and Ascot has consulted with various Nisga'a Lisims government agencies in regard to the project.

The Lax Kw'alaams and Metlakatla First Nations have voiced concerns about potential effects to marine resources that originate near the proposed mine site and/or resources found along the shipping lane. Ascot has designed the project and has developed mitigation strategies and management plans to address these concerns.

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Ascot will continue to meet with representatives from the Nisga'a Nation and Lax Kw'alaams and Metlakatla First Nations during the Application review period and throughout the mine life. The scope and frequency of future meetings will be discussed prior to initiating construction activities.

13.4.10 Visual Resources

Although there is no formal procedure in place for assessing the visual impacts of a mining project, a visual assessment was completed for the proposed mine due to the high scenic values in the area. A decision was made to apply the forestry visual assessment procedures and an assessment was completed as per the Visual Impact Assessment Guidebook (April 1995).

The largest visual impact will be to boaters travelling along the Portland Canal and this was the focus of the analysis. Also considered was the impact of the project on Maple Bay, which is a proposed Park approximately 4 km to the south.

The maximum visual disturbance of 7.5% that can be attributed to the mine is within the maximum allowance of 8% for forestry activities in Visual Class III in the NCLRMP. Not withstanding this, Ascot will investigate ways of reducing visual effects. These may include planting of alders and trees along the access road early in the mine life and planting alder or cottonwood trees as screens to reduce the visual effect of pit slopes.

Long term, the mine site will be re-vegetated and, like many old clearcuts, the visual impact will be negligible. Therefore, the proposed project will be noticeable in the short term but in the long term, it will have a minimal effect on the viewscape.

13.4.11 Air Quality & Noise

Baseline air quality conditions at Swamp Point are assumed to be essentially pristine, since there are no industrial sources of air emissions within 10 km of the proposed mine. Continuous meteorological monitoring was initiated at the site in January 2005 and will continue through mine life. Dust emissions will be the primary air contaminant at this site, and numerous mitigation strategies will be used to minimize the generation of dust at the site. Minimizing drop heights at hoppers and conveyor transfer points, along with the use of water misters and watering roadways will be used when necessary to minimize dust emissions. The low amount of clay-particles in the sand and gravel deposit, coupled with the relatively wet climate on the coast will help minimize dust emissions at the site. Best Management Practices commonly used in other sand and gravel mines to deal with concerns regarding dust emissions will be implemented at this site.

The remote location of Swamp Point will preclude any potential adverse effects of noise on any communities. The potential for noise to adversely affect workers is addressed in the Preliminary Health and Safety Plan, Noise Management subsection. Measures to minimize noise, including Best Management Practices, are described in that section, as is worker hearing protection. Noise is also one of the human disturbance factors considered for wildlife in the Project effects assessment.

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13.4.12 Navigable Waters

Transport Canada has made a determination that the Marine Facilities as currently planned do not significantly interfere with navigation, and a Section 5(2) exemption will be sought prior to constructing these facilities. A water intake structure on Reservoir Lake will also require a Section 5(2) exemption from Transport Canada, as the lake is potentially navigable with a small boat. Creeks in the project area are not navigable.

At full production, the Swamp Point Project would increase vessel traffic in Portland Canal and Portland Inlet. This increase would include one large vessel per week, several trips by small supply and crew boats and occasional barge traffic. There are no navigational hazards in Portland Inlet or Portland Canal, waters are deep, and radar signals off the steep mountain walls provide the ship's Pilot with a great deal of certainty while traveling. Therefore, the increased level of traffic will not result in safety concerns due to over-crowding.

13.4.13 Natural Hazards Assessment

Natural hazards that were assess for the site included debris flood/flow potential; tsunami risk, earthquake hazards, avalanche risks and marine storms. All structures and facilities will be constructed to withstand predicted natural hazard conditions.

Qualitative assessment of debris flood / flow potential was limited to gullies and stream channels with potential to directly impact the proposed mine site. This assessment excluded Donahue Creek. In general the gullies and stream channels assessed are considered to have low potential for debris flows. However, probability of debris floods is considered moderate to high. This is based on observations of recent gully and channel side slope slide features. These types of failures have the potential to temporarily block the creek during a period of heavy rain and cause an outbreak flood event, or become entrained into the heavy run-off flows and generate a debris flood. In addition, woody debris was observed in some of the gullies during the aerial reconnaissance. This material has the potential to jam the gully, breach, and mobilize and entrain downstream gully sediments as a debris flood. A further assessment of debris flow potential will be conducted prior to constructing facilities in the vicinity of South Beach Creek.

In general site soils are not considered susceptible to liquefaction during a design earthquake event. Tsunami modelling was carried out using historical earthquake event magnitudes and tsunami wave data to calibrate the model. The results of modelling Portland Canal at various locations, including an observation point near Swamp Point, determined a maximum expected surge level in the order of 3 m above mean sea level at a current velocity of 0.35 m/s based on the Alaska 1964 9.2 M earthquake event. The maximum expected surge level is based on mean sea level and should be adjusted for tidal fluctuation in design.

The North Coast area is characterized by high snowfalls, resulting in numerous areas with moderate to high avalanche potential. While winter precipitation at the Swamp Point Aggregate mine site is commonly in the form of rain instead of snow, the mountain slopes above the site typically develop deep snow packs through the winter. However, there are no large slide paths on the slopes directly above the site. There is some possibility that some of the smaller gullies on the slopes above the mine site could present a hazard to workers working on the eastern edges of the site. Ascot will have a qualified expert assess this risk before construction of the mine commences.

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Marine storms may have the ability to disrupt ship loading operations and may cause concerns for ship passage. The Shiploader structure will be designed to withstand wind gusts up to 160 km/h (85 knots), but the Shiploader would cease operating when winds reach 70 km/h (40 knots). If winds exceed this speed, then the Shiploader loading boom should be tied down and secured to prevent it from being moved by the winds and damaged. Prince Rupert Vessel Traffic Control and the Ship's Pilot will be responsible for ensuring safe ship's passage under all weather conditions to and from the site.

While Portland Canal is considered relatively sheltered with respect to large vessels, conditions can be potentially hazardous for small vessels. Crew boats will not travel if conditions are, or are forecasted to be, beyond the safe operating limits of the vessel. Workers would stay in the camp during periods when travel is unsafe. The Swamp Point facility will provide a safe refuge for small craft in an area with few sheltered harbours and thus increase boating safety on the Portland Canal.

Surface facilities will be built at 10 m elevation or higher. Therefore there is no risk of damage from storm waves.

13.4.14 Proponent's Conclusion

Based on the Project effects assessments and environmental management plans described in Sections 5 and 4 respectively of the Environmental Assessment Application, the report states that:

The Swamp Point Aggregate Mine is not likely to cause significant adverse residual environmental, heritage, socio-economic, socio-community, effects to the Nisga'a Nation and the Metlakatla and Lax Kw'alaams First Nations, or other effects. This conclusion is based on the determinations of significance presented in the Application, and takes into account successful implementation of the technically and economically feasible proposed mitigation measures.

There are unavoidable localized effects on some environmental resources (mainly terrestrial), however the proposed mitigation measures are considered to reduce the residual effects to acceptable levels. Almost all predicted effects are considered reversible, with duration primarily limited to the life of mine. Irreversible effects identified are limited to minor flow changes in Donahue Tributary and permanent changes to site terrain. The latter is unavoidable at any mining development, and mitigation measures have been presented to address post-mine terrain stability and visual effects.

13.5 Capital and Operating Cost Estimates

13.5.1 Capital Cost

The capital cost estimates for the Swamp Point including infrastructure, mining, process plant, materials handling, shiploader, marine facilities and sustaining capital have been based in third quarter 2005 United States dollars, using a CDN$1/US$0.85 exchange rate where applicable. No allowances are included for escalation or exchange rate fluctuations.

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Two capital cost estimates have been generated for two separate project scenarios. The capital cost estimate options considered are:

- **Ascot Owns (100%) Equipment** – Ascot procures new mining mobile equipment for the project during Phase 1 - initial production including mobile equipment replacement during the life of mine.
- **Contractor Supplied Equipment** – Mining contractor supplies a permanent mining fleet and associated equipment during initial production.

The summary of capital cost estimates for the Swamp Point is presented in Table 16 and reflects an accuracy level of ±20% (i.e. consistent with the pre-feasibility study level of engineering effort).

