

July 8, 2009

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Yukon Zinc Corporation
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Attention: Mr. Chiew Yeo, Manager – Design Engineering

Subject: **Annual Inspections of the On-site Earth Structures
Wolverine Mine Site, South Eastern Yukon**

1.0 INTRODUCTION

As requested by Yukon Zinc Corporation (YZC), EBA Engineering Consultants Ltd. (EBA) has completed the annual inspections of the earth structures located throughout the Wolverine Mine site (shown on Figure 1). YZC identified the following areas as requiring inspection.

1. Industrial Complex – cut and fill slopes.
2. Industrial Complex Surface and Underground Water Treatment Sumps (1, 2, 3, 4 and 5) - liners and slopes.
3. Industrial Complex Diversion Ditches (1 and 6) – cut and fill slopes.
4. Industrial Complex Collection Ditches (2, 3, 4 and 5) – liners, cut and fill slopes.
5. Mine Camp Pad Area including upper generator and water treatment pad, sewage treatment plant pad, and treated effluent pond – liner, cut and fill slopes.
6. Temporary Waste Rock and Ore Storage Facility including seepage collection sump and ore waste stockpiles contained within the facility – cut and fill slopes.
7. Land Treatment Facility (Hydrocarbon Contaminated Material) including runoff collection sump – liners and fill slopes.
8. Tailings Facility Area Diversion Ditches A & B – cut and fill slopes.

2.0 SCOPE OF SERVICES

With reference to s per e-mail correspondence between YZC and EBA from June 10 to 15, 2009, it was understood that all YZC requires at this time is a brief statement about the geotechnical stability including a few photos for each area of interest.

EBA scope of service was as follows:

- Complete a visual inspection of the earth structures associated with each area of interest.

- Complete a photo log for each area of interest.
- Prepare an inspection report with a brief statement about the geotechnical and stability conditions for each area of interest.

3.0 FIELD INSPECTION

The field inspection was completed by Mr. Chad Cowan, P.Eng. of EBA between June 16 to 18, 2009. The following is a brief inspection summary detailing any stability issues including a few photos of each area. EBA was not able to inspect all of the areas listed in Section 1.0 because some of them had yet to be constructed or were under construction.

3.1 INDUSTRIAL COMPLEX

Most of this area is still under construction but a preliminary inspection of the slopes was completed for the Mill, Fuel Storage and Generator locations. The 1:1 (H:V) design cut slopes in the bedrock for these areas are considered stable. Along the cut slope between Ditch #1 and the Mill Pad the original design also called for a 1:1 slope, which is too steep for the material that was encountered during the excavation. In this area a frozen coluvium material was exposed and started to thaw causing failure and sloughing of the slope. YZC has completed temporary repair to reduce any further damage to the affected area. This repair work consisted of excavating the sloughed material, and covering the slope with geotextile and rock. It has been suggested that the long term solution will be to reconstruct an engineered fill with a more gradual slope, from the toe to the crest, along the affected area. YZC was informed and will carry out remedial actions.

During the inspection, fill was still being placed along the south western sides. The fill slopes associated with the fill placement are considered stable and are constructed as per the 2:1 (H:V) design. There are some noticeable erosion channels along the south western side of the Mill fill that were created during the recent heavy rainfalls. Final design incorporates proper grading to divert surface runoff towards designated drainage ditches. Until this final grading occurs the erosion channels should be filled in with coarse grained material.



Photo 1: Looking W at excavation and fill placement at the Mill Site.



Photo 2: Looking NW at excavator repairing downslope of Ditch 1.



Photo 3: Looking SE at cut slope for Fuel Storage and Generator Pads.



Photo 4: Looking down the cut slope at the Fuel Storage and Generator Pads.

3.2 INDUSTRIAL COMPLEX SURFACE AND UNDERGROUND WATER TREATMENT SUMPS (1, 2, 3, 4 AND 5)

The foundations for all five sumps were inspected and EBA determined that they were in a stable condition.

