

EBA Engineering Consultants Ltd.

Civil, Geotechnical and Materials Engineers

SUMMARY OF

**GRANULAR RESOURCE DATA FOR
THE UPPER MACKENZIE VALLEY
FORT PROVIDENCE TO NORMAN WELLS**

VOLUME II

**APPENDIX B - TABULAR SUMMARY OF
PROSPECTIVE SOURCE DATA**

PREPARED FOR

INDIAN AND NORTHERN AFFAIRS CANADA

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APPENDIX B
TABULAR SUMMARY OF
PROSPECTIVE SOURCE DATA
(Volume II)

B.1 Legend

B.2 Summary Tables



B.1 BORROW SOURCE NUMBER

A unique identification number which includes the borrow management area where the deposit is found and the deposit number. Generally the source numbers increase from downstream to upstream on the right bank side of the Mackenzie River then downstream to upstream on the left bank side of the Mackenzie River. The class of material is not given as part of the number in the table as it is given later in the chart (see B.6). It is, however, noted with the source number on the maps in Appendix C.

Not all deposits were given a unique identification number in some of the studies. Some have been identified by reference to an area on a map, or a kilometre post along the Mackenzie Highway, or the Interprovincial Pipeline. For these data, the data source only is included.

Cross-Reference 26 from Public Works Canada also employed a somewhat nonconventional site identification system. In effect the reference includes three separate studies which were identified by a colour code as listed below. In the table, this colour identification has been maintained. For example, the Cross-Reference for Deposit 11.004 is '7RED(26)', for Site 7, test pitted in September 1982.

B.2 NTS REFERENCE

The NTS Reference number identifies the 1:50,000 National Topographic System map sheet where the deposit can be found. These maps are available by number from the Canada Map Office, 615 Booth Street, Ottawa, Ontario, K1A 0E9, Phone (613) 994-9663.

Blue: Hand dug test holes, September 1976, Fort Simpson to Camsell Bend
Green: Drilled test holes, February 1976, Fort Simpson to Camsell Bend
Red: Hand dug test holes, September 1982, Camsell Bend to River-Between-Two Mountains

B.3 CROSS-REFERENCES

Many of the deposits have been identified in more than one study. The borrow source number of previous studies is recorded and the reference study is given a number in parenthesis. Example: 95 H-B3 (1). This refers to borrow source number 95 H-B3, defined in the Northern Engineering Services, Pipeline Borrow Investigations (Reference 1). The complete title of the studies referenced, by number is presented in Appendix A.1. Appendix A.2 presents the same information in a more conventional bibliographical format.

Because of space limitations on the tables, there are a few cases where a number of cross-reference could not be listed. These are indicated by a ampersand () and in the column. A total list of references is included on the computer disk provided with this report.

B.4 LOCATION

The geographic location of each deposit is defined both with respect to the U.T.M. zone and coordinate system, and in general terms. The general location is provided in terms of distances or directions from easily identifiable geographic features. These could include the Mackenzie River, smaller rivers and creeks, towns or kilometre posts along the Mackenzie Highway.



Legend**B.5 MATERIAL TYPE**

This provides the soil description for the potential borrow in the deposit. It is based on the gradation description as provided in the references.

An additional comment in this column identifies some sources for which no volume or quantity data is available.

B.6 MATERIAL CLASS

The material quality has been divided into six categories which represent their suitability for construction purposes. These are as follows:

- a) Class #1: Excellent quality granular material which consists of clean, well graded, structurally sound sands and gravel. It is suitable for high quality surfacing materials or asphalt and concrete aggregate with minimal processing needed.
- b) Class #2: Good quality granular material composed of well graded sands and gravels with limited fines. This material is suitable for base and surface course aggregates, embankment or structural fill. The material requires processing for concrete aggregate.
- c) Class #3: Fair quality granular material composed of poorly graded sands and gravels with or without silt. This material is suitable for general fill and foundation pads.

- d) Class #4: Poor quality granular material composed of poorly graded, fine sands with moderate to high silt content. This material may contain minor amounts of gravel and is suitable for marginal fill only.
- e) Class #5: Fair to excellent quality bedrock which is suitable for quarrying and processing into required grades of granular material.
- f) Class NG: This essentially nongranular material includes fine silty sands, silts and cohesive soils. It is unsuitable for most construction purposes except nonstructural fills.
- g) In BMA 12 for PWC pits located on the Mackenzie Highway east of Highway 3 information on the Class of material was not available.

B.6 AVERAGE THICKNESS

This is the interpreted average thickness of recoverable granular borrow (metres). It is estimated using data obtained from test pits and boreholes or inferred from the deposits physical features and geologic characteristics.

B.7 VOLUMES

This is the estimated useable granular material in millions of cubic metres. This category has been subdivided into six subcategories as follows:

a) Total Volume: The total estimated volume of useable granular material in the deposit. This volume is the sum of three parts which are:

- i) proven resources
- ii) probable resources (excluding proven)
- iii) prospective resources (excluding proven and prospective)

In cases where no volume of material is reported, it is because there is insufficient data to do so.

b) Proven Resources: Material whose occurrence and distribution are known with a high degree of confidence due to ground truthing methods. These methods would include test pitting, boreholes and mapped outcrops. The ground truth information would be extrapolated to include an area for which there is a high degree of confidence (about 50 m around each borehole or test pit).

c) Probable Resources: Material whose occurrence and distribution have been inferred on several types of direct or indirect evidence. These would include topographic characteristics, geophysical data, airphoto interpretation and a limited number of test pits or boreholes. Further investigations are needed to prove up the deposit.

d) Prospective Resources: Material whose volume is based on limited indirect evidence such as airphoto interpretation and general geological considerations.

Sections e) and f) deal with volumes of material removed from deposits. These have not been deducted from the Total Volume (a).

e) This is an estimate of the volume of material (in millions of cubic metres) which was removed from the deposit for the construction of the Mackenzie Highway. These volumes were determined from Public Works Canada documents, correspondence and as-built maps for the Mackenzie Highway.

f) This is an estimate of the volume of material (in millions of cubic metres) which was removed from the deposit for the construction of the Interprovincial Pipeline. The volumes removed were determined from information supplied by W.M. Pearce, Director, Special Projects for Interprovincial Pipeline (NW) Ltd.

B.8 GENERIC ORIGIN/LANDFORM

The origin of the geologic feature and its resulting landform can provide useful inferences about the deposits quality and occurrence. For example; a glaciofluvial terrace will more likely contain coarse granular material than will an aeolian deposit.

B.9 DRAINAGE

This section deals with aspects of surface drainage within the deposit. Where information is available, a description is also given such as:

- a) Good or Well Drained: Surface water drains quickly and material is unsaturated.
- b) Fair: Surface water drains slower but no standing water is seen.



c) Poor: Surface water drains very slowly and standing water is found. Soils are saturated and areas tend to be very sensitive.

terrains; requirements for buffer zones; the presence of an active pit; and wildlife or fisheries related environmental impact information.

B.10 ICE CONTENT

This is an estimate of the excess ice content within the soil. Excess ice is that which exceeds the volume of the interparticle voids. It is a measure of frozen water content in excess of that required to produce 100 percent saturation. It is given as None or Unfrozen, low (0 to 5 percent), medium (5 to 10 percent) and high (>10 percent). It should be noted that ice contents can vary considerably over short distances within a deposit.

