

Indian and Northern Affairs Canada

**GEOTECHNICAL INVESTIGATION PLANS
SUBSURFACE EVALUATION OF GRANULAR RESOURCES
TULITA, NT**

EBA File: 1200209

October 2007

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1.0 INTRODUCTION

Under INAC Contract No. A7133-06-0017, EBA Engineering Consultants Ltd. (EBA) was retained by R.J. Gowan, Manager, Land Programs, Land and Water Management Directorate, Northern Affairs Program, Indian and Northern Affairs Canada, to carry out a study of granular sources on Crown Land near the community of Tulita, NT. The objective of the study was to prepare geotechnical site investigation plans for previously identified granular sources, including proposed locations of subsurface evaluation targets, suitable access routes for winter exploration and recommendations for subsurface investigation methods, costs and logistics. The project was motivated in response to foreseen increased granular demands in an area where existing developed sources are limited.

Recommendations and conclusions are based on air photo interpretation, aerial reconnaissance, reviews of previous reports and subsurface data, and experience in geological mapping and evaluation of granular sources in the study area.

This report incorporates and is subject to the attached General Conditions.

2.0 BACKGROUND

Increasing demands from growing industrial development and transportation infrastructure has a potential to impact the supply of granular resources near communities. This study was initiated by DIAND to follow its strategy for the continuous development of programs to effectively manage granular resources and ensure adequate future supply for communities. Given present and future projected demands for granular construction material, particularly in light of the proposed Mackenzie Gas Pipeline project, definition of existing and potential granular resources near the communities is fundamental.

Many granular sources have been identified and investigated in the Tulita region. These sources occur in a variety of depositional environments, including glaciofluvial outwash plains; channel deposits and esker complexes; dunes and eolian sand; colluvial talus below bedrock slopes; and alluvial fans and alluvial plains and terraces in some areas (EBA, March 2006). Most sources are of poor quality and low volume and the Community of Tulita has relied on Source 7.155AP on the Little Bear River for a reliable supply of granular material.

Of the potential granular sources on crown land identified in the Tulita region (EBA, 2006), Deposit 7.155AP was found to warrant further detailed assessment. On September 16, 2006 EBA completed aerial reconnaissance and groundwork to further evaluate Deposit 7.155AP and locate possible test sites and access routes. During the aerial reconnaissance, favourable exposures of granular material were observed on the nearby river escarpment at Source FN20x. Although Source FN20x was considered a lower priority granular resource, a modest sub-surface

evaluation program is warranted in conjunction with the proposed field program at Source 7.155AP.

3.0 METHODOLOGY

To develop a work plan and estimated costs for a geotechnical sub-surface investigation program at the Tulita community granular sources 7.115AP and FN20x, the following tasks were undertaken:

- The results of previous geotechnical evaluation reports were reviewed.
- Preliminary recommendations from previous reports and the aerial reconnaissance survey were reviewed with the departmental representative;
- Revised boundaries and expansion limits of potential quarries were established based on the results of the aerial reconnaissance;
- Proposed access trail alignments indicated during the aerial reconnaissance were finalized and located on plan drawings;
- Proposed test sites located during the aerial and ground reconnaissance were revised or confirmed;
- Figures were prepared to illustrate potential development boundaries, access trail alignments, test site locations, geological boundaries and other pertinent information; and,
- Recommendations were developed on methodology for the subsurface geotechnical evaluation program, including equipment and personnel requirements, sampling and testing, anticipated costs and logistical considerations.

4.0 GRANULAR RESOURCE DEPOSITS

4.1 DEPOSIT 7.155

Deposit 7.155AP is a principal source of granular material for the community of Tulita. It is located about 17 km west of Tulita at the Little Bear River. The area terrain is characterized as a glaciolacustrine plain that has been deeply incised by the Little Bear River. The active extraction area of Deposit 7.155AP is located about 2 km upstream of the Mackenzie River (Figure 1). The deposit, probably a remnant glaciofluvial channel, is characterized by thick beds of gravel and sand exposed on the left (west) escarpment of the Little Bear River. A terrace landform (mapped as Gt, Figure 2) is assumed to be the westward extension of the deposit, although the western deposit limit has not been determined.