Table 16: Capital Cost Estimate Summary for the two Options

Description	**Ascot Owns (100%) US$'000's**	**Contractor Supplied US$'000's**
Infrastructure	4,895	4,895
Mining	5,759	0
Process Plant	5,571	0
Stockpile and Conveyors	0	0
Water Management	403	403
Shiploading Systems	11,518	11,518
Total Directs	**28,146**	**16,816**
Indirects	5,604	3,909
Contingency	6,750	4,075
Total Estimate	**40,500**	**24,800**
Sustaining Capital (Year 3 – 15)	6,222	119
Contingency (20%)	1,248	27
Total Sustaining Capital	**7,470**	**146**

13.5.2 Operating Cost

Operating costs for Swamp Point include mining, process plant, shipping, general and administrative (G&A) and royalty costs that have been estimated in third quarter 2005 United States dollars using a CDN$1/US$0.85 exchange rate and no allowance for escalation or exchange rate fluctuations are included.

The operating cost estimates presented in Table 17 and Table 18 reflect an accuracy level of ±20%, consistent with a Pre-Feasibility Study level of engineering effort.

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Table 17: Operating Cost Estimate (Ascot Owns 100%)

	Activity	US$/t
Mining + Process	Stripping	0.21
	Mining Sand & Gravel	0.48
	Process Plant	1.15
	Pond Maintenance	0.03
	Reclamation	0.07
	Loading Conveyor	0.17
	Operations Overhead	0.06
	Labour	1.61
Sub-Total – Mining + Process		**3.77**
Shipping	Shiploading	0.25
	Shipping	4.51
	Offloading	0.48
Sub-Total – Shipping		**5.24**
Miscellaneous	Air transport, communications, supply boat and barges, office equipment	0.08
G & A	Owners Cost	0.21
Royalties	Government	0.37
	647680 BC Ltd.	0.71
Sub-Total - Other		**1.36**
Total		**10.38**

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Table 18: Operating Cost Estimate (Contractor Operated)

	Activity	US$/t
Mining + Process	Stripping	0.46
	Mining Sand & Gravel	0.80
	Process Plant	2.05
	Pond Maintenance	0.06
	Reclamation	0.16
	Loading Conveyor	0.27
	Site Management	0.12
	Operations Overhead	0.10
	Allowance for Contractor Mob. Capital Recovery; Overhead + Profit	0.59
Sub-Total – Mining + Process		**4.60**
Shipping	Shiploading	0.25
	Shipping	4.51
	Offloading	0.48
Sub-Total – Shipping		**5.24**
Miscellaneous	Air transport, communications, supply boat and barges, office equipment	0.08
G & A	Owners Cost	0.21
Royalties	Government	0.37
	647680 BC Ltd.	0.71
Sub-Total - Other		**1.37**
Total		**11.21**

13.6 Economic Analysis

Preliminary economic analyses were carried out on the following two scenarios:

- **Ascot Owns (100%)** – Ascot procures new mining mobile equipment for the project during Phase 1 - initial production.
- **Contractor Operated** – Mining contractor supplies mining fleet and associated equipment during the initial production.

These economic analyses are preliminary in nature and include a measured mineral resource. Classification of a probable reserve will occur upon receipt of Letters of Intent from potential suppliers. A clearer indication from specific customers is required to support a reserve classification.

Results of the analyses for the two scenarios are summarized in Table 19 below.

Table 19: Project Financial Analyses Summary (US$)

Options		**Ascot Owns (100%)**	**Contractor Operated**
Total Production	tonnes	45,864,000	45,864,000
Total Aggregate Produced	Tonnes (sales)	44,029,440	44,029,440
Capital cost:			
Direct	US$M	28.1	16.8
Indirects	US$M	5.6	3.9
Contingency	US$M	6.8	4.1
Total Capital	US$M	40.5	24.8
Sustaining Capital	US$M	6.2	0.1
Contingency	US$M	1.2	0.0
Total Sustaining Capital	US$M	7.5	0.1
Operating costs:			
Mining and Processing	US$/t	3.77	4.60
Shiploader and Shipping	US$/t	5.24	5.24
G&A	US$/t	0.29	0.29
Total cash cost	US$/t	9.30	10.13
Total cash cost (incl. Royalties)	US$/t	10.38	11.21
Annual production, yrs 1-2, average		1,766,700	1,766,700
Annual production, LOM, average		3,256,200	3,256,200
Cashflow pre-tax, LOM	$M	155.3	140.5
NPV @ 0%, pre-tax	$M	155.3	140.5
NPV @ 5%, pre-tax	$M	91.3	83.7
NPV @ 10%, pre-tax	$M	55.2	51.5
NPV @ 12%, pre-tax	$M	45.4	42.7
NPV @ 15%, pre-tax	$M	34.0	32.4
IRR, pre-tax	%	44	48
Payback period	years	3.7	3.4

Note: NPV = Net Present Value using a Discounted Cash Flow Analysis; IRR – Internal Rate of Return.

Cashflow analyses exclude financing costs.

13.7 Payback

Payback for the project is defined as the period of time (measured in years) that elapses before the costs of the project are fully recovered. Interest is not included in the payback calculation.

Payback includes all capital costs incurred during the implementation phase + operating costs of the project from Year 1 and concurrent revenue from initial aggregate sales.

From Table 18 above the payback period for the two options ranges from 3.7 to 3.4 years.

13.8 Mine Life

Mining activities will last a minimum of 15 years before the gravel resources are depleted. The first and second years are expected to have low production levels, while higher production rates are expected during the third to fifteenth years. The maximum annual production level will be 3.3 Mt/a; actual production rates will be dependent on product sales.

Table 20 defines the production levels and expected efficiencies for each year of operation.

Table 20: Measured Resource Extraction Schedule

Phase	Year	Plant Capacity (tonnes/hr)	Efficiency	Hourly Production (tonnes)	Hours/Day	Daily Production (tonnes)	Days/Year	Yearly Production (tonnes)	Accumulated (tonnes)
1	1	300	90%	270	22	5,940	275	1,633,500	1,633,500
	2	300	90%	270	22	5,940	320	1,900,800	3,534,300
2	3	540	90%	486	22	10,692	320	3,421,440	6,955,740
	4	540	90%	485	22	10,662	320	3,411,936	10,367,676
	5	540	90%	483	22	10,633	320	3,402,432	13,770,108
3	6	540	89%	482	22	10,603	320	3,392,928	17,163,036
	7	540	89%	481	22	10,573	320	3,383,424	20,546,460
	8	540	89%	479	22	10,544	320	3,373,920	23,920,380
4	9	540	89%	478	22	10,514	320	3,364,416	27,284,796
	10	540	88%	477	22	10,484	320	3,354,912	30,639,708
	11	540	88%	475	22	10,454	320	3,345,408	33,985,116
5	12	540	88%	474	22	10,425	320	3,335,904	37,321,020
	13	540	88%	473	22	10,395	320	3,326,400	40,647,420
	14	540	87%	471	22	10,365	320	3,316,896	43,964,316
	15	540	50%	270	22	5,940	320	1,900,800	45,865,116

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Phase One contains approximately 3,500,000 t of sand and gravel products, and will require approximately two years to mine with a 300 t/h plant. Phases Two through Four will result in the production of 30 Mt of product, and will take at least an additional 9 years to mine at minimum. Phase Five has resources of approximately 11 Mt of material, however production rates will be lower during the last year of production because of greater focus on final reclamation during that phase. Assuming maximum possible production, all of the sand and gravel resource will be mined out and the reclamation process will be almost complete by the end of the fifteenth year. Actual mine life will be dependent upon whether annual product sales reach the 3.3 Mt/year maximum.

13.8.1 Mine Perimeter Road

The Mine Perimeter Road will be the longest road at the mine site, and will extend approximately 1.8 km from the Laydown Area to the Fresh Water Storage Pond. It will be constructed during Phase One, and will provide the primary access to the Operations Camp, the soils, subsoils, peat, and mine waste stockpiles as well as the Fresh Water Storage Pond.

The Mine Perimeter Road will be constructed using cut and fill methods, and will use excavated materials for road surfacing. If the materials available nearby are not suitable for this purpose, crushed granular materials from the Processing Plant may be used to improve the quality of the road surface.

13.8.2 Mine Wastes

No Potential Acid Generating (PAG) waste rock will be produced during operations of the Swamp Point Aggregate Mine, as there will be no drilling and blasting. Mine waste will be limited to the cemented layers found in the upper part of the sand and gravel deposit; silt removed from the Processing Plant Settling Ponds; and over-size rocks. Over the life of the mine, it is expected that approximately 1 Mm^3 of cemented materials will be removed, along with 818,000 m^3 or 1.8 Mt of washed out silt material. The amount of silt produced will depend on product specifications, as some products may not require washing (Table 21).