B.11 OVERBURDEN TYPE/THICKNESS

An interpretation of the type of overburden and estimate of its thickness in metres. This information is significant in determining the feasibility of developing a pit.

B.12 ACCESS

Comments on the most likely means of access to a deposit. For example; winter roads, a barge on the Mackenzie River, or along seismic cut lines from the Mackenzie Highway or CNT pole line.

B.13 DEVELOPMENTAL CONSTRAINTS

Previously reported or obvious environmental or aesthetic constraints to the development of the deposit. For example; sensitive surrounding

B.14 GROUND TRUTHING OF DEPOSITS

Two categories included are the number of boreholes and their maximum depth and/or the number of test pits and their maximum depth. This information was used along with the laboratory testing to aid in determining the overall assessment of the deposit.

B.15 LABORATORY TESTING

This column has been subdivided into four subsections:

- a) Moisture Contents: The number of moisture contents performed on samples from a deposit. These results may suggest whether the material will be suitable for certain construction purposes and whether permafrost is present.
- b) Grain Size Analysis: The number of grain size evaluations performed on samples from a deposit. The results show percentages of gravel, sand, silt and clay.
- c) Petrographic Analysis: The number of petrographic analyses performed on samples from the deposit, useful in assessing whether the material may be suitable for high quality uses such as concrete aggregate.
- d) Other Testing: This shows the total number of other tests which were performed on the samples from the deposit.



These other test could include:

- i) Los Angeles Abrasion Tests: a measure of the durability of the coarser aggregates.
- ii) Sulphate Soundness Tests: a measure of the resistance of coarse aggregates to chemical attack.
- iii) Organic Content Tests: a measure of the amount of organic matter in the finer aggregates.
- iv) Atterberg Limits: a measure of the quality of nongranular borrow

B.16 DATA RELIABILITY

This subjective evaluation of the accuracy of quality and/or quantity data for the source considers many variables. Most important are the number of boreholes or test pits, their depth, their spacing and the experience of those who logged the data.

B.17 OVERALL ASSESSMENT

This is a subjective assessment of the feasibility of developing the source. It is a generalized assessment and possibly a misleading one because it is oriented to uses requiring above-average quality granular deposits (select aggregates for asphalt or concrete, or structural fill). For example a deposit classified as poor perhaps because it is fine-grained may be entirely suitable for road embankment (nonstructural) fill but totally unsuitable for selected aggregate. Individual users should apply their own assessment relative to their specific requirements.

These assessments have been made primarily on the basis of the quality of material and to a lesser extent on the feasibility of developing the pit or quarry at that site. Although environmental constraints are beyond the scope of this report, where they have been reported for individual deposits, it has been noted by * in this column.

B.18 STUDY PRIORITY

Generally deposits with above average quality have been assigned the highest priority rating. Deposits were not eliminated or down-graded if they had developmental or environmental constraints.



SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/LANDFORM			
7.043	96-E(6)	7.43(39) 100, 101(38) 102A(38) 100, 101(41) 102A(41)	ZONE 9 584500E 724900N	W of Billy Creek N of Mackenzie River	sand	4	3.50	R) B) C) D) E) F)	0.050 0.000 0.050 0.000 0.000 0.000	aeolian sand dunes		
7.044	96-E(6)	7.43(39)	ZONE 09 564000E 724000N	along Cercajou River	sand and silt	4	4.50	R) B) C) D) E) F)	0.000 0.000 0.000 0.450 0.000 0.000	fluvial fluvial floodplain		
7.045	96-E(6)	7.45(39)	ZONE 9 587600E 7251900N	N of Mackenzie River	sand -some silt -some gravel	4	3.00	R) B) C) D) E) F)	0.450 0.000 0.450 0.000 0.000 0.000	glaciofluvial kame hillocks		
7.046	96-E(6)	7.46(39) 107(38) 107(41)	ZONE 9 590500E 7250000N	N of Mackenzie River	sand & gravel -trace silt	3	9.00	R) B) C) D) E) F)	1.100 0.050 0.350 0.700 0.000 0.000	glaciofluvial kame-esker complexes		
7.047	96-E(6)	NW-16X(10) AREA I-R(30) 109A, 109B(38) 110A(38, 41) 109A, 109B(41) 111, 112(38, 41)	ZONE 9 593000E 724900N	11.3 km NW of Norman Wells at Base of Discovery Ridge on southern flank of Norman Range	limestone -slightly weathered -siltzone -volumes unlimited	5	15.20	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock		
7.048	96-E(6)	NW-11(10)	ZONE 9 599000E 7238000N	11.3 km SW of Norman Wells, S bank of Mackenzie River, N of abandoned Canol Camp	sand -fine grained -silty	4	3.00	R) B) C) D) E) F)	0.570 0.115 0.115 0.340 0.000 0.000	aeolian sand dunes		
7.049	96-E(7)	NW-15(10) NW-15(3) NW-15(21)	ZONE 9 600000E 724900N	6.4 km N of Norman Wells near Bosworth Creek	gravel -fine grained -sandy -silty	2	3.00	R) B) C) D) E) F)	0.760 0.380 0.150 0.230 0.000 0.000	glaciofluvial ridges & knolls		
7.050	96-E(7)	NW-3X(10)	ZONE 9 599000E 7246000N	in active channel of Bosworth Creek	gravel -sandy	2-3	1.30	R) B) C) D) E) F)	0.115 0.000 0.023 0.092 0.000 0.000	alluvial creek bars		
7.051	96-E(3)	NW-5(10) NW-7(10)	ZONE 9 592000E 7235000N	12.9 km SW of Norman Wells, S bank of Mackenzie River	sand -fine grained -some silt	4	10.70	R) B) C) D) E) F)	1.500 0.300 0.300 0.900 0.000 0.000	aeolian sand dunes		
7.052	96-E(7)	NW-2X(10)	ZONE 9 599000E 7243000N	W of Norman Wells in active channel of Bosworth Creek	sand -with gravel bars -silty	3	1.30	R) B) C) D) E) F)	0.075 0.000 0.015 0.060 0.000 0.000	alluvial creek bars		