Sumps 1, 2 and 3 were constructed prior to 2009 and are situated within covered enclosures. All three sumps had noticeable settlement of the backfill along the perimeter liner key trench and buried propane lines - in some areas up to 150 mm of settlement. This settlement is an indication that the key trench and buried propane line backfill material was not compacted to specification during placement. There is no immediate attention required to filling these settlement areas but filling of these depressions would increase the perimeter grade elevations and reduce the amount of outside surface runoff from flowing into the sump. YZC was informed of these conditions and will carry out repairs as soon as possible. All three sumps were full of water during the time of the inspection so it was not possible to inspect the condition of the liners, but from what was visible there was no noticeable slumping of the liner slope. I was also told that there is a lot of sediment covering the bottom of each liner which would also make it difficult to inspect.

Sumps 4 and 5 were constructed earlier this spring and presently are not in covered enclosures. During the inspection the surface of the backfill along the perimeter of each sump was soft, which indicates that the backfill material was not compacted during placement. Presently there are no indications of fill deterioration but this area should be monitored and repaired as required. During the inspection Sump 4 was full of water and Sump 5 was empty. Sump 4's liner was not able to be inspected but from what was visible there was no noticeable slumping. A visual inspection of Sump 5's liner confirmed that there were no issues with the recent installation.



Photo 5: Looking NE from the western corner of Sump 1. Notice the settlement along the perimeter.



Photo 6: Looking at the NE corner of Sump 2 where there is noticeable settlement of the backfill over the buried propane line.



Photo 7: Looking at the liner key trench settlement along the perimeter of Sump 3.



Photo 8: Looking at the seepage that is flowing in from beyond the perimeter of Sump 3's enclosure.



Photo 9: Notice the foot prints in the backfill material at Sump 4, which indicates that there was no compaction during placement.



Photo 10: Looking west at Sumps 4 and 5. Sump 5 is empty.

3.3 INDUSTRIAL COMPLEX DIVERSION DITCHES (1 AND 6)

Both Diversion Ditches 1 and 6 were under construction during the inspection.

3.4 INDUSTRIAL COMPLEX COLLECTION DITCHES (2, 3, 4 AND 5)

Only the lower portion of Collection Ditch 2 had been completed and this portion still required welding of the liner seams. Collection Ditches 3 and 4 were complete with the exception of the liner seams requiring welding. Along Ditch 4 there was a noticeable area where a large tension crack started to form along the western downslope between STA 0+070 and STA 0+170. YZC was immediately made aware of this situation and repair work commenced right away. Collection Ditch 5 was still under construction.



Photo 11: Looking East at the lower portion of Collection Ditch 2.



Photo 12: Looking NW at the alignment along Collection Ditch 3.



Photo 13: Looking SE at the alignment along Collection Ditch 4.



Photo 14: Looking SE at the tension crack along the downslope side of Collection Ditch 4.

3.5 MINE CAMP PAD AREA INCLUDING UPPER GENERATOR AND WATER TREATMENT PAD, SEWAGE TREATMENT PLANT PAD AND TREATED EFFLUENT POND

The 2:1 cut and 1.5:1 fill slopes for the camp pad, upper generator and water treatment pad, sewage treatment plant pad, and the treated sewage effluent pond were inspected and all of the slopes were considered stable.

There were some noticeable settlement cracks along the perimeter of the southwest portion of the camp, and upper generator and water treatment pads. It looks as though these areas were constructed during the winter months and during the spring thaw settlement cracks have formed. These areas should be monitored and repaired as required.

The treated effluent pond liner could not be inspected because the pond was full. The visible portion of the liner showed no indications of slumping. There was also noticeable settlement of the backfill along the liner key trench which indicates that the backfill material was not compacted during placement.



Photo 15: Looking SE from the NW corner of the Camp pad along the fill slope.



Photo 16: Looking NW from the SE corner along the back slope of the Camp pad.



Photo 17: Looking NW along the south west portion of the Camp pad at the area where settlement cracks have formed after spring thaw.



Photo 18: Looking at the settlement of the backfill material along the liner key trench of the treated effluent pond.

3.6 TEMPORARY WASTE ROCK AND ORE STORAGE FACILITY

All of the cut and fill slopes were inspected and considered stable. The collection sump was also inspected and at the time was full of runoff water.