The present borrow pit area is about 225 m by 100 m and is accessed by a winter trail from the Mackenzie River on the east side of the Little Bear River. Access for the proposed sub-surface

investigation program follows an old trail and cutline on the west side of the Little Bear River leading to a terrace above the present borrow pit (Figures 1 and 2).

Relief on the escarpment is approximately 30 m from the river channel to the upland plain. Overburden exposed at the top of the escarpment is a thin veneer of silty sand typically about 0.15 m thick. Undisturbed areas are densely forested with juvenile aspen and birch regeneration following a forest fire.

Granular material exposed on the upper escarpment at the deposit consists of poorly graded gravel with some sand. The deposit is stratified with variable sand and gravel content. Underlying siltstone with interbedded sandstone bedrock is exposed near the river channel. Table 1 summarizes the results of the field reconnaissance stations.

Dense forest cover prevented access by helicopter during the September 16, 2007 reconnaissance and ground assessment of the deposit was limited to two sites on the escarpment (JD17 and JD18, Figure 2). Aerial reconnaissance confirmed fine textured (glaciolacustrine) soils exposed on landslides in a gully incised into the upland plain about 1500 m west of the Little Bear River escarpment. Ground mapping indicated a northern limit to the deposit about 600 m downstream of the present borrow pit. The deposit limit to the south remains open.

If the western extent of Deposit 7.155AP coincides with the short escarpment (**Ga**, Figure 2) of the (assumed) glaciofluvial terrace, a prospective volume of granular material at the deposit is estimated to be 10 million m³ assuming an average pit depth of 15 m. Southern and western limits of the deposit are unknown and this volume estimate will increase if sub-surface testing indicates granular deposition beyond the limits of the glaciofluvial terrace.

A subsurface geotechnical evaluation program is recommended to characterize the spatial extent of the deposit, verify consistency of material texture, map stratigraphy to aid further exploration and mapping and test for potential reserve expansion. A cost-effective subsurface evaluation is proposed using an excavator for testpitting. Seasonal site access necessitates a winter program, which would also allow equipment mobilization to Tulita by winter road if required.

TABLE 1 SOURCE 7.155 AND FN20x FIELD STATIONS – SEPTEMBER 16, 2006

FIELD SITE	UTM LOCATION (Zone 10)		DRAINAGE	MATERIAL and TEXTURE		DESCRIPTION
	NORTHING	EASTING				
JD17	7198728	362022	rapid	FG	GRAVEL, some sand	stratified, ~75% clasts, sub-rnnd; terrace
JD18	7199258	361897	well drained	LG	SAND and SILT, tr. gravel	stratified; gravel beds; escarpment
JD19	7201704	362066	well drained	FG	SAND and GRAVEL	stratified; sub-rnnd; escarpment
JD20v	7201177	360474	well drained	LG	mostly silt (visual site)	escarpment, earthflow
JD21v	7200451	360285	well drained	LG	mostly silt (visual site)	escarpment; earthflow

Abbreviations: tr.= trace; FG = glaciofluvial; LG = lacustrine; rnnd =rounded;

4.2 DEPOSIT FN 20x

Initial research indicated that Deposit FN20x did not warrant a site specific evaluation program. However, during the reconnaissance on September 16, 2007, a thick sequence of gravel and sand was observed on the escarpment of the Little Bear River near the mouth. (Source FN20x photograph; ground station JD-19, Figure 2). As the proposed access to Deposit 7.155AP passes over Deposit FN20x, it is recommended that sub-surface exploration by test-pitting be advanced at this deposit in conjunction with the testpitting program at Source 7.155AP. Three test pits are proposed (Figure 2) to evaluate the spatial extent of the deposit.