Source Description				Tests and Assessments							
DRAINAGE/ ICE CONTENT	OVERBURDEN TYPE AND THICKNESS (m)	ACCESS	DEVELOPMENT CONSTRAINTS	NO. OF BOREHOLES/ TESTPITS/ MAX DEPTH (m)	NO. OF TESTPITS/ MAX DEPTH (m)	LABORATORY TESTING	DATA RELIABILITY	OVERALL ASSESSMENT/ STUDY PRIORITY	BORROW SOURCE NUMBER		
- high	peat & silt 0-0.8	Mackenzie Hwy	-	8/ 5.50	0/ 0.00	A) B) C) D)	32 2 0 0	Fair	poor to unsuitable low	7.043	
-	-	undeveloped winter road, thermokarst, summer barge	siltation of Carcajou River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	unsuitable low	7.044	
fair medium to high	-	-	undeveloped, rugged, thermally sensitive terrain	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	unsuitable low	7.045	
fair low to unfrozen	silt 0.0-0.6	winter road	sensitive terrain	3/ 11.50	0/ 0.00	A) B) C) D)	13 2 0 0	Fair	unsuitable low	7.046	
fair very low	till 0-1.0	existing seismic cutlines	quarrying operation, similar material at Kee Escarpment, site #7.057	20/ 5.50	0/ 0.00	A) B) C) D)	68 2 0 0	Fair	good high	7.047	
good unfrozen	topsoil 0-0.2	winter road to Canol Camp, then seismic cutlines	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	7.048	
fair low to medium	topsoil & silt 0-0.5	difficult access to Norman Wells	extensive access roads & stream crossings of Bosworth Creek	12/ 7.90	0/ 0.00	A) B) C) D)	7 11 3 0	Fair	poor to favourable low to medium	7.049	
unfrozen	organic silt 0-0.3	winter road and hiking trails	deposits in active channel Bosworth Creek, Bosworth Creek is primary source of water for Fort Norman	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to unsuitable* low	7.050	
good unfrozen	topsoil 0-0.2 m	winter road through abandoned Canol Camp	sensitive terrain, retention of vegetation buffer zones, poor quality material	0/ 0.00	4/ 2.40	A) B) C) D)	1 1 0 0	Poor	poor low	7.051	
unfrozen	organic silt 0-0.3	access roads	stream used as water supply for Fort Norman, area contains producing high pressure oil wells, deposits are in active channel	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to unsuitable* low	7.052	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
7.053	96-E(6)	NW-19(10)	ZONE 9 591000E 7252000N	16 km NW of Norman Wells	sand & gravel -medium grained -well graded -trace silt	2	6.00	A) B) C) D) E) F)	0.760 0.300 0.230 0.230 0.000 0.000	glaciofluvial esker/kame complex		
7.054	96-E(7)	AREA I-At(31) 114(38) 114(41)	ZONE 9 598000E 7246000N	E & W bank of Bosworth Creek NW of Norman Wells	gravel -sandy -some silt & clay	2-3	5.50	A) B) C) D) E) F)	0.615 0.615 0.000 0.000 0.000 0.000	glaciofluvial glaciofluvial terraces		
7.055	96-E(7)	NW-21(10) AREA I-AF(31)	ZONE 9 605000E 7245000N	9.6 km N of Norman Wells N of Kee Escarpment	limestone -angular fragments -in silty matrix	2-4	12.10	A) B) C) D) E) F)	1.500 0.000 0.300 1.200 0.000 0.000	colluvial slope wash deposits		
7.056	96-E(7)	NW-10X(10) AREA I-AF(31)	ZONE 9 608000E 7245000N	6.4 km N of Norman Wells at mouth of Schooner Creek, W of Hodgson (Fish) Lake	gravel -well graded -medium grained	2	3.00	A) B) C) D) E) F)	0.760 0.000 0.230 0.530 0.000 0.000	alluvial alluvial cone or fan		
7.057	96-E(7)	NW-4(10) NW-4(3) NW-4(22) NW-4(21) IPP-3kmp(23) AREA IR(30)	ZONE 9 608000E 7245000N	6.4 km NE of Norman Wells on prominent ridge, Kee Escarpment	Devonian dolomitic limestone - weathered & fractured at surface, competent at depth -volumes unlimited -also granular material	5	30.00	A) B) C) D) E) F)	1.500 0.000 0.000 1.500 0.000 0.000	bedrock bedrock		
7.058	96-E(7)	NW-14(10) AREA I-E(31)	ZONE 9 603000E 7243000N	3.2 km NE of Norman Wells	sand -fine to medium grained -silty	2-3	6.00	A) B) C) D) E) F)	1.100 0.700 0.400 0.100 0.000 0.000	glaciofluvial esker ridges		
7.059	96-E(7)	AREA I-Br(31)	ZONE 9 607000E 7241000N	E of Norman Wells N of Mackenzie River NW of D.O.T. Lake	gravel, sand & silt -volumes not determined	3-4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial glaciofluvial beach ridges		
7.060	96-E(7)	NW-1(10) AREA I-(31)	ZONE 09 605000E 7240000N	5.6km E of Norman Wells N bank of Mackenzie River	gravel -sandy -high silt content	3	3.00	A) B) C) D) E) F)	0.023 0.000 0.023 0.000 0.000 0.000	alluvial river terrace		
7.061	96-E(7)	NW-20(10)	ZONE 9 609000E 7238000N	6.4 km E of Norman Wells at mouth of Joe Creek on N bank of Mackenzie River	gravel -coarse grained -well graded -silty	2-3	1.50	A) B) C) D) E) F)	0.004 0.004 0.000 0.000 0.000 0.000	alluvial alluvial cone or fan		
7.062	96-E(7)	AREA I-Br(31) 119, 120(49) 121, 122(49)	ZONE 9 613000E 7238000N	NE of Hanna Lake	gravel, sand & silt	3-4	0.00	A) B) C) D) E) F)	0.650 0.000 0.000 0.650 0.000 0.000	glaciofluvial glaciofluvial beach ridges		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boresholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
fair low	topsoil & silt 0-0.6	access very difficult, winter road & existing seismic cut lines	sensitive terrain very difficult access	2/ 4.90	0/ 0.00	A) B) C) D)	0 2 0 0	poor	favourable medium	7.053	
good low	-	access by proposed Mackenzie Hwy which passes S of deposit	-	2/ 5.50	1/ 0.00	A) B) C) D)	8 2 0 0	poor	good high	7.054	
good high	colluvium 0-0.2	extremely difficult access	extremely difficult access, high ice content of the situ material, Bosworth Creek used as water supply for Norman Wells	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	unsuitable*	7.055	
good unfrozen	topsoil 0.02	construction of new access road	new access road to be constructed, sensitive terrain	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	7.056	
good very low	colluvium 0-0.5	all weather road	active quarry for Norman Wells	0/ 0.00	0/ 0.00	A) B) C) D)	0 1 1 1	fair-good	good to excellent high	7.057	
fair unfrozen	topsoil 0-0.2	existing seismic cut line	large surface area to be cleared for small volume of material	11/ 9.10	1/ 1.00	A) B) C) D)	1 2 0 0	poor	unsuitable to poor low	7.058	
fair to good low to moderate	-	access by snow road 2 km E to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	7.059	
-	-	-	-	0/ 0.00	1/ 0.00	A) B) C) D)	1 1 0 0	poor	unsuitable low	7.060	
good low	topsoil 0-1.0	all-weather road	adjacent to river, limited volume, active pit for Norman Wells	2/ 2.90	2/ 2.10	A) B) C) D)	0 0 0 0	poor	favourable*	7.061	
fair to good low to moderate	-	access by snow road 2 km E to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	7.062	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
7.063	96-E(2)	NW-18(10) AREA I-E(31) 126(49)	ZONE 9 614000E 7240000N	14.5 km E of Norman Wells W of Snowshoe Creek	sand -trace gravel	4	6.00	A) 0.226 B) 0.023 C) 0.015 D) 0.188 E) 0.000 F) 0.000	glaciofluvial esker ridge		
7.064	96-E(7)	NW-8(10) AREA I-RF(31)	ZONE 9 613000E 7243000N	12.8 km N of Norman Wells	Primary -well graded, coarse gravels Secondary -silty medium gravels	P-2-3, S-3	0.00	A) 0.760 B) 0.305 C) 0.150 D) 0.305 E) 0.000 F) 0.000	alluvial alluvial cone or fan		
7.065	96-E(7)	NW-9(10) AREA I-RF(31)	ZONE 9 616000E 7242000N	14.4 km NE of Norman Wells between Edie Lake and Bandy Lake	gravel -well graded -medium grained -silty	2	3.00	A) 0.570 B) 0.170 C) 0.115 D) 0.285 E) 0.000 F) 0.000	alluvial alluvial cone or fan		
7.066	96-E(2)	NW-12(10) AREA I-Rt(31) 123, 124, 125(49)	ZONE 9 615000E 7238000N	14.4 km E of Norman Wells near Canyon Creek & Snowshoe Creek	sand -fine to medium grained	2-3	6.00	A) 0.470 B) 0.060 C) 0.030 D) 0.320 E) 0.000 F) 0.000	glaciofluvial esker ridges		
7.067	96-E(1)	284-X(7)	ZONE 9 618000E 7239000N	S of Bandy Lake, W of Canyon Creek	silt -some clay -some gravel & sand -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	colluvial slope wash		
7.068	96-E(1)	283(7) AREA I-Rt(31)	ZONE 9 617000E 7238000N	18 km E of Norman Wells, E of Canyon Creek	silty sand & gravel -volumes not determined	2-3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial fan & terrace		
7.069	96-E(1)	282-X(7) AREA I-BR(31) 113, 114, 115(49) 116(49)	ZONE 9 618000E 7237000N	between Francis & Canyon Creeks	gravel, sand & silt -stratified -scattered -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine beach ridge		
7.070	96-E(1)	281(7)	ZONE 9 620000E 7238000N	between Francis & Canyon Creeks, 19.3km E of Norman Wells	sand & gravel -variable gradation -stratified -some silt	2	3.00	A) 1.500 B) 0.700 C) 0.300 D) 0.500 E) 0.000 F) 0.000	glaciofluvial kame terraces		
7.071	96-E(1)	AREA I-Gfr(31)	ZONE 9 623000E 7237000N	between Helava Creek & Francis Creek	gravel -sandy -some silt & clay -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge		
7.072	96-E(1)	277(7) AREA I-E(31)	ZONE 9 623000E 7235000N	between Francis & Helava Creeks, 21km E of Norman Wells	silty sand with some gravel -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker ridge		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low	topsoil 0-0.3	winter road & existing seismic cutlines	very poor quality material access poor, long haul to Norman Wells	2/ 6.10	2/ 0.00	A) B) C) D)	2 2 0 0	poor	poor to unsuitable low	7.063
good unfrozen	none	all-weather road	-	0/ 0.00	3/ 1.60	A) B) C) D)	0 1 1 1	poor	favourable to good medium to high	7.064
good unfrozen	topsoil 0-0.3	all-weather road	seasonal	0/ 0.00	3/ 1.50	A) B) C) D)	0 1 1 0	poor	favourable to good medium to high	7.065
good unfrozen	topsoil 0-0.3	existing winter road & existing seismic cutlines	sensitive terrain, difficult access	5/ 6.10	1/ 1.00	A) B) C) D)	2 2 0 0	poor	poor to favourable low to medium	7.066
good low to medium	org topsoil and peat, 0-0.5	seismic cutlines & access trails from CNT line	materials of granular quality not established, Canyon Creek contains considerable potential spawning gravels	4/ 4.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor to unsuitable*	7.067
fair to poor	topsoil & org. silt, 0-0.3	extension of existing seismic cutline	must cross small streams, buffer zone next to Canyon Creek	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	7.068
fair low to medium	organic topsoil CNT line 0-0.5		potential quantity of recoverable is minimal, scattered pockets	5/ 4.60	5/ 1.50	A) B) C) D)	1 1 0 0	fair	poor low	7.069
good low	org silt and topsoil, 0-0.3	seismic cutlines & access trails from CNT line	buffer zones next to both creeks	11/ 8.50	0/ 0.00	A) B) C) D)	12 8 2 0	fair-good	good high	7.070
fair to good low to moderate	-	access by snow road 3.5 km E to Mackenzie Hwy	-	0/ 0.00	1/ 0.00	A) B) C) D)	1 1 0 0	poor	favourable to good medium to high	7.071
well	organic topsoil	existing seismic cut- lines & trails	fine grained & silty materials, small volumes relative to volume cleared	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to unsuitable low	7.072