All of the mine waste materials will be stored on the phase 4 mining area and will be moved to previously mined areas on the slopes and floor as these areas are cleared of marketable aggregate. The reclamation of the walls and floors of the mined areas will be an ongoing activity. As the floor of the pit gets lowered the walls will be replaced with mine waste that will be used to reclaim it. Some of the materials will be placed along these walls as they are easy to reach and the materials will be placed there directly from the stripping activities ongoing. In this manner the movement of some materials more than once will be avoided.

It is expected that not all materials will be moved twice, however the schedule conservatively shows that all materials will be moved twice. After the materials are placed at the shown stockpile areas they will be moved and placed in their final resting areas. Some of the materials that are moved for the first time from the phase 4 stripping area will then be moved back to cover and reclaim the mined area. Phase 4 will be stripped in advance of the processor moving to the phase 4 area. A section of the phase 4 stripping area will be stripped after the processor has arrived at that elevation, but prior to that area being mined. Over-size (greater than 50 cm diameter) rocks will be stockpiled separately. It is expected that most or all of

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these rocks will be used for riprap during mine life. Any rocks remaining will be used during final reclamation to create small mammal habitat.

Table 21: Waste Schedule

Phase	Year	Peat (m³)			Organic Soils (m³)			Mineral Soils (m³)	Washed Silts		Total Waste m³
		Stockpile Bases	Stripping	Reclaim	Stockpile Bases	Stripping	Reclaim	Cemented Layer	m³	tonnes	
1	1/4	15,000	0	0	2,000	75,500	0	0	2,700	6,500	95,200
	1/2	15,000	0	0	0	26,000	0	0	8,200	19,600	49,200
	3/4	0	41,000	0	0	32,000	0	0	8,200	19,600	81,200
	1	0	27,000	0	0	32,000	0	0	8,200	19,600	67,200
	1 1/2	0	22,000	0	0	22,000	0	68,500	15,800	38,000	128,300
	2	0	0	0	0	22,000	0	68,500	15,800	38,000	106,300
2	3	0	0	0	0	42,000	0	137,000	66,100	136,900	245,100
	4	0	0	0	0	42,000	0	137,000	65,800	136,500	244,800
	5	0	0	0	0	0	0	0	65,400	136,100	65,400
3	6	0	0	0	0	0	0	0	65,000	135,700	65,000
	7	0	0	40,000	0	20,000	98,600	395,000	64,600	135,300	618,200
	8	0	0	40,000	0	20,000	98,600	395,000	64,200	135,000	617,800
4	9	0	0	40,000	0	20,000	98,600	395,000	63,900	134,600	617,500
	10	0	0	0	0	0	0	0	63,500	134,200	63,500
	11	0	0	0	0	0	0	0	63,100	133,800	63,100
5	12	0	0	0	0	0	0	0	62,700	133,400	62,700
	13	0	0	0	0	0	0	0	62,300	133,100	62,300
	14	0	0	0	0	0	30,000	0	62,000	132,700	92,000
	15	0	0	0	0	0	30,000	0	38,000	76,000	68,000
	Totals	**30,000**	**90,000**	**120,000**	**2,000**	**353,500**	**355,800**	**1,596,000**	**865,500**	**1,834,600**	**3,412,800**

14. ILLUSTRATIONS

Dwg 14-1: Laydown Area Conceptual General Arrangement

Dwg 14-2: Year 1, 1st Quarter Mining Plan

Dwg 14-3: Year 1, 2nd Quarter Mining Plan

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Dwg 14-4: Year 1, 3rd Quarter Mining Plan

Dwg 14-5: Year 1, 4th Quarter Mining Plan

Dwg 14-6: Year 2, 1st Half Mining Plan

Dwg 14-7: Year 2, 2nd Half Mining Plan

Dwg 14-8: General Arrangement

Dwg 14-9: Section Through Shiploader

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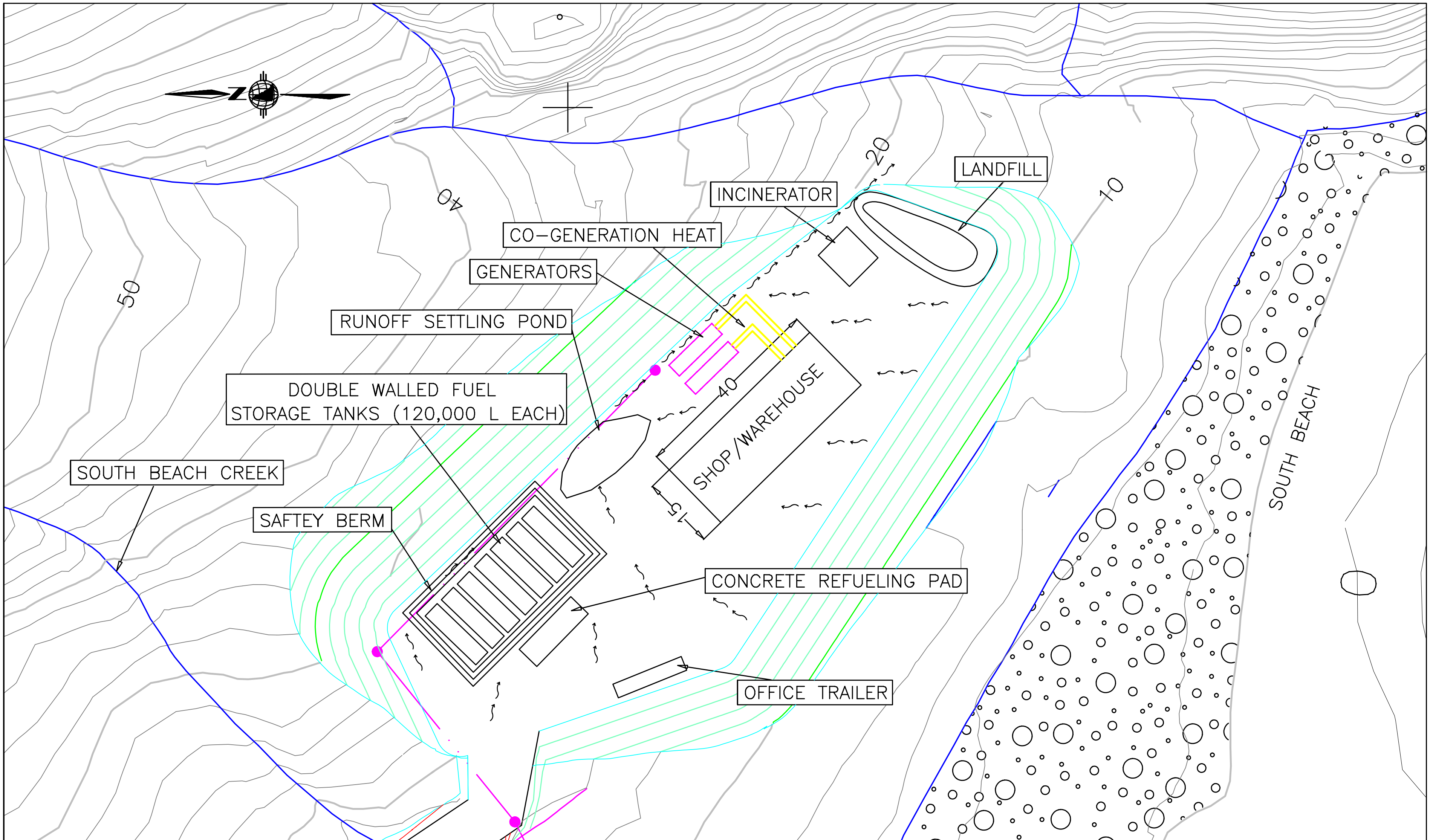

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BATHEMETRY CONTOUR INTERVAL : 2 METERS

Mapping by: AERO GEOMETRICS LTD.
Job Number: 04276
Datum: UTM nad 83
Date of Photo: October 3, 2004

DATE	SUBMISSION	DESIGN	DRAWN	CHECKED	APPROVED
05/11/14	Pre- Feasibility	EN/JTQ	JTQ		HS

Legend
- Contour Index
- Existing Contour
- Proposed Contour
- Creek
- Helicopter Landing Area
- Amphibious Habitat
- Power Line
- Drainage Arrows
- Spot Height
- Lake
- Log Landing
- Road
- Reclamation Minor
- Reclamation Major
- License of Occupation
- Foreshore License of Occupation
- Drill Hole
- Test Pit
- Gravel Sample