5.0 PROPOSED SUBSURFACE EVALUATION PROGRAM

A geotechnical testpitting program is recommended to evaluate the extent, quality and consistency of the Source 7.155AP and FN20x granular deposits. Eight testpits at Source 7.155AP and six testpits at Source FN20x are recommended (Figure 2). Seasonal site access necessitates a winter program, which would also allow equipment mobilization to Tulita by winter road if required. Access to the mouth of the Little Bear River will require construction of an ice road from the Mackenzie Highway winter road at Bear Rock north of Tulita. Ice-profiling will also have to be completed.

Project personnel would be based in Tulita with daily transport to the site by truck. A bulldozer (minimum size Caterpillar D6 or equivalent, Class 130-190 FWHP) is required to clear access trails. A minimum 59,000 – 68,000 lbs Class excavator (Caterpillar 325 or equivalent) is recommended for testpit excavation.

About 4 km of existing trails and 5 km of new trails will require clearing to access the proposed test sites (Figure 2). The study area is mostly juvenile aspen-birch forest suitable for clearing by equipment only. Some spruce forest at Source FN20x may require minor hand clearing to prepare parts of the access trails. Prior to equipment mobilization, access routes should be located and flagged to ensure that access is possible or if a slashing crew should be retained to clear any vegetation if required. Access trail routes should meet the following objectives:

- Follow existing cutlines and trails wherever possible;
- Minimize environmental impact (tree cutting) by taking advantage of natural openings or sparsely forested areas.
- Clearing equipment should be fitted with blade shoes or other device to prevent blade contact with the ground surface. A thin veneer of snow cover should be retained on the trails to protect ground vegetation as directed by land use permits.
- Minimize the length of access trails
- Where possible, consider an alignment for access trails that could be upgraded to an all-season road for future quarry development.

Representative samples from testpitting should be selected for testing. A modest lab testing program to determine grain size at the deposits should be completed to correlate and complement field logs.

6.0 COST ESTIMATE

Cost estimates for the proposed testpitting program are itemized in Table 2. The estimates assume that suitable equipment may be contracted in Tulita. Costs to mobilize equipment from Norman Wells are not included (Table 2).

TABLE 2 SUBSURFACE EVALUATION COST ESTIMATE – TESTPIT PROGRAM		
TRAIL CLEARING		
Mobilize and demobilize bulldozer from Tulita		\$800
Trail Clearing		\$1650
Establish ice-road on Mackenzie River (including ice-profiling)		\$17,500
		\$19,650
TESTPIT EXCAVATION		
Mobilize and demobilize excavator from Tulita		\$800
Testpitting – 14 testpits		\$11,000
		\$11,800
GEOTECHNICAL SUPPORT		
Access trail reconnaissance	1 day	\$1200
Supervision, logging and sampling	7 days	8400
Travel		\$960
Truck rental	5 days	\$1250
Accommodation and meals	9 days	\$2250
Airfare		\$1200
Report and drafting	32 hrs	\$3840
Senior Review	4 hrs	\$820
		\$19,920
SAMPLE TESTING		\$1100
SUB-TOTAL		\$54,470
Suggested contingency (15%)		\$7871
TOTAL		\$60,341

The costs in Table 2 are estimates prepared for preliminary budgeting purposes and are based in part on past experience. As costs will vary depending on timing, availability of equipment, and non-fixed expenses, direct quotes should be sought from contractors prior to establishing a final budget.

7.0 SUMMARY AND PROJECT SCHEDULE

A subsurface geotechnical program of testpitting is recommended for two granular sources of interest in the Tulita area. Eight testpits are proposed for Source 7.155AP and six testpits are proposed for Source FN20x. Testpit depth should typically be about 5 m. A schedule for the proposed field program is shown on Table 3.

Main access to the potential granular sources will follow existing trails and cutlines. Additional trail development will be required to provide access to test sites within the source areas. A total of about 12 km of trails are required to access the sites. The program must be advanced during the winter to ensure minimum environmental impact.