SITE IDENTIFICATION						SOURCE DESCRIPTION							
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM				
7.073	96-E(1)	280(?) P-290(3) P-290(22) AREA I-At(31)	ZONE 9 621000E 7235000N	23 km E of Norman Wells on Francis Creek	sand & gravel -well graded -medium grained -some silt	2	3.00	R) B) C) D) E) F)	1.100 0.600 0.200 0.300 0.000 0.000	alluvial fan & terrace			
7.074	96-E(2)	MW-13X(10) IPP-20kmp(23) 117, 118(49)	ZONE 9 615000E 7235000N	active stream channel Canyon Creek, 16 km E of Norman Wells	sand & gravel -stratified	2-3	1.50	R) B) C) D) E) F)	0.400 0.080 0.080 0.240 0.000 0.004	alluvial stream terrace deposits			
7.075	96-E(1)	IPP(23) AREA I-At(31)	ZONE 9 619000E 7233000N	E of Francis Creek at KP 24 along pipeline	sand & gravel -volumes not determined	3	0.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial river terrace			
7.076	96-E(1)	276(7) AREA I-At(31) 109(49)	ZONE 9 622000E 7232000N	24 km SE of Norman Wells adjacent to proposed Mackenzie Hwy (KP 993- 995)	sand & gravel -variable gradation -fine grained -some silt	2-3	2.50	R) B) C) D) E) F)	0.250 0.060 0.030 0.160 0.000 0.000	alluvial alluvial fans			
7.077	96-E(1)	96-E-B2(1) 278, 279(7) 273(7) AREA I-BR(31) 111, 112(49) 104, 105, 110(49)	ZONE 09 622000E 7233000N	between Francis Creek & Prohibition Creek	sand -well graded gravel -well to poorly graded	1-2	1.50	R) B) C) D) E) F)	3.000 1.500 0.900 0.600 0.000 0.000	glaciolacustrine beach ridge			
7.078	96-E(1)	275(7) AREA I-At(31)	ZONE 9 625000E 7234000N	27 km SE of Norman Wells, 23 km NE of proposed Hwy (KP 993)	sand & gravel -fine to medium grained -poorly graded -some silt	2-3	4.60	R) B) C) D) E) F)	1.500 0.600 0.300 0.600 0.000 0.000	alluvial alluvial fan & terrace			
7.079	96-E(1)	274-X(7) AREA I-BR(31)	ZONE 9 626000E 7233000N	27 km SE of Norman Wells parallel to proposed Mackenzie Hwy	sand -fine grained -poorly graded -some silt -volumes not determined	4	0.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine beach ridge			
7.080	96-E(1)	272-X(7)	ZONE 9 624000E 7228000N	27 km E of Norman Wells, N bank of Mackenzie River	silt -some sand & clay -stratified -volumes not determined	NG	0.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace			
7.081	96-E(1)	269(7) IPP-33kmp(23) 101(49)	ZONE 9 627000E 7230000N	29 km SE of Norman Wells, E bank of Mackenzie R., active stream channel of Prohibition Creek	sand & gravel -some silt -variable grading -volumes not determined	3-4	0.00	R) B) C) D) E) F)	0.500 0.000 0.000 0.500 0.000 0.000	alluvial bars & terraces			
7.082	96-E(1)	270(7)	ZONE 9 628000E 7230000N	31 km E of Norman Wells	gravel -medium grained -well graded -sandy	2	0.00	R) B) C) D) E) F)	0.150 0.045 0.030 0.075 0.000 0.000	glacioluvial outwash plain			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low to medium	peat & topsoil	seismic cutlines & access trails from CNT line	deposits adjacent to Francis Creek have buffer zone between it & development	11/ 8.20	0/ 0.00	A) B) C) D)	11 9 1 0	fair-good good high	7.073	
good unfrozen	organic silt & topsoil 0-0.2	existing winter road	deposits are in active stream channel of Canyon Creek -was excavated	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor favourable medium	7.074	
fair medium	topsoil & silt 0-1.8	existing all-weather road	active borrow pit for Norman Wells	6/ 5.00	2/ 1.70	A) B) C) D)	3 3 1 0	fair-poor good high	7.075	
fair low	topsoil & org. silt, 0-0.5	proposed Mackenzie Hwy right of way	buffer zones near stream channels	5/ 6.10	0/ 0.00	A) B) C) D)	0 0 0 0	poor favourable medium	7.076	
good low to medium	-	CNT line -barge	buffer zone between creeks and borrow areas, available granular material deposits are thin - volumes minimal	1/ 10.10	9/ 1.80	A) B) C) D)	7 9 1 3	good good high	7.077	
good low	topsoil & org. silt, 0-0.5	seismic cutline & access trails from CNT line	-	4/ 8.50	0/ 0.00	A) B) C) D)	4 4 1 0	fair good high	7.078	
fair medium	organic topsoil 0-0.3	seismic cutlines from CNT line	very poor quality of sand minimal volume	1/ 3.70	0/ 0.00	A) B) C) D)	0 0 0 0	poor unsuitable low	7.079	
good high	peat & topsoil 0-0.3	seismic cutlines & access trail from CNT line	material of granular quality not established	3/ 4.30	0/ 0.00	A) B) C) D)	2 0 0 0	poor unsuitable low	7.080	
good	organic silt 0-0.3	existing winter road	deposits are in active stream channel -was excavated	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor poor to favourable low to medium	7.081	
fair to good low to medium	org. topsoil and short access trail from peat, 0-0.2	CNT line	buffer zone next to creek	2/ 6.10	1/ 2.00	A) B) C) D)	0 0 0 0	poor good high	7.082	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
7.083	96-E(1)	271(?) P-271(3) P-271(22) P-271(21) AREA I-R(30)	ZONE 9 634000E 723000N	E of Prohibition Creek SW toe of Norman Range	Middle Devonian limestone -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock ridges			
7.084	96-E(1)	268-X(7)	ZONE 9 632000E 722700N	35 km E of Norman Wells on proposed Hwy (KP 980-983)	gravel -poorly graded -medium grained -some sand -volumes not determined	2	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine beach strand lines			
7.085	96-E(1)	263(7)	ZONE 9 639000E 722800N	upstream section of Vermilion Creek -9.7 km NE of Mackenzie River	sand & gravel -variable grading -silt & till pockets -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker/kame terrain			
7.086	96-E(1)	267-X(7)	ZONE 9 636000E 722600N	0.8 km W of Vermilion Creek, 2.4km N of proposed Hwy	silt & sand -fine grained -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker ridge			
7.087	96-E(1)	264(7) AREA I-R(30)	ZONE 9 639000E 722500N	SE of Vermilion Creek 9.7 km E of Mackenzie River	Middle Devonian shale -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock ridge			
7.088	96-E(1)	266-X(7) P-266(3) P-266-X(22) P-266(21)	ZONE 9 634000E 722200N	40 km E of Norman Wells, active channel of Vermilion Creek	gravel -poorly sorted -silty -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.004	alluvial alluvial terraces & fans			
7.089	96-E(1)	265(7) 91, 92, 93, 94(49)	ZONE 9 637000E 722200N	42 km E of Norman Wells from Vermilion Creek to Nota Creek	shale & siltstone beds -inclusion of sandstone -top weathered -volumes unlimited	5	0.00	A) 1.300 B) 0.000 C) 0.000 D) 1.300 E) 0.000 F) 0.000	bedrock bedrock ridge			
7.090	96-F(4)	261(7) 86, 87, 88(49) 147(49)	ZONE 10 360000E 721500N	48 km E of Norman Wells on proposed Hwy (KP 964-969), S of Jungle Ridge Creek	Devonian limestone -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock			
7.091	96F(4)	262(7) P-262(3) P-262(22) P-262(21)	ZONE 10 365000E 721800N	western toe of Norman Range & E of Nota Creek	sand -silty -some gravel -irregular bedded -silt & till lenses -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker ridges & kame field			
7.092	96-F(4)	FN-17X(8)	ZONE 10 378000E 721300N	14.5 km N of Fort Norman, W of Brackett River	silt -some sand -wet glacial till -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial outwash plain			