Ascot Resources Ltd.
SWAMP POINT AGGREGATE MINE

LAYDOWN AREA CONCEPTUAL GENERAL ARRANGEMENT

Technical Report (43-101)

Date: November 14, 2005
By: Yukon Engineering Services

Dwg. 14-1

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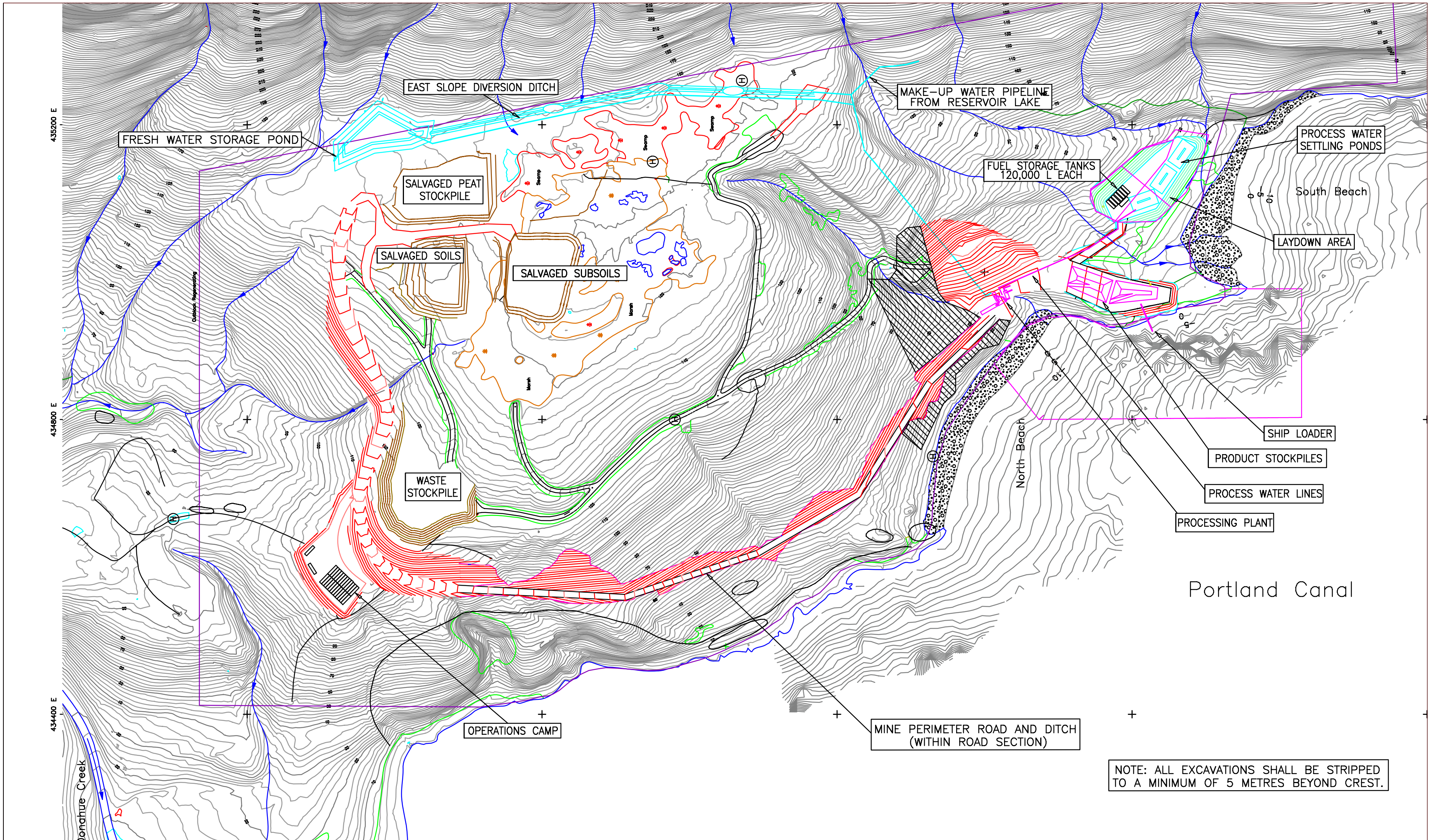

NOTE: ALL EXCAVATIONS SHALL BE STRIPPED TO A MINIMUM OF 5 METRES BEYOND CREST.

Yukon Engineering Services

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BATHEMETRY CONTOUR INTERVAL : 2 METERS

Mapping by: AERO GEOMETRICS LTD.
Job Number: 04276
Datum: UTM nad 83
Date of Photo: October 3, 2004

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05/10/29	PRE-FEASIBILITY	EN/JTQ	JTQ		

Legend
- Contour Index
- Existing Contour
- Proposed Contour
- Creek
- Helicopter Landing Area
- Amphibian Habitat Ponds
- STRIPPED AREA
- Spot Height
- Lake
- Log Landing
- Road
- Heavy Mineral Sample
- Reclamation Contour
- Salvage Pile Contour
- License of Occupation
- Foreshore License of Occupation
- Drill Hole
- Test Pit
- Gravel Sample

Ascot Resources Ltd.
SWAMP POINT AGGREGATE MINE

YEAR 1, 1ST QUARTER MINING PLAN

Technical Report (43-101)

Date: OCTOBER 29, 2005
By: Yukon Engineering Services

Dwg. 14-2

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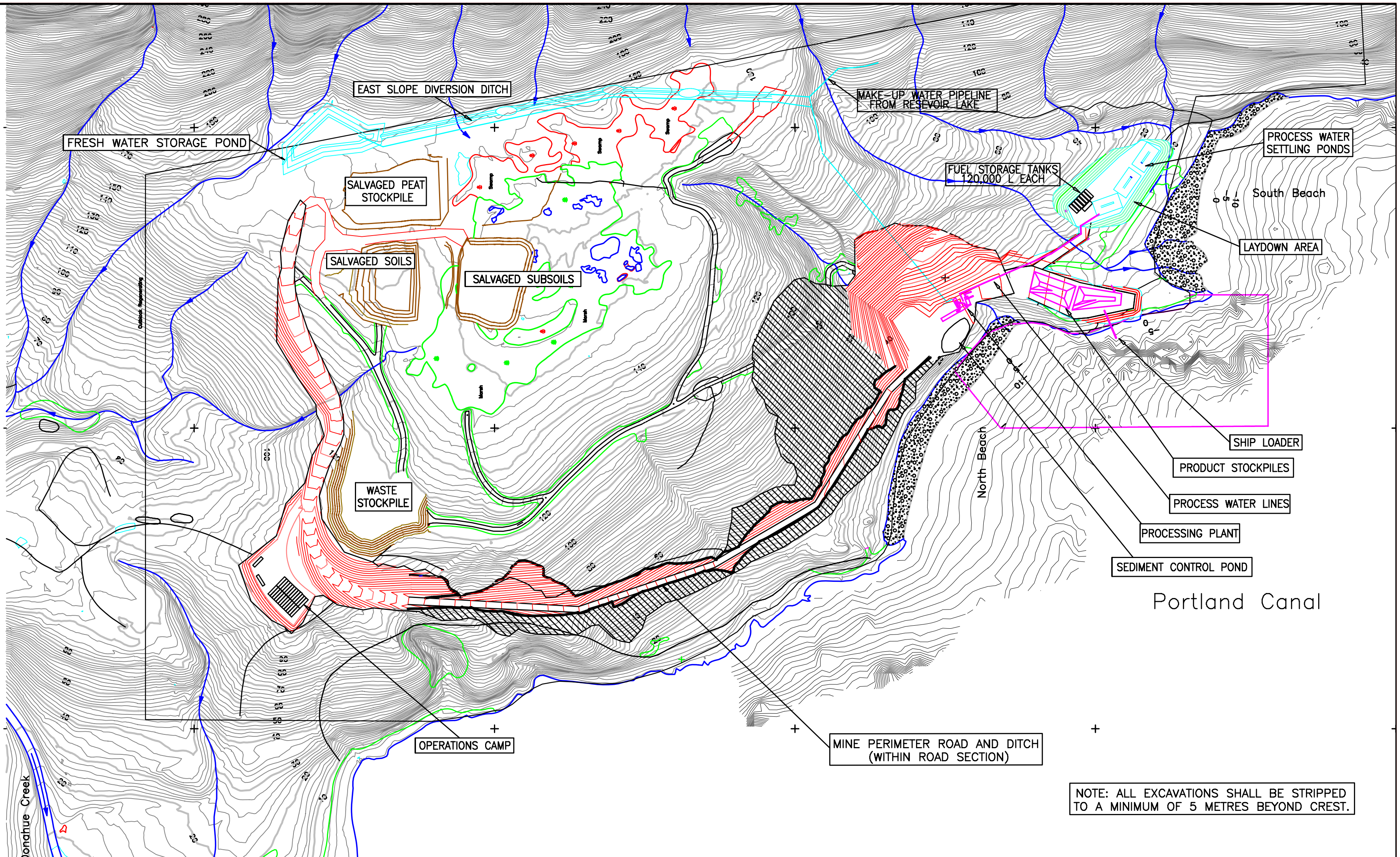

NOTE: ALL EXCAVATIONS SHALL BE STRIPPED TO A MINIMUM OF 5 METRES BEYOND CREST.