Observations to assess drainage conditions, potential access routes, environmental considerations and other issues that may aid in future stages of development should be documented during testpitting. The results of the geotechnical program should provide key information necessary to complete a preliminary Quarry Development Plan. Testpit locations could be altered, or additional testpits added, depending on the results of the initial testpits and a professional with suitable experience and knowledge of the regional surficial geology should be retained to manage the field program.

The cost of the sub-surface evaluation program, including sample testing and reporting, is estimated at about \$60,000 including a contingency of 15%.

Source 7.155AP has good potential for a considerable volume of quality granular material. The terrace landform assumed to form the main part of the deposit covers an area of about 70 ha and a prospective volume estimate of granular material is 10 million m³. There is good potential for the deposit to exist beyond the terrace landform (gsGt, Figure 2) and favourable results of the testpitting program could result in a significant increase in the estimated deposit reserves. There is insufficient data to estimate a prospective volume at Source FN20x.

TABLE 3 FIELD PROGRAM SCHEDULE															
TASK	DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Construct ice road from Tulita to Little Bear River		■	■	■	■	■	■								
Travel and mob / demob to Tulita							■								
Winter trail reconnaissance and clearing								■	■						
Mob Excavator to 7.155AP									■						
Testpitting at 7.155AP									■	■	■				
Mob excavator to FN20x												■			
Testpitting and drilling at FN20x												■	■	■	
Demob equipment to Tulita														■	
Demob equipment to Tulita; travel															■

8.0 CLOSURE

The information and recommendations contained in this report and figures are based on the results of previous reports, air photograph interpretation, current understanding of regional terrain and geology, and on limited observations of land-surface conditions. In most of the study area, subsurface conditions (e.g., characteristics of subsurface materials and subsurface hydrologic conditions) are interpreted from surface observations or air photo interpretation with only reconnaissance level field checking. The terrain and soil conditions indicated are intended as a useful guide for regional planning purposes and should not be used to guide specific development until local material textures have been evaluated by sub-surface investigation.

Further information regarding the use of this report is presented in the attached General Conditions that form a part of this report.

EBA Engineering Consultants Ltd.