Photo 19: Looking SE at the Waste Rock and Ore Stockpile area.



Photo 20: Looking east at the runoff collection sump for the waste rock end of the stockpile area.

3.7 LAND TREATMENT FACILITY (HYDROCARBON CONTAMINATED MATERIAL) INCLUDING RUNOFF COLLECTION SUMP

The berms and the liner were inspected and there was no noticeable deterioration of the berms or damage to the exposed liner. The land treatment facility was 30% to 40% full of hydrocarbon contaminated material and the collection sump was about 75% full.



Photo 21: Looking north at the LTF.



Photo 22: Looking west at the runoff collection sump that is located in the western corner of the LTF.

3.8 TAILINGS FACILITY AREA DIVERSION DITCHES A & B

The Tailings Facility Diversion Ditches A and B were inspected and the fill portions (downslope sides) of both trenches had settlement cracks throughout. It is thought that the construction of the ditches was completed in late Fall - early Winter and the cracks formed in the uncompacted fill during the spring thaw. There is no immediate concern for these settlement cracks but they should be monitored and repaired before the Fall of 2009.

The upslope sides of both ditches were considered stable with the exception of two areas of localized sloughing, one area along the Ditch A and one area along Ditch B. There is no immediate concern but these areas should be monitored and should be repaired prior to Fall 2009. YZC was advised and will carry out remedial actions.

The buried CSP culvert portions of both Ditch A and B were also inspected and there was noticeable settlement depressions along both alignments that indicates that the pipes were installed in the late Fall – early Winter months. There is no immediate concern but the backfill along these alignments should be graded and compacted to reduce future erosion and settlement problems.



Photo 23: Looking south at the settlement cracks in the downslope fill portion of Ditch A.



Photo 24: Looking SE at the settlement cracks in the downslope portion of the Ditch B.



Photo 25: Looking SE at the cut slope of Ditch A. Notice the sloughing of the slope.



Photo 26: Looking SW at the cut slope of Ditch B at an area that is starting to slough.



Photo 27: Looking SE at the buried CSP culvert alignment of Ditch A.



Photo 28: Looking south at the buried CSP culvert alignment of Ditch B.

4.0 CLOSURE

This report and its contents are intended for the sole use of YZC and their agents. EBA does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than YZC, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in the General Conditions attached.

Yours truly,
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GEOTECHNICAL REPORT – GENERAL CONDITIONS

This report incorporates and is subject to these “General Conditions”.

1.0 USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment.

This report and the recommendations contained in it are intended for the sole use of EBA’s Client. EBA does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA’s Client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

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2.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA’s instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of EBA’s instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. EBA’s instruments of professional service will be used only and exactly as submitted by EBA.

Electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client’s current or future software and hardware systems.

3.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, EBA has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

4.0 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. EBA does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

5.0 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

6.0 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. EBA does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

7.0 SURFACE WATER AND GROUNDWATER CONDITIONS

Surface and groundwater conditions mentioned in this report are those observed at the times recorded in the report. These conditions vary with geological detail between observation sites; annual, seasonal and special meteorologic conditions; and with development activity. Interpretation of water conditions from observations and records is judgemental and constitutes an evaluation of circumstances as influenced by geology, meteorology and development activity. Deviations from these observations may occur during the course of development activities.