Yukon Engineering Services

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CONTOUR INTERVAL : 2 METERS
BATHEMETRY CONTOUR INTERVAL : 2 METERS

Mapping by: AERO GEOMETRICS LTD.
Job Number: 04276
Datum: UTM nad 83
Date of Photo: October 3, 2004

DATE	SUBMISSION	DESIGN	DRAWN	CHECKED	APPROVED
05/10/29	PRE-FEASIBILITY	EN/JTQ	JTQ		

Legend

- Contour Index
- Existing Contour
- Proposed Contour
- Creek
- Helicopter Landing Area
- Amphibian Habitat Ponds
- Stripped Area
- Spot Height
- Lake
- Log Landing
- Road
- Heavy Mineral Sample
- Reclamation Contour
- Salvage Pile Contour
- License of Occupation
- Foreshore License of Occupation
- Drill Hole
- Test Pit
- Gravel Sample

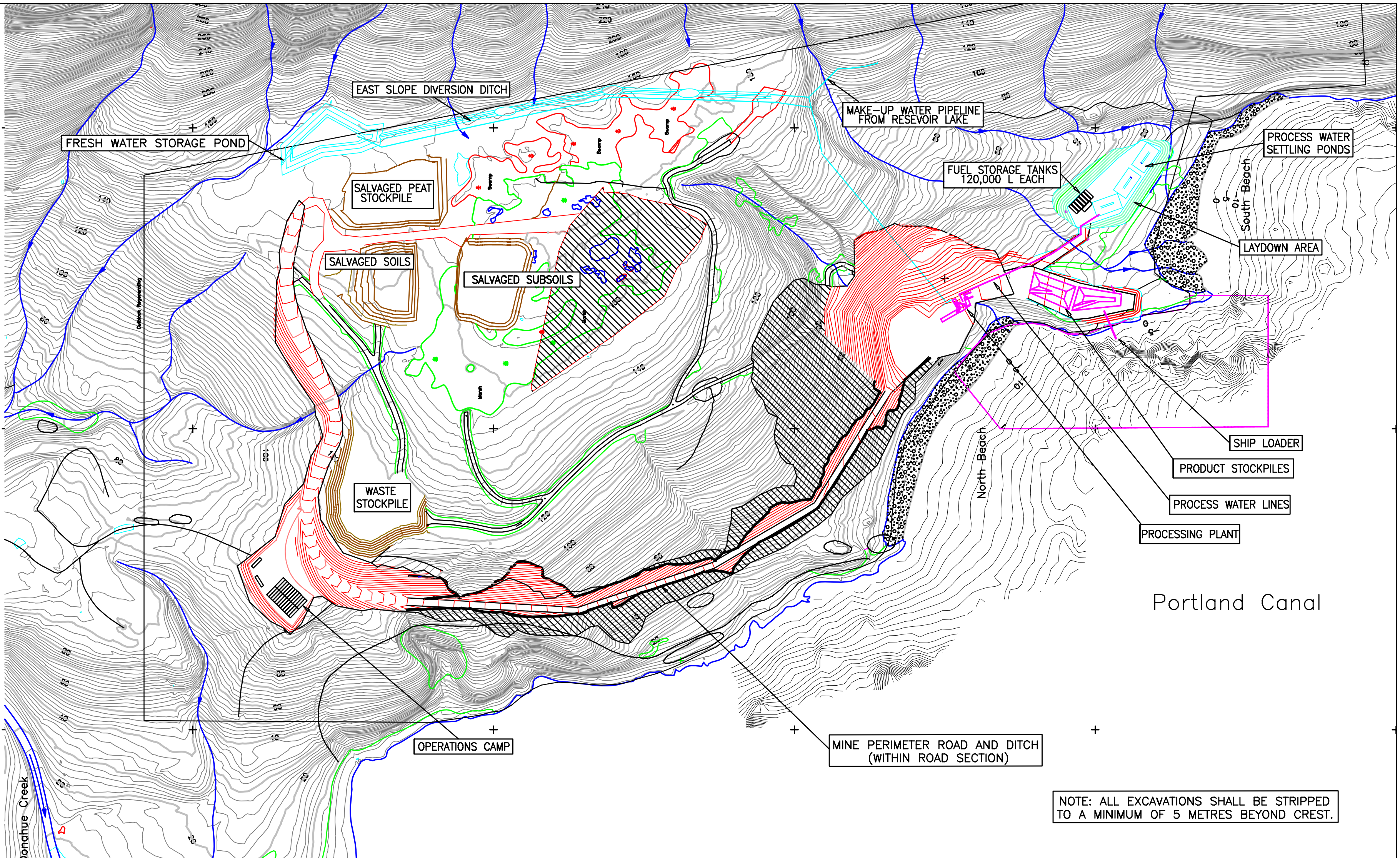
Ascot Resources Ltd.
SWAMP POINT AGGREGATE MINE

YEAR 1, 2ND QUARTER MINING PLAN

Technical Report (43-101)

Date OCTOBER 29, 2005
By: Yukon Engineering Services

Dwg. 14-3



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BATHEMETRY CONTOUR INTERVAL : 2 METERS

Mapping by: AERO GEOMETRICS LTD.
Job Number: 04276
Datum: UTM nad 83
Date of Photo: October 3, 2004

DATE	SUBMISSION	DESIGN	DRAWN	CHECKED	APPROVED
05/10/29	PRE-FEASIBILITY	EN/JTQ	JTQ		

Legend

- Contour Index
- Existing Contour
- Proposed Contour
- Creek
- Helicopter Landing Area
- Amphibian Habitat Ponds
- Stripped Area
- Spot Height
- Lake
- Log Landing
- Road
- Heavy Mineral Sample
- Reclamation Contour
- Salvage Pile Contour
- License of Occupation
- Foreshore License of Occupation
- Drill Hole
- Test Pit
- Gravel Sample

Ascot Resources Ltd.
SWAMP POINT AGGREGATE MINE

YEAR 1, 3RD QUARTER MINING PLAN

Technical Report (43-101)