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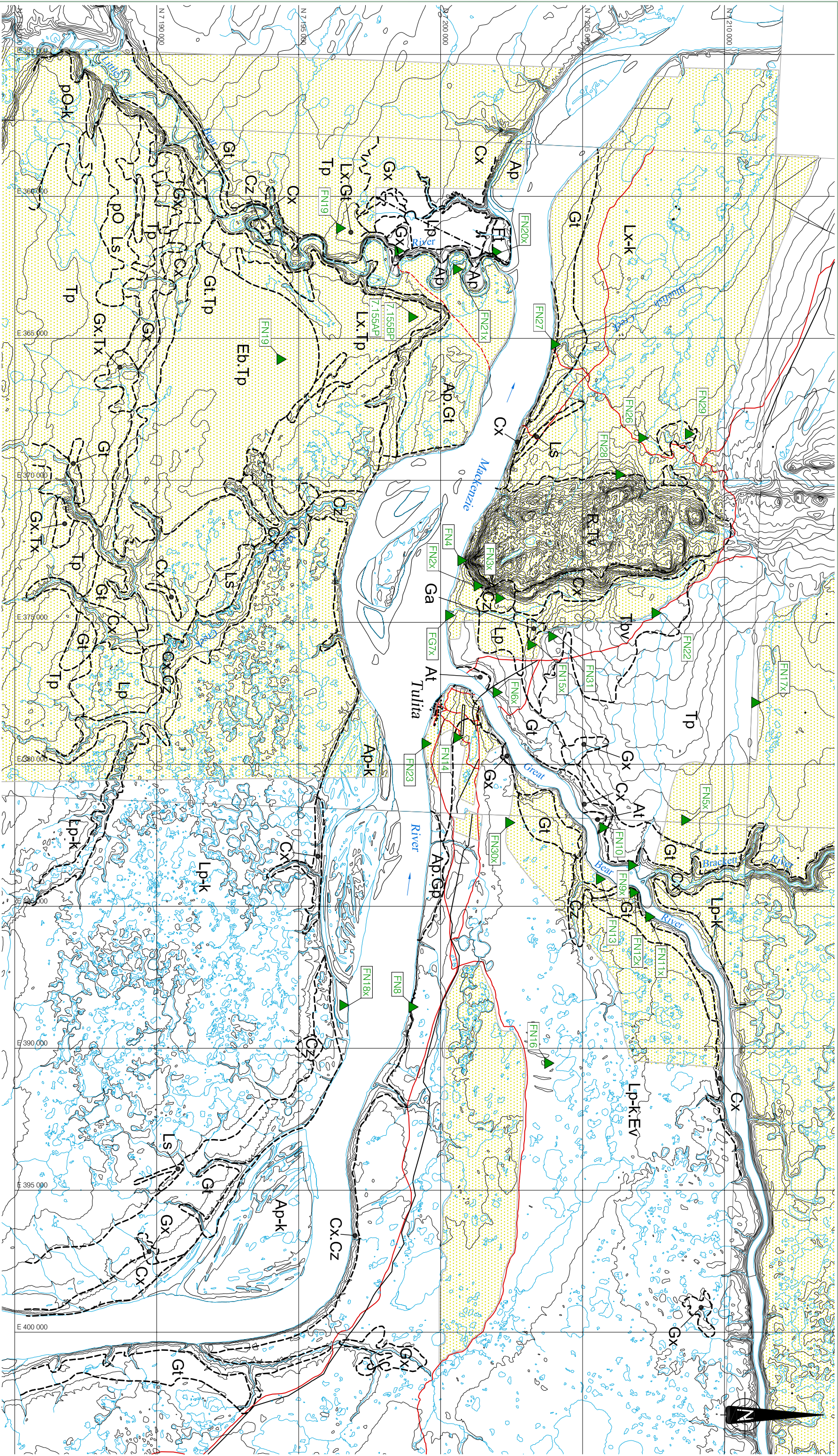
REFERENCES

EBA Engineering Consultants Ltd. Indian and Northern Affairs Canada. Preliminary Geotechnical Study of Community Granular Resources. Inuvik, Ft. Good Hope and Tulita, NT. March 2006.

EBA Engineering Consultants Ltd. Indian and Northern Affairs Canada. Field Reconnaissance Study of Community Granular Resources. Fort Good Hope, NT. January 2007.

FIGURES

- Figure 1 Site Location and Geology - Tulita Area
Figure 2 Site Map - Deposits 7.155AP and FN20x