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
well	glacial till	existing cutlines from CNT line	access difficult to areas N of Vermilion Ridge due to deep gullies	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable to good medium to high	7.083	
fair to poor low to medium	peat & topsoil 0-0.3	CNT line & proposed Mackenzie Hwy	minimal quantities available	5/ 4.60	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	7.084	
well	-	extending existing seismic cutlines parallel to the downstream section of Vermilion Creek	difficult access, must cross deeply incised stream channels	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	7.085	
well low	topsoil & inorg old seismic silt, 0-0.2	from CNT line	materials of granular quality not established, may be used for very marginal fill	1/ 4.00	0/ 0.00	A) B) C) D)	1 0 0 0	poor	poor low	7.086	
well	glacial till	existing seismic cut lines	quarrying operation	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable medium	7.087	
fair medium to high	topsoil 0-0.2 m	existing seismic cut lines from CNT line	deposits in the active stream channel -was excavated	3/ 4.30	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor to unsuitable* low	7.088	
well none	peat & topsoil 0-0.2 m	existing seismic cut lines from CNT line	top 0.9-1.2 mm is weathered and very friable, buffer zone next to creeks	6/ 6.10	0/ 0.00	A) B) C) D)	0 0 0 0	fair	poor low	7.089	
well	glacial till 0-3.0	existing CNT line & proposed Mackenzie Hwy	quarry operation	4/ 6.10	0/ 0.00	A) B) C) D)	0 0 0 0	fair	good high	7.090	
fair	-	existing seismic cutlines	large degree of surficial area to be cleared relative to the volume of material available	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to unsuitable low	7.091	
very poor medium to high	topsoil 0-0.3	no existing access to the site	materials of granular quality not established	2/ 3.70	1/ 1.10	A) B) C) D)	4 2 0 1	fair-poor	unsuitable low	7.092	