Date: OCTOBER 29, 2005
By: Yukon Engineering Services

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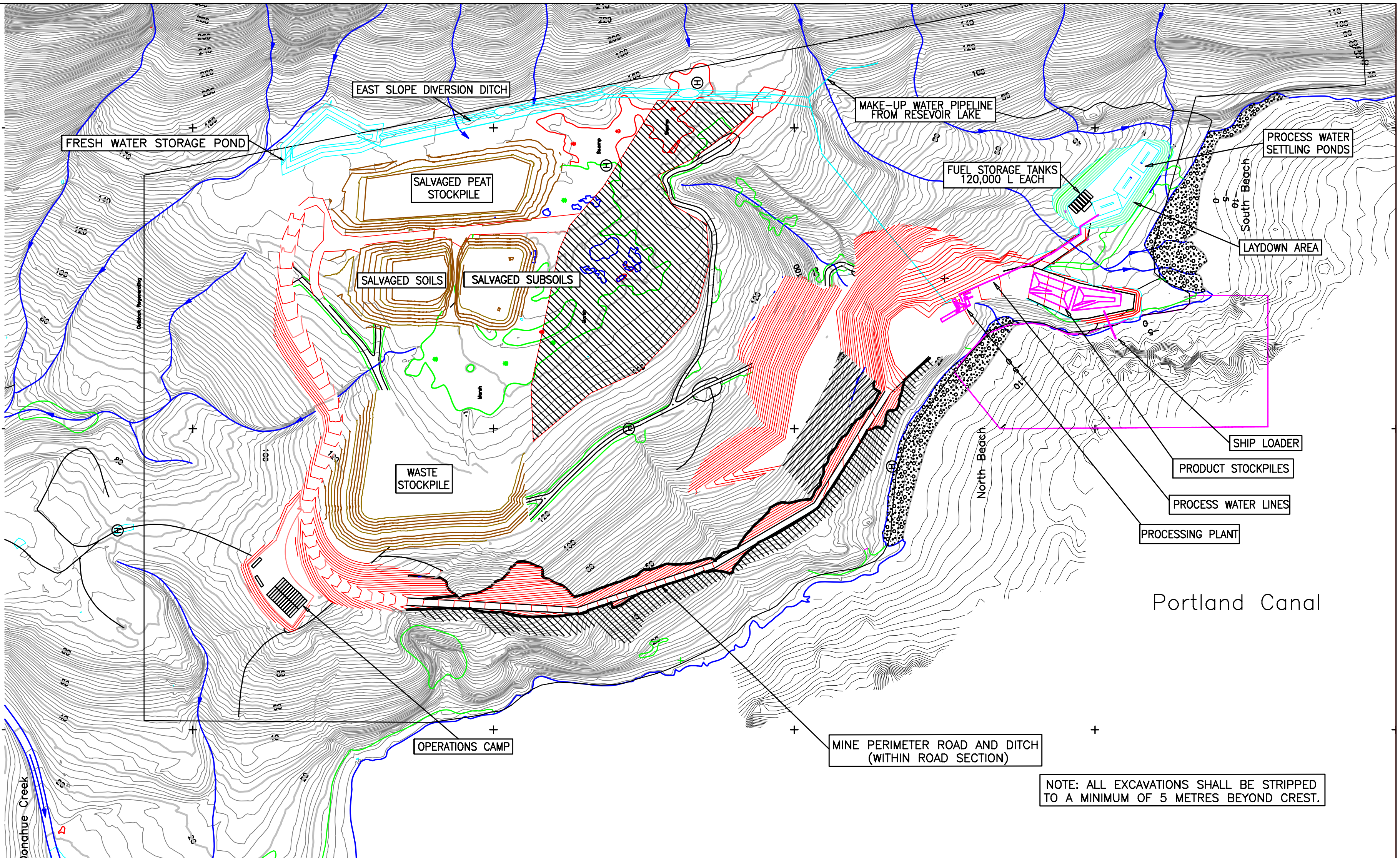

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Datum: UTM nad 83
Date of Photo: October 3, 2004

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05/10/29	PRE-FEASABILITY	EN/JTQ	JTQ		

Legend

- Contour Index
- Existing Contour
- Proposed Contour
- Creek
- Helicopter Landing Area
- Amphibian Habitat Ponds
- Stripped Area
- Spot Height
- Lake
- Log Landing
- Road
- Heavy Mineral Sample
- Reclamation Contour
- Salvage Pile Contour
- License of Occupation
- Foreshore License of Occupation
- Drill Hole
- Test Pit
- Gravel Sample

Ascot Resources Ltd.
SWAMP POINT AGGREGATE MINE

YEAR 1, 4th QUARTER MINING PLAN

Technical Report (43-101)

Date: OCTOBER 29, 2005
By: Yukon Engineering Services

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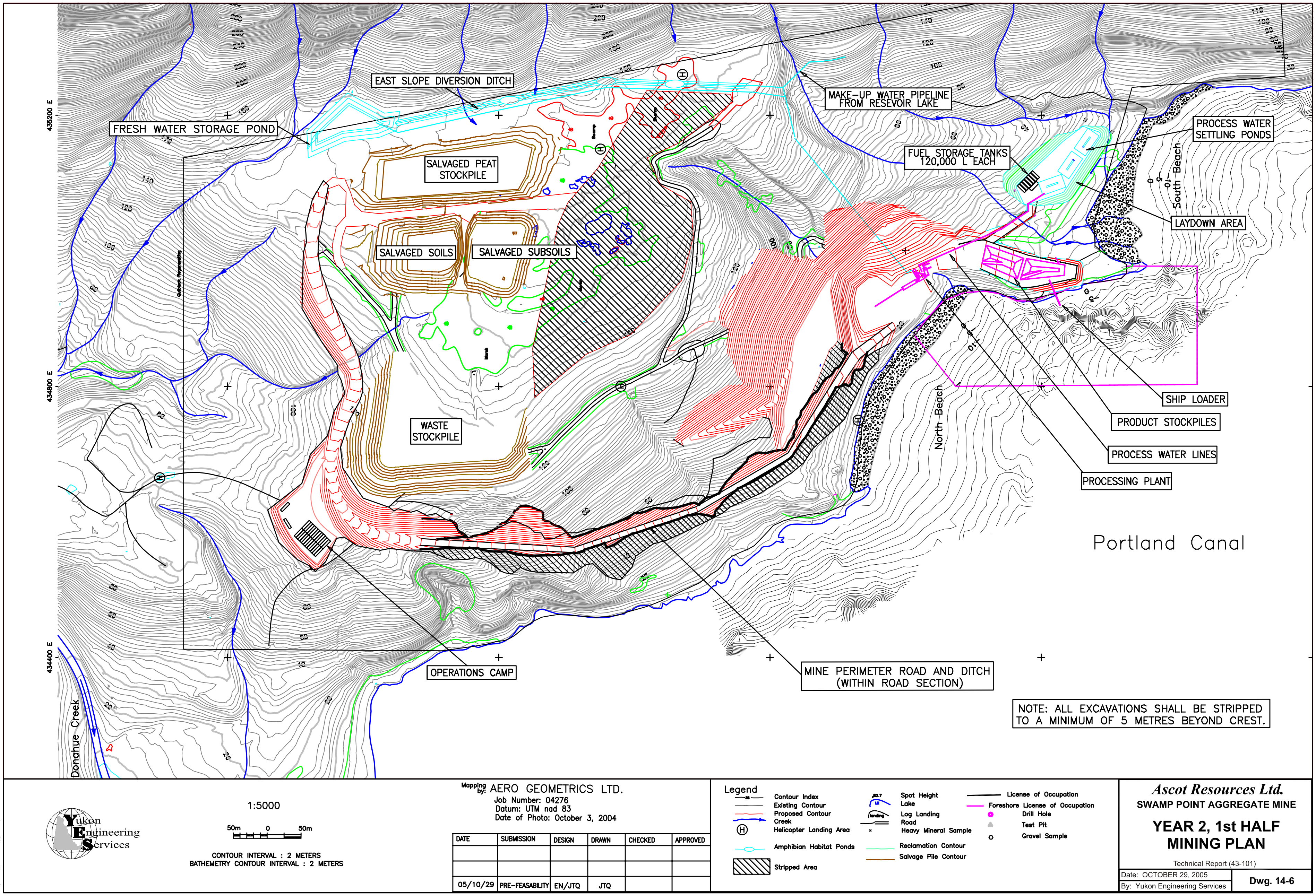