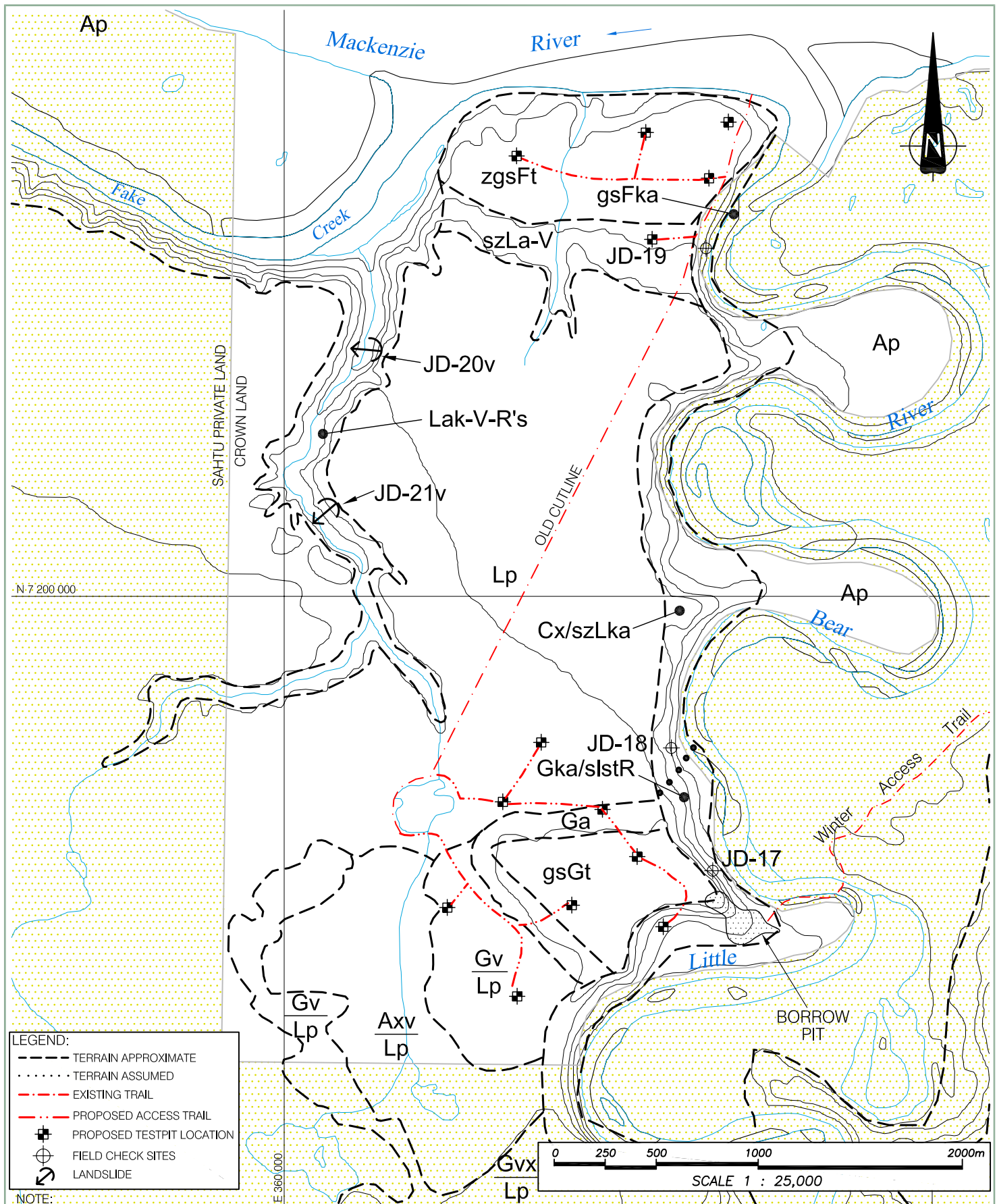


LEGEND:

- SAHTU LANDS OR MUNICIPAL LAND
- GRANULAR DEPOSIT AND REFERENCE NUMBER
- CUTLINE/ACCESS TRAIL
- WINTER ACCESS ROAD

NOTES:
1. TERRAIN SYMBOLS ARE DEFINED ON "LEGEND FOR SURFICIAL MATERIALS" ON SEPARATE SHEET.
2. THIS DRAWING HAS BEEN PRODUCED IN COLOR, ANY REPRODUCTIONS MAY NOT BE REPRESENTATIVE OF ORIGINAL.

EBA Engineering Consultants Ltd. 			CLIENT		PROJECT	
DEPARTMENT OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT LAND & WATER MANAGEMENT, NRE			SUBSURFACE EVALUATION OF GRANULAR RESOURCES - TULITA, NT		TITLE	
DWN, JSB, CHKO, JTD/JRT			LAND & WATER MANAGEMENT, NRE		SITE LOCATION & GEOLOGY TULITA AREA	
EBA JOB NO. 1200209			FILE: 1200209 Figure 1_Tulita.dwg		REVISION NO.: 1	
			DATE: October 2007		Figure 1	



EBA Engineering Consultants Ltd.