SITE IDENTIFICATION						SOURCE DESCRIPTION							
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM				
7.093	96-F(3)	FN-5X(8)	ZONE 10 383000E 7213000N	16 km N of Fort Norman, W of Brackett River	sand -very fine -some silt	4	6.00	A) B) C) D) E) F)	0.010 0.006 0.003 0.001 0.000 0.000	aeolian sand dunes			
7.094	96-F(5)	AREA III-GL(34)	ZONE 10 364000E 7253000N	N of Kelly Lake	sand & gravel	2-3	8.00	A) B) C) D) E) F)	14.000 0.000 0.000 14.000 0.000 0.000	glaciofluvial glaciofluvial hummocks			
7.095	96-F(5)	AREA IV-E(34)	ZONE 10 371000E 7264000N	W of Mahony Lake	gravel	2-3	3.00	A) B) C) D) E) F)	0.014 0.000 0.000 0.014 0.000 0.000	glaciofluvial eskers			
7.096	96-F(6)	AREA V-E(34)	ZONE 10 389000E 7253000N	SW of Mahony Lake	gravel	2-3	3.00	A) B) C) D) E) F)	0.055 0.000 0.000 0.055 0.000 0.000	glaciofluvial eskers			
7.097	96-F(6)	AREA VI-E(34)	ZONE 10 405000E 7252000N	SE of Mahony Lake	gravel	2-3	3.00	A) B) C) D) E) F)	0.107 0.000 0.000 0.107 0.000 0.000	glaciofluvial eskers			
7.098	96-F(6)	AREA VI-GL(34)	ZONE 10 400000E 7251000N	S of Mahony Lake	sand & gravel	2-3	8.00	A) B) C) D) E) F)	14.000 0.000 14.000 0.000 0.000 0.000	glaciofluvial glaciofluvial hummocks			
7.099	96-F(6)	AREA VI-GL(34)	ZONE 10 400000E 7245000N	S of Mahony Lake	sand & gravel	2-3	8.00	A) B) C) D) E) F)	55.900 0.000 55.900 0.000 0.000 0.000	glaciofluvial glaciofluvial hummocks			
7.100	96-F(3)	Map 96-F: E(34)	ZONE 10 405000E 7227000N	E of Brackett Lake N of Great Bear River	gravel -volumes not determined	2-3	3.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial eskers			
7.101	96-F(2)	AREA II-Gt(34)	ZONE 10 422000E 7213000N	S bank and N bank of Great Bear River at St Charles Rapids (Bennett Field Deposit)	sand & gravel	2-3	8.00	A) B) C) D) E) F)	42.500 0.000 0.000 42.500 0.000 0.000	glaciofluvial glaciofluvial terrace			
7.102	96-F(2)	AREA II-GL(34)	ZONE 10 429000E 7217000N	N of Great Bear River W of Wolverine Creek	sand & gravel	2-3	8.00	A) B) C) D) E) F)	29.200 0.000 0.000 29.200 0.000 0.000	glaciofluvial glaciofluvial hummocks			

Source Description				Tests and Assessments							
DRAINAGE/ ICE CONTENT	OVERBURDEN TYPE AND THICKNESS (m)	ACCESS	DEVELOPMENT CONSTRAINTS	NO. OF BOREHOLES/ TESTPITS/ MAX DEPTH (m)	NO. OF TESTPITS/ MAX DEPTH (m)	LABORATORY TESTING	DATA RELIABILITY	OVERALL ASSESSMENT/ STUDY PRIORITY	BORROW SOURCE NUMBER		
good unfrozen	topsoil 0-0.2	no access	remote location, poor quality material, very limited quantity	0/ 0.00	1/ 1.10	A) B) C) D)	1 1 0 0	poor	unsuitable low	7.093	
good low	-	remote location E of Norman Range, access by snow road & Great Bear River S & W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	7.094	
good low	-	remote location E of Norman Range, access by snow road & Great Bear River S & W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.095	
good low	-	remote location E of Norman Range, access by snow road & Great Bear River S & W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.096	
good low	-	remote location E of Norman Range, access by snow road & Great Bear River S & E to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.097	
fair to good low	-	remote location E of Norman Range, access by snow road & Great Bear River S & E to Mackenzie Valley	-	0/ 0.00	2/ 0.00	A) B) C) D)	2 2 0 0	poor	good high	7.098	
fair to good low	-	remote location E of Norman Range, access by snow road & Great Bear River S & E to Mackenzie Valley	-	0/ 0.00	1/ 0.00	A) B) C) D)	1 1 0 0	poor	good high	7.099	
good low	-	remote location E of Norman Range, access by snow road & Great Bear River S & E to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.100	
fair to good low	-	Great Bear River to Mackenzie River by barge 45 km	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.101	
fair to good low	-	access by snow road 3 km to Great Bear River, barge down Great Bear River 45 km to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	7.102	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/LANDFORM			
7.103	96-F(2)	AREA II-E(34)	ZONE 10 428000E 722100N	N of Great Bear River W of Wolverine Creek	gravel	2-3	3.00	A) B) C) D) E) F)	0.055 0.000 0.000 0.055 0.000 0.000	glaciofluvial eskers		
7.104	96-F(1)	AREA II-GL(34)	ZONE 10 437000E 722300N	N of Great Bear River NE of Wolverine Creek	sand & gravel	3	8.00	A) B) C) D) E) F)	10.500 0.000 0.000 10.500 0.000 0.000	glaciofluvial glaciofluvial hummocks & morainal plain		
7.105	96-C(13)	260-X(7)	ZONE 10 362000E 720600N	51 km E of Norman Wells 8 km SW of proposed Mackenzie Hwy	sand -fine grained -poorly graded -trace silt	4	0.00	A) B) C) D) E) F)	0.191 0.038 0.038 0.115 0.000 0.000	aeolian sand dune		
7.106	96-C(13)	259X(7)	ZONE 10 362000E 720400N	51 km E of Norman Wells SW of proposed Mackenzie Hwy	silt, fine grained -thin layers of sand & gravel -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace		
7.107	96-C(13)	FN-27(8) AREA I-At(33)	ZONE 10 365000E 720400N	14.4 km W of Fort Norman, N bank of Mackenzie River at Bluefish Creek	sand -silty -small pockets of gravel	4	3.00	A) B) C) D) E) F)	0.530 0.105 0.105 0.320 0.000 0.000	alluvial alluvial terrace		
7.108	96-C(13)	FN-29(8) 74,75(49)	ZONE 10 369000E 720900N	13.7 km N of Fort Norman, western flank of Bear Rock	sands & gravel -well graded -fine to medium grained	2	3.00	A) B) C) D) E) F)	0.230 0.090 0.090 0.050 0.000 0.000	glaciofluvial outwash deposits		
7.109	96-C(13)	FN-25(8) MAPS(40) AREA I-R(33) 73(49)	ZONE 10 371000E 721000N	16 km NW of Fort Norman, N of Bear Rock	Devonian to Ordovician dolomitic limestone -weathered & fractured -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock		
7.110	96-C(13)	FN-26(8)	ZONE 10 368000E 720700N	17.7km NW of Fort Norman, W flank of Bear Rock	sand & gravel -fine to medium grained -some silt	2	6.00	A) B) C) D) E) F)	1.500 0.500 0.300 0.700 0.000 0.000	glaciofluvial esker ridge		
7.111	96-C(13)	FN-28X(8)	ZONE 10 369000E 720600N	17.7 km NW of Fort Norman, W of Bear Rock	silt -some clay -trace pebbles -till-like -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial outwash deposits		
7.112	96-C(13)	FN-1(8) IPP-68kmp(23) AREA I-R(33) 69,70(49)	ZONE 10 372000E 720500N	4.8 km N of Fort Norman, southern edge of Norman Range at Bear Rock	limestone -Devonian & Ordovician -dolomitic -weathered & fractured -volumes unlimited	5	150.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.010	bedrock bedrock		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low	-	access by snow road 6 km to Great Bear River, barge down Great Bear River 45 km to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.103
fair to good low	-	access by snow road 11 km to Great Bear River, barge down Great Bear River 55 km to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	7.104
good low	topsoil 0-0.3	seismic cutlines & access trail from CNT line	poor quality of available materials, difficult access to site across thermally sensitive terrain	1/ 4.30	0/ 0.00	A) B) C) D)	1 1 0 1	poor	poor low	7.105
good low to medium	peat & topsoil 0-0.5	seismic cutlines & access trail from CNT line	exploitable quantity of granular quality material not established	3/ 4.60	0/ 0.00	A) B) C) D)	2 2 0 1	poor	poor to unsuitable low	7.106
fair medium	topsoil & silt 0-1.8	-	low quality, buffer zone nears river & creek	2/ 6.40	0/ 0.00	A) B) C) D)	1 1 0 0	poor	poor to unsuitable low	7.107
fair low	topsoil & silt 0-0.5	existing winter road	must cross Great Bear River to get to Fort Norman	6/ 6.00	0/ 0.00	A) B) C) D)	3 3 1 0	fair	good high	7.108
good very low	colluvium 0-0.6	winter road	quarrying operation, major crossing of Great Bear River	3/ 6.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good to excellent high	7.109
good low to medium	topsoil & silt 0-0.2	winter road & seismic cut line	long haul distance to Fort Norman	3/ 6.70	0/ 0.00	A) B) C) D)	4 4 0 0	fair-poor	favourable medium	7.110
good medium	topsoil & peat 0-0.3	existing winter road & seismic cutline	materials of granular quality not established	5/ 4.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor to unsuitable low	7.111
well drained very low	colluvium 0-0.4	major river crossing of Great Bear River, winter road	quarrying operation (has been active), southern end in migration & staging route of waterfowl, must cross Great Bear River to gain access	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	fair	good to excellent* high	7.112