8.0 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

9.0 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

10.0 INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

11.0 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

12.0 DRAINAGE SYSTEMS

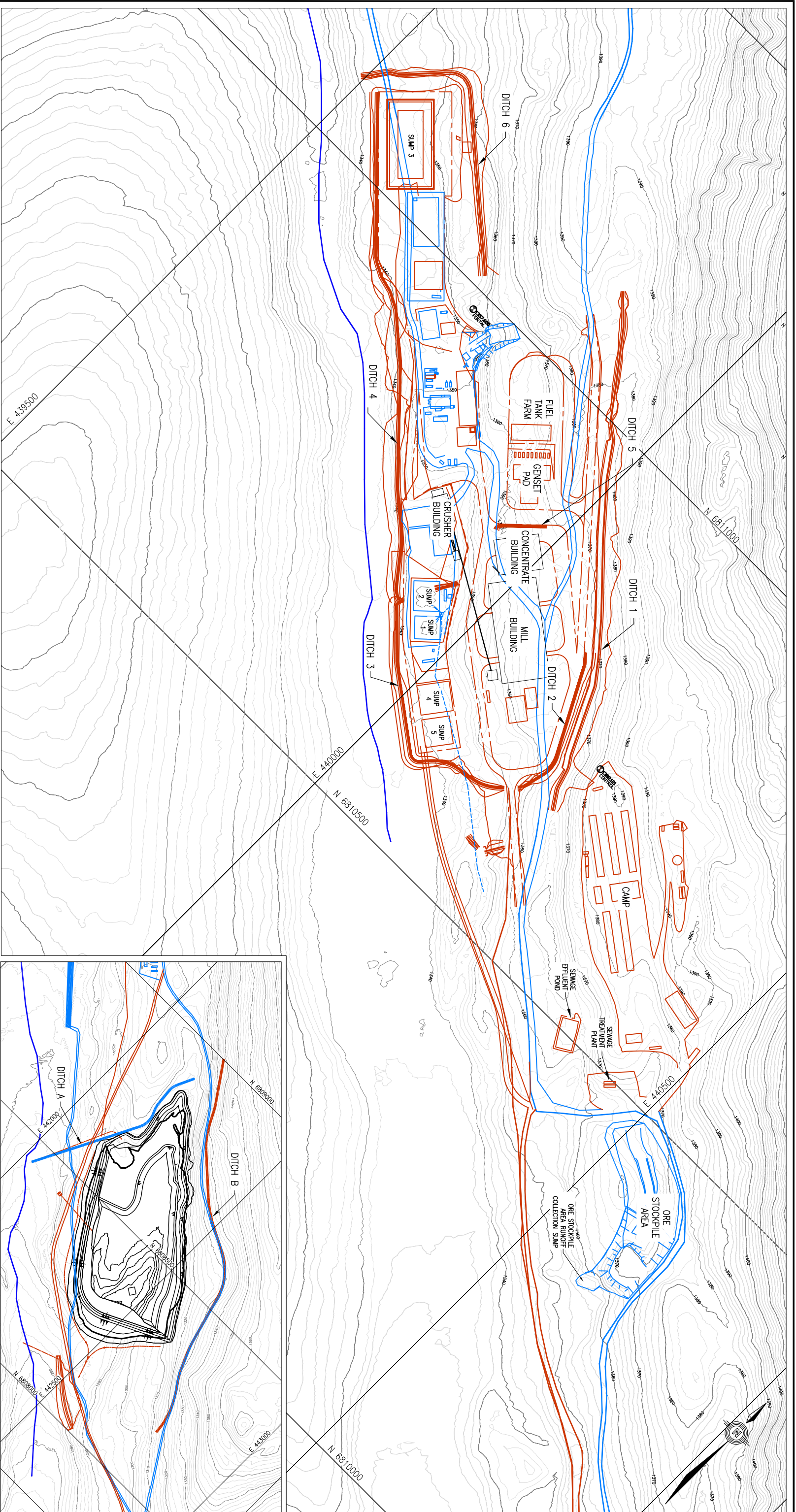
Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

13.0 BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

14.0 SAMPLES

EBA will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the Client's expense upon written request, otherwise samples will be discarded.



MILL AND CAMP SITES
SCALE 1 : 4,000

TAILINGS AREA
SCALE 1 : 10,000

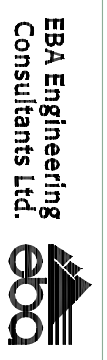


CLIENT



Wolverine Mine Stability Assessment
Wolverine Mine, South Eastern Yukon

Site Plan Showing
Inspection Locations



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|---------------|--------------|-----|-----|
| PROJECT NO. | DWN | CHD | REV |
| W14101095.006 | JSB | CPC | 0 |
| OFFICE | DATE | | |
| WHSE | July 9, 2009 | | |

Figure 1