DWN. JSB

CHKD. JTD/JRT

EBA JOB NO. 1200209

CLIENT

DEPARTMENT OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT
LAND & WATER MANAGEMENT, NRE

FILE: 1200209 Figure 2.dwg

PROJECT

GEOTECHNICAL INVESTIGATION PLANS
SUBSURFACE EVALUATION OF GRANULAR RESOURCES - TULITA, NT

TITLE

SITE MAP - DEPOSIT 7.155AP
NEAR TULITA

DATE:

October 2007

REVISION NO.: 1

Figure 2

LEGEND FOR SURFICIAL MATERIALS – Tulita Area

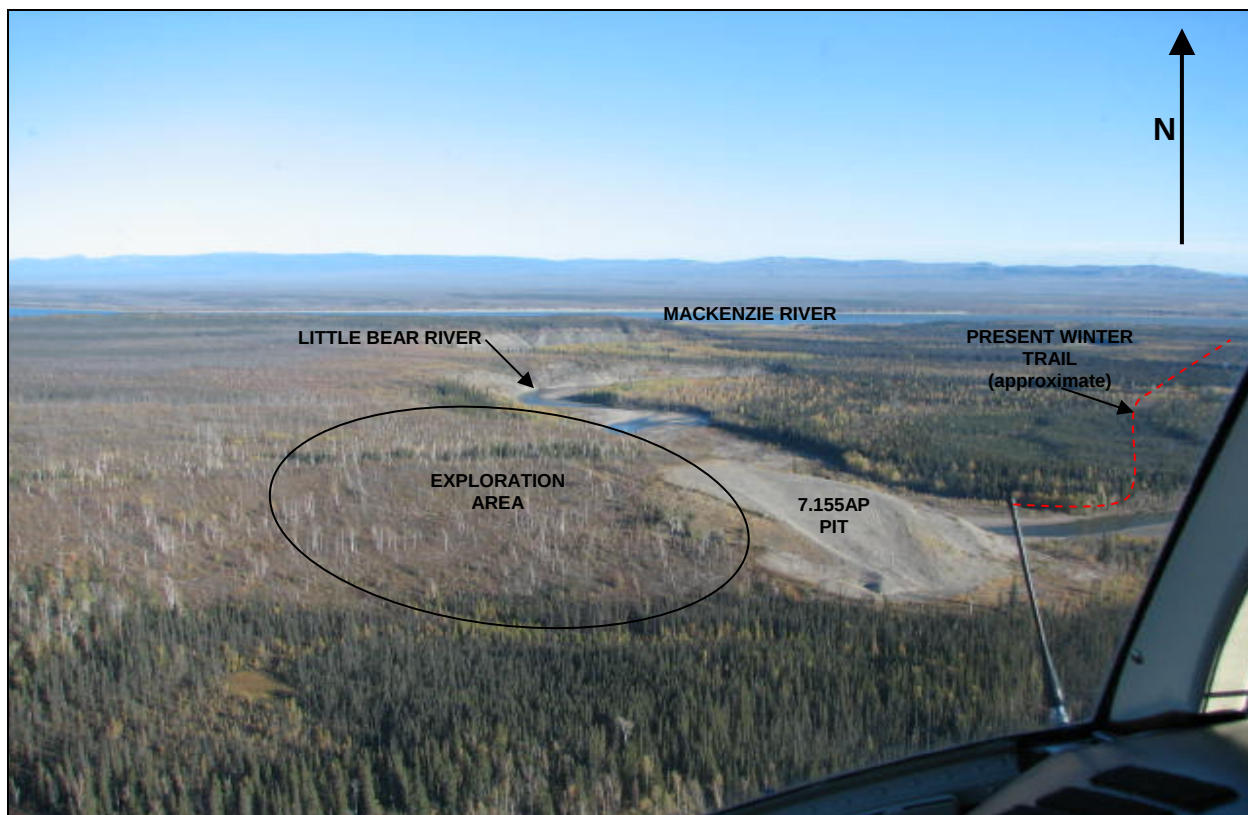
Combined map units are used where two intermingled units cannot be delineated individually. The dominant unit (>50% of the map area) is followed by a dot and the second unit (20-50% of the map area).