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/ LANDFORM		
7.113	96-C(13)	FN-22(8) IPP-73kmp(23)	ZONE 10 375000E 7207000N	11 km NW of Fort Norman at base of Bear Rock*	sand -some gravel -some silt	3	1.50	A) B) C) D) E) F)	0.075 0.015 0.015 0.045 0.000 0.000	glaciofluvial outwash remnant	
7.114	96-C(13)	FN-3X(8)	ZONE 10 374000E 7204000N	4 km W of Fort Norman, SE of Bear Rock	limestone fragments -weathered & finely fragmented -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial fan	
7.115	96-C(14)	FN-15X(8) 54,55,56,57(49)	ZONE 10 376000E 7203000N	4 km NW of Fort Norman, N of Great Bear River	sandy silt & glacial till -volumes not determined	NG	0.00	A) B) C) D) E) F)	1.000 0.000 0.000 1.000 0.000 0.000	glaciofluvial hummocks	
7.116	96-C(13)	FN-31(8) 58,59,60(49)	ZONE 10 376000E 7203000N	4 km W of Fort Norman, N of Mackenzie River	sand -some silt -gravel pockets	3	1.00	A) B) C) D) E) F)	0.857 0.017 0.017 0.823 0.000 0.000	alluvial alluvial fan	
7.117	96-C(13)	FN-2X(8)	ZONE 10 374000E 7202000N	4 km W of Fort Norman, SE slopes of Bear Rock	limestone fragments & blocks -volumes not determined	3	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	colluvial colluvial fragments and blocks	
7.118	96-C(13)	FN-6X(8) 52,53(49)	ZONE 10 377000E 7202000N	0.8 km W of Fort Norman, E of Great Bear River	silty sand -very fine grained -gravel pockets -volumes not determined	4	0.00	A) B) C) D) E) F)	0.600 0.000 0.000 0.600 0.000 0.000	alluvial alluvial terrace	
7.119	96-C(13)	FN-4(8) MAP5(40)	ZONE 10 374000E 7201000N	4 km W of Fort Norman, SE of Bear Rock	limestone -fragments -angular to sub angular -silty sand matrix	3	0.00	A) B) C) D) E) F)	0.750 0.300 0.300 0.150 0.000 0.000	alluvial alluvial fan	
7.120	96-C	FN-7X(8)	ZONE 10 376000E 7200000N	2 km W of Fort Norman, North bank of Mackenzie River	gravel -medium grained -very sandy & silty	3	1.00	A) B) C) D) E) F)	0.019 0.015 0.004 0.000 0.000 0.000	alluvial alluvial cone or fan	
7.121	96-E(4)	AREA IV Fp(30)	ZONE 9 562000E 7224000N	active channel of Imperial River at Link Bend	gravel, sand & silt	2-3	5.00	A) B) C) D) E) F)	19.000 0.000 0.000 19.000 0.000 0.000	fluvial fluvial plain	
7.122	96-E(4)	AREA IV Gfc(30)	ZONE 9 566000E 7223000N	E of Imperial River NW of Gafe River	sand & gravel	2-3	15.00	A) B) C) D) E) F)	251.900 0.000 0.000 251.900 0.000 0.000	glaciofluvial glaciofluvial channel complex	