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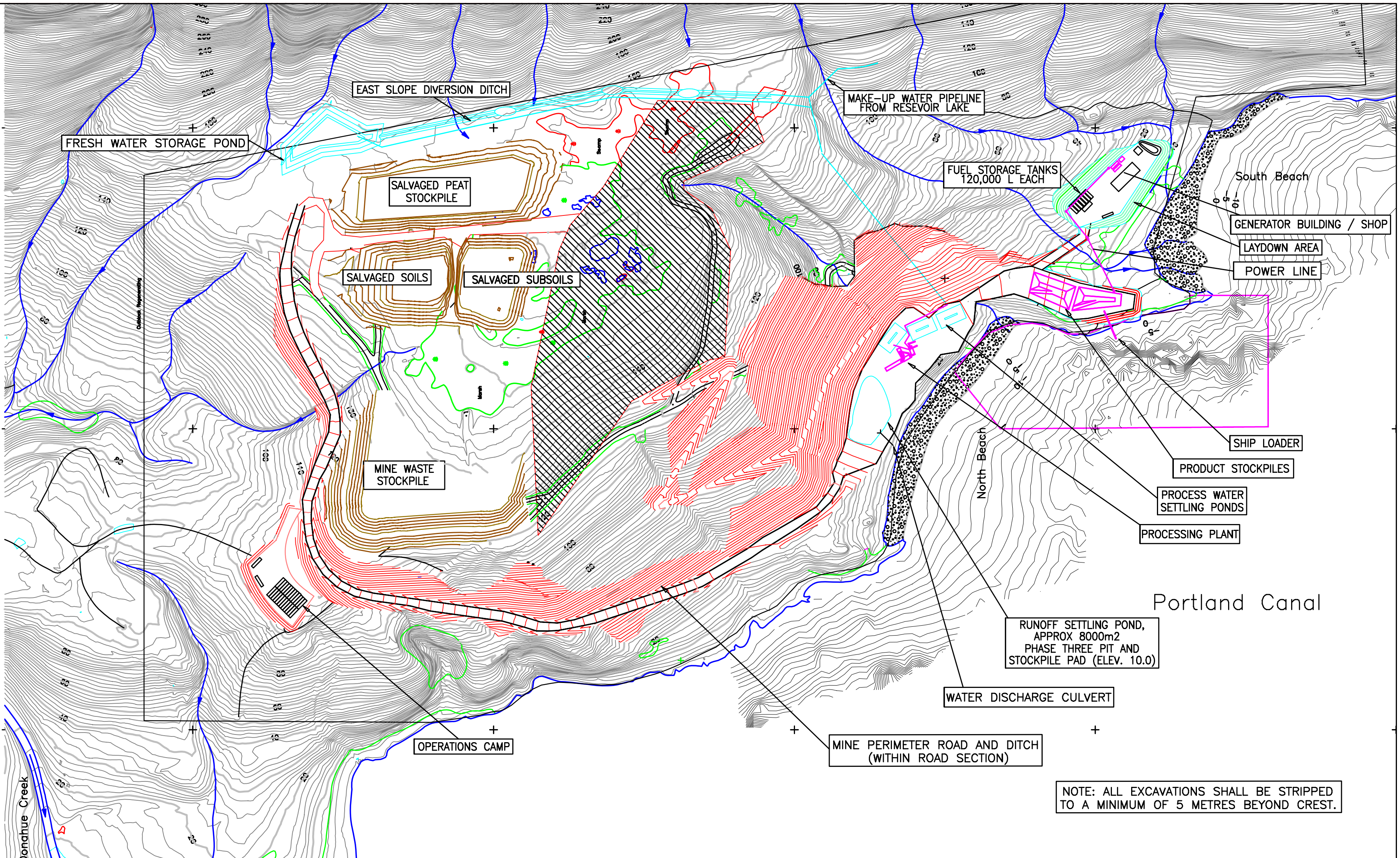

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BATHEMETRY CONTOUR INTERVAL : 2 METERS

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05/10/29	PRE-FEASABILITY	EN/JTQ	JTQ	KW	HS

Legend
- Contour Index
- Existing Contour
- Proposed Contour
- Creek
- Helicopter Landing Area
- Amphibian Habitat Ponds
- Stripped Area
- Spot Height
- Lake
- Log Landing
- Road
- Heavy Mineral Sample
- Reclamation Contour
- Salvage Pile Contour
- License of Occupation
- Foreshore License of Occupation
- Drill Hole
- Test Pit
- Gravel Sample

Ascot Resources Ltd.
SWAMP POINT AGGREGATE MINE

YEAR 2, 2nd HALF MINING PLAN

Technical Report (43-101)
Date: OCTOBER 29, 2005
By: Yukon Engineering Services

Dwg. 14-7

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PLAN
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NOTES:
1. COORDINATES ARE AT CENTRE OF BERTH FACE AT EACH DOLPHIN.

speed and precision worldwide
Sandwell

SANDWELL PROJECT NUMBER	142868
SANDWELL DRAWING NUMBER	D. 142868 FIG 7-1

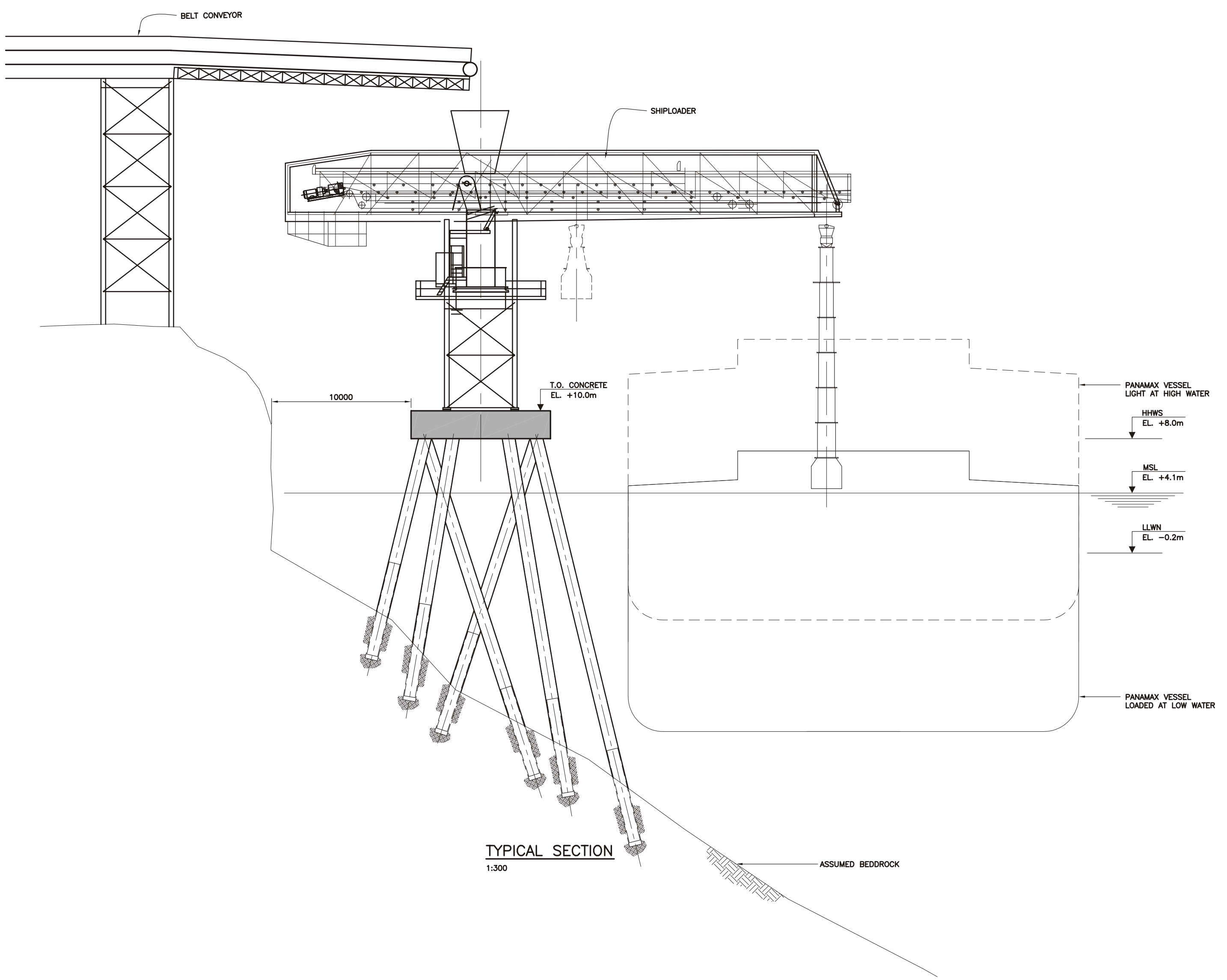
20 0 20 40 60 80m
SCALE = 1:1500

Ascot Resources Ltd.
SWAMP POINT AGGREGATE MINE

GENERAL ARRANGEMENT

Technical Report (43-101)

Date: Aug. 16, 2005
By: D.H.
Dwg. 14-8



TYPICAL SECTION
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SANDWELL PROJECT NUMBER
142868
SANDWELL DRAWING NUMBER
D. 142868 FIG 7-2

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Ascot Resources Ltd.
SWAMP POINT AGGREGATE MINE

SECTION THROUGH SHIPLOADER

Technical Report (43-101)

Date: Aug. 16, 2005
By: D.H.
Dwg. 14-9

15. REFERENCES

Banner et. al. 1983. A Field Guide to Site Identification and Interpretation for the Prince Rupert Forest Regiona. Land Management Handbook Number 26.

Bear River Salmonid Enhancement Society. 2003. Fisheries Assessment of Swamp Point Gravel Lease, June 2003.

Canadian Council of Ministers of the Environment (CCME). 1999. Canadian Water Quality Guidelines for the Protection of Aquatic Life: Summary table. In: Canadian environmental quality guidelines, 1999.