SYMBOL	DESCRIPTION	THICKNESS
Ap	ALLUVIUM; coarse sand and gravel with silt and fine sand, occurring as channel and overbank floodplain sediments	2-4m
At	ALLUVIUM; sand and silt, in places underlain by gravel, occurring as terraces	2-4m
Cx	COLLUVIUM; derived from bedrock or surficial material; slope complex consisting of a veneer to blanket of diamicton and rubble	>2 m
Cz	COLLUVIUM; derived from bedrock or surficial material; rubble and/or diamicton occurring as stepped or fan-shaped deposits formed by mass movement (slides)	
Eb	EOLIAN; fine to medium sand, minor silt; blanket deposited over surficial materials, particularly lacustrine and till plains	3-5 m
Ev	EOLIAN; fine to medium sand, minor silt; veneer deposited over surficial materials, particularly lacustrine and till plains	< 3 m
Lp	GLACIOLACUSTRINE (glacial lake) deposit; silt and clay with minor sand commonly overlain by a discontinuous veneer of organic deposits; thick sediments occurring as a flat to gently sloping plain	2-80 m
Lp-k	Contains thermokarst depressions	
Ls	LACUSTRINE sediments occurring as low, ridged beach deposits of sand and gravel; may be intercalated with till deposits	
Lx	LACUSTRINE complex or transitional between glaciofluvial and glaciolacustrine deposits with upper 0-5 m consisting of sand	0-20 m
Gp	GLACIOFLUVIAL; sand and gravel outwash deposits, flat to gently sloping plain	2-20 m
Gt	GLACIOFLUVIAL; sand and gravel outwash deposits, terrace	2-30 m
Gx	GLACIOFLUVIAL; ice contact glaciofluvial complex of eskers, kames and plains	2-30 m
pO	ORGANICS; peat and muck occurring as flat to gently sloping plains; peatland, sphagnum peat generally underlain by woody sedge peat	0.5-4 m
Tbv	TILL; non-sorted silt, sand and clay with clasts (gravel) deposited by glacial ice; blanket or veneer with gently to moderately sloping plain conforming to underlying topography	Tv <2 m
Tp	TILL; flat to gently sloping plain	3-20 m
Tv	TILL; veneer with slopes conforming to underlying topography	<2 m
R	BEDROCK; prominent ridges, escarpments and hills of dolomite (Bear Rock)	

After GSC, 2004.



PHOTOGRAPHS



Source 7.155AP. September 16, 2006. Overview of Source 7.155AP area.



Source 7.155AP. September 16, 2006. Present Pit



Source 7.155AP. September 17, 2006. Granular material exposed on upper escarpment.



Source FN20x. September 17, 2006. Granular stratigraphy exposed on escarpment near the mouth of the Little Bear River.

APPENDIX A

APPENDIX B General Conditions *

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.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 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.

3.0 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.

4.0 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.

5.0 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 judgmental 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.

6.0 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.

7.0 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.

8.0 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.

9.0 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.

10.0 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.

11.0 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.

12.0 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.

13.0 STANDARD OF CARE

Services performed by EBA for this report have been conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions in the jurisdiction in which the services are provided. Engineering judgement has been applied in developing the conclusions and/or recommendations provided in this report. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of this report.

14.0 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.

15.0 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), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by EBA shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancies, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by EBA shall be deemed to be the overall original for the Project.

The Client agrees that 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. The Client warrants that EBA's instruments of professional service will be used only and exactly as submitted by EBA.

The Client recognizes and agrees that 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.