CSA A23.2-15A, Attachment A2, indicates the following limits for PNs for coarse aggregates

Environment Canada. 2004. http://www.climate.weatheroffice.ec.gc.ca/climate_normals

Frontier Geosciences Ltd. 2002. Report on Seismic Refraction Investigation, Swamp Point Gravel Lease, Stewart Area, B.C., December 2002.

Golder Associates Ltd. 2003. Swamp Point Proposal: Submitted to Land and Water British Columbia Inc., December 2003.

Golder Associates Ltd., May 2004 Swamp Point Project, Valuation of Aggregate Reserve, Portland Canal, B.C., Internal company report.

Golder Associates Ltd. and H. Smit. 2004. Technical Report and Recommendations on Swamp Point Aggregate Property, Northwest British Columbia. Submitted to Ascot Resources Ltd., Vancouver, BC.

Hatch Ltd. Pre-Feasibility Study for the Swamp Point Aggregate Project Rev. 1 dated January 2006. Submitted to Ascot Resources Ltd., Vancouver, BC.

Ministry of Energy and Mines, 2002. The *Aggregate Operators Best Management Practices Handbook for British Columbia* from http://www.em.gov.bc.ca/Mining/MiningStats/55AOBMPHand_pdf.htm

Ministry of Forests. 1998. Integrated Watershed Restoration Plan. Overview Assessment for Kitsault River, Marmot River, Donahue Creek and Maple Bay. November 1998.

Nisga'a Final Agreement. 1998. Treaty signed by Nisga'a Nation, Province of British Columbia and Government of Canada, August 4, 1998.

North Coast Land and Resource Management Plan (draft). 2004. http://srmwww.gov.bc.ca/ske/lrmp/ncoast/

Pawlak, L. Ministry of Forests. 2005. Planning Forester. Pers. Comm.

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Price, W.A. 1997. Draft Manual of Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia. Energy and Minerals Division, Ministry of Employment and Investment. 170 pp.

Rogers, J. Department of Fisheries and Oceans. 2005. Resource Management Biologist. Pers. Comm

Tamblyn, G.C. and H. Horn. 2001. Current Conditions Report: North Coast Land and Resource Management Plan, Prince Rupert Interagency Management Committee. March, 2001.

16. CERTIFICATE OF AUTHORS

(Please see following pages.)

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Golder Associates Ltd.

Fred H. Shrimer
Golder Associates Ltd.
Unit B, 12330 – 88th Avenue
Surrey, BC V3W 3J6

Telephone: 604-591-6616
Fax: 604-591-6608
Email: fshrimer@golder.com

CERTIFICATE OF AUTHOR

I, FRED SHRIMER, P.Geo. do hereby certify that:

1. I am employed as a Senior Geoscientist at
   Golder Associates Ltd.
   Unit B, 12330 – 88th Avenue
   Surrey, BC Canada
   V3W 3J6
2. I graduated with a B.Sc. degree in Geology from Calvin College in Michigan in 1987.
3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia registration #18749), a Fellow of the Geological Association of Canada, and a Licensed Geologist and Engineering Geologist in the State of Washington (License #1982).
4. I have worked as a geologist for a total 18 years since my graduation from university.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with professional associations (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible as primary author and/or as collaborating author for the preparation of sections 3, 9.1 – 9.6, 10.2, 11.1, and 12.2 of the technical report titled "Ascot Resources, Technical Report (43-101) for Swamp Point Aggregate Project" and dated January 17, 2006 (the "Technical Report") relating to the Licence of Occupation number 740560 which covers the sand and gravel deposit on which the project will be based, Foreshore Licence number 740744 which covers part of the foreshore area beside the deposit and two mineral claims which in part underlie the gravel deposit.
7. I visited the Swamp Point property in November 2002, March 2003, and March 2005 for a total of approximately 12 days.
8. I have had prior involvement with the property that is the subject of this Technical Report. The nature of my prior involvement was in the preparation of the Technical Report NI43-101, dated July 15, 2004, issued by Golder Associates Ltd. and Hans Q. Smit. In addition, I provided preliminary assessment of geological samples retrieved from the site by Lafarge Canada Inc. in 2000/1. I was also retained by Cominco Ltd. (now Teck Cominco) to assess market conditions for the site in approximately the same time period.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

10. I am independent of the issuer applying all the tests in section 1.5 of National Instrument 43-101.
11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 17th day of January, 2006.

PROFESSIONAL PROVINCE OF F. H. SHRIMER BRITISH COLUMBIA GEOSCIENTIST

Signature of Qualified Person

Fred Shrimer

Print Name of Qualified Person

Hains Technology Associates

Donald H. Hains, P.Geo
Hains Technology Associates
605 Royal York Rd., Suite 206
Toronto, Ontario
M8Y 4G5
Tel: (416) 971-9783
Fax: (416) 971-9812
Email: hainstech@on.aibn.com

CERTIFICATE OF AUTHOR

I, Donald H. Hains, P.Geo do hereby certify that:

1. I am the Principal of:
   Hains Technology Associates
   605 Royal York Rd., Suite 206
   Toronto, Ontario
   M8Y 4G5
2. I graduated with a degree in Chemistry from Queen's University, Kingston, Ontario in 1974. In addition, I have obtained a Master of Business Administration from Dalhousie University, Halifax, N.S. in 1976.
3. I am a registered member of the Association of Professional Geoscientist of Ontario, registration number 0494.
4. I have worked as an industrial minerals economic geologist for a total of 25 years since my graduation from university.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. In conjunction with co-authors Fred Shrimer P.Geo and Keith Watson P.Eng I authored this report titled "Ascot Resources, Technical Report (43-101) for Swamp Point Aggregate Project" dated 17 January 2006 (the "Technical Report") relating to the Licence of Occupation number 740560 which covers the sand and gravel deposit on which the project will be based, Foreshore Licence number 740744 which covers part of the foreshore area beside the deposit and two mineral claims which in part underlie the gravel deposit. I was the lead author for the sections of this report listed in Section 4, Introduction and Terms of Reference.
7. I visited the Swamp Point property on June 4th, 2004 for one day.
8. I have had prior involvement with the property that is the subject of this Technical Report. The nature of my prior involvement was preparation of a valuation report for the property in connection with the acquisition of the property by Ascot.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
10. I am independent of the issuer applying all the tests in section 1.5 of National Instrument 43-101.
11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated at Toronto, Ontario this 17th day of January 2006.

PROFESSIONAL GEOSCIENTIST
DONALD H. HAINS
PRACTISING MEMBER
0494
ONTARIO

Signature of Qualified Person

Donald H. Hains, P. Geo

Print name of Qualified Person

Sterling Keith Watson, P.Eng.
HATCH Ltd.,
Suite 2200, Oceanic Plaza,
1066 West Hastings Street
Vancouver, British Columbia,
CANADA V6E 3X2

Telephone: 604-689-5767
Fax: 604-689-3918
Email: kwatson@hatch.ca

CERTIFICATE OF AUTHOR

I, Keith Watson, P.Eng., do hereby certify that:

1. I am currently employed as a Mining Engineer by:

    HATCH Ltd.,
    Suite 2200, Oceanic Plaza,
    1066 West Hastings Street
    Vancouver, British Columbia,
    CANADA V6E 3X2

2. I graduated with the degree of Bachelor of Science (Honours), Mining Engineering from Queen's University, Kingston, Ontario, Canada in 2000.

3. I am a registered member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia registration number 29784, and of the Association of Professional Engineers of the Province of Ontario licence number 100042278.

4. I have worked as a mining engineer since my graduation from university.

5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. In conjunction with co-authors Fred Shrimer P.Geo and Don Hains P.Geo I authored this report titled "Ascot Resources, Technical Report (43-101) for Swamp Point Aggregate Project" dated 17 January 2006 (the "Technical Report") relating to the Licence of Occupation number 740560 which covers the sand and gravel deposit on which the project will be based, Foreshore Licence number 740744 which covers part of the foreshore area beside the deposit and two mineral claims which in part underlie the gravel deposit. I was the lead author for the sections of this report listed in Section 4, Introduction and Terms of Reference.

7. I visited the Swamp Point property on September 28th, 2005 for one day.

8. I have not had any prior involvement with the property that is the subject of this Technical Report.

9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

10. I am independent of the issuer applying all the tests in section 1.5 of National Instrument 43-101.

11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website accessible by the public, of the Technical Report.

Dated at Vancouver, British Colombia this 17th day of January 2006.

PROFESSIONAL PROVINCE OF S. K. WATSON # 29784 BRITISH COLUMBIA ENGINEER

Signature of Qualified Person

Keith Watson, P.Eng.

Print name of Qualified Person