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReholes/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
very poor medium	organic topsoil 0-0.2	winter road proposed Mackenzie Hwy right of way	limited seasonal access low quality	0/ 0.00	2/ 1.30	A) B) C) D)	2 2 1 0	fair	poor low	7.113	
good low	none	no existing access	no existing access to site, must cross Great Bear River & one other stream, groundwater table near surface	0/ 0.00	1/ 0.50	A) B) C) D)	1 1 1 0	poor	poor to favourable low to medium	7.114	
poor unfrozen	topsoil 0-0.2	winter road	no appreciable amounts of granular material	0/ 0.00	2/ 1.50	A) B) C) D)	0 0 0 0	poor	poor low	7.115	
poor low	topsoil & silt 0-0.6	proposed Mackenzie Hwy	must cross Great Bear River to get to Fort Norman	4/ 7.30	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	7.116	
good low	none	no existing access	difficult access, must cross Great Bear River	0/ 0.00	2/ 1.10	A) B) C) D)	0 1 1 0	fair	favourable medium	7.117	
good low	topsoil	no direct access	no existing access to site, must cross Great Bear River, gravel in isolated pockets	2/ 11.00	9/ 1.70	A) B) C) D)	4 4 0 0	fair	poor low	7.118	
good unfrozen	organic topsoil 0-0.2	no existing overland access, direct access by water	access difficult only suitable for general fill -Fort Norman Community Pit	0/ 0.00	2/ 1.40	A) B) C) D)	1 2 1 0	fair	poor low	7.119	
poor unfrozen	topsoil & silty sand, 0.5-1.0	seismic cutline, barge	deposits in active stream channel, deep overburden, limited quantities, difficult access	0/ 0.00	10/ 1.70	A) B) C) D)	9 7 1 0	fair	poor to unsuitable*	7.120	
fair to good low to moderate	organic silt & peat	access by snow road 26 km to W bank of Mackenzie River	deposits located in active stream channel of Imperial River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	7.121	
fair to good low	-	access by snow road 24 km E to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.122	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
7.123	96-E(3)	AREA IV Fp(30)	ZONE 9 575000E 7216000N	active channels of Carcajou River, Dodo Creek & Katherine Creek	gravel, sand & silt	2-3	10.00	R) 474.800 B) 0.000 C) 0.000 D) 474.800 E) 0.000 F) 0.000	fluvial plains, fans & terraces			
7.124	96-E(3)	AREA IV Gfc(30)	ZONE 9 578000E 7213000N	between Katherine Creek & Dodo Creek S of Carcajou River	sand & gravel	2-3	15.00	R) 251.900 B) 0.000 C) 0.000 D) 251.900 E) 0.000 F) 0.000	glaciofluvial channel complex			
7.125	96-E(3)	AREA IV Gfc(30)	ZONE 9 584000E 7210000N	S of Carcajou River E of Dodo Creek	sand & gravel	2-3	15.00	R) 251.900 B) 0.000 C) 0.000 D) 251.900 E) 0.000 F) 0.000	glaciofluvial channel complex			
7.126	96-E(3)	GM-118(3)	ZONE 10 591000E 7223000N	W of Loon Creek	gravel & sand	2-3	3.00	R) 1.900 B) 0.000 C) 0.000 D) 1.900 E) 0.000 F) 0.000	glaciofluvial terrace			
7.127	96-E(3)	AREA VI Gfc(30)	ZONE 9 591000E 7229000N	W of Loon Creek	sand & gravel	2-3	15.00	R) 9.300 B) 0.000 C) 0.000 D) 9.300 E) 0.000 F) 0.000	glaciofluvial glaciofluvial deposits			
7.128	96-E(2)	NW-6(10) AREA VII-E(30)	ZONE 9 596000E 7233000N	16 km SW of Norman Wells S of Mackenzie River	sand -fine grained -silty	4	6.00	R) 1.100 B) 0.000 C) 0.300 D) 0.800 E) 0.000 F) 0.000	aeolian sand dunes			
7.129	96-E(3)	AREA VI(30)	ZONE 9 595000E 7227000N	W of Loon Creek	gravel -some sand	2-3	6.00	R) 0.061 B) 0.000 C) 0.000 D) 0.061 E) 0.000 F) 0.000	glaciofluvial esker			
7.130	96-E(3)	AREA VI Gfc(30)	ZONE 9 596000E 7228000N	W bank of Loon Creek	sand & gravel	2-3	15.00	R) 9.300 B) 0.000 C) 0.000 D) 9.300 E) 0.000 F) 0.000	glaciofluvial glaciofluvial deposits			
7.131	96-E(2)	NW-17X(10) AREA VII-E(30)	ZONE 9 603000E 7229000N	11.3 km S of Norman Wells near Three Day Lake between Loon Creek and Stewart Creek	sand -silty -fine grained	4	3.00	R) 2.300 B) 0.000 C) 0.500 D) 1.800 E) 0.000 F) 0.000	glaciolacustrine beach ridge			
7.132	96-E(2)	AREA VII E(30)	ZONE 9 614000E 7226000N	E of Three Day Lake S of Mackenzie River	sand -fine grained	4	5.00	R) 16.000 B) 0.000 C) 0.000 D) 16.000 E) 0.000 F) 0.000	aeolian sand dunes			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoREHOLES/ MAX DEPTH (m)	No. of TESTPITS/ MAX DEPTH (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low to moderate	organic silt & peat	access by snow road 12 km to W bank of Mackenzie River	deposits located in active stream channels	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	good to excellent* high	7.123	
good low	-	access by snow road 28 km E to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	good to excellent high	7.124	
good low	-	access by snow road 32 km E to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	good to excellent high	7.125	
fair to good low	- 0-0.2 m	W of Mackenzie River, access by snow road 18km E to Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	favourable medium	7.126	
fair to good low to moderate	-	access by snow road 10 km to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	good to excellent high	7.127	
good unfrozen	topsoil 0-0.2 m	existing winter road	sensitive terrain low quality material	0/ 0.00	1/ 2.10	A) 0 B) 0 C) 0 D) 0	1 poor	poor low	7.128	
good low	-	access by snow road 14 km to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	good to excellent high	7.129	
fair to good low	-	access by snow road 12 km to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	good to excellent high	7.130	
good -	topsoil 0-0.3	existing winter roads and seismic cutlines, remote	difficult access, must cross creeks, similar material in other locations with better access	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	poor to unsuitable low	7.131	
fair low to moderate	-	access by snow road 3 km E to Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0 none	favourable to poor medium to low	7.132	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/LANDFORM		
7.133	96-E(2)	AREA V(30)	ZONE 9 514000E 721400N	S of Gus Creek	sand & gravel	2-3	15.00	A) B) C) D) E) F)	43.500 0.000 0.000 43.500 0.000 0.000	glaciofluvial glaciofluvial channel deposits	
7.134	96-D(14)	AREA X-F(35)	ZONE 9 574000E 720600N	active channel of Katherine Creek	gravel & sand	1-3	10.00	A) B) C) D) E) F)	7.500 0.000 0.000 7.500 0.000 0.000	fluvial fluvial terrace deposits	
7.135	96-D(14)	AREA XI-GFc(35)	ZONE 9 583000E 720800N	W of Carcajou River E of Dodo Creek	sand	3	10.50	A) B) C) D) E) F)	42.700 0.000 0.000 42.700 0.000 0.000	glaciofluvial glaciofluvial channel complex	
7.136	96-D(14)	AREA X-Fa(35)	ZONE 9 587000E 720800N	active channel of Carcajou River	gravel & sand	1-3	3.00	A) B) C) D) E) F)	20.200 0.000 0.000 20.200 0.000 0.000	fluvial fluvial fan	
7.137	96-D(14)	AREA XII-GFc(35)	ZONE 9 588000E 720700N	E of Carcajou River	sand	3	10.50	A) B) C) D) E) F)	18.200 0.000 0.000 18.200 0.000 0.000	glaciofluvial glaciofluvial channel complex	
7.138	96-D(15)	AREA XIII-GFc (35)	ZONE 9 598000E 720900N	S of Twenty Mile Lake	sand	3	10.50	A) B) C) D) E) F)	4.400 0.000 0.000 4.400 0.000 0.000	glaciofluvial glaciofluvial channel complex	
7.139	96-D(14)	AREA X-F(35)	ZONE 9 582000E 720700N	active channel of Dodo Creek, W of Carcajou River	gravel & sand	1-3	10.00	A) B) C) D) E) F)	25.000 0.000 0.000 25.000 0.000 0.000	fluvial fluvial floodplain	
7.140	96-D(14)	AREA X-F(35)	ZONE 9 598000E 719000N	active channel of Carcajou River	gravel & sand -some silt	1-3	10.00	A) B) C) D) E) F)	176.500 0.000 0.000 176.500 0.000 0.000	fluvial fluvial floodplains & fans	
7.141	96-D(10)	AREA IX-GFc(35)	ZONE 9 599000E 717400N	S of Little Keele River N of Jacee Creek	gravel & sand	1-3	15.00	A) B) C) D) E) F)	71.700 0.000 0.000 71.700 0.000 0.000	glaciofluvial glaciofluvial channelled deposits	
7.142	96-D(10)	AREA IX-GF(35)	ZONE 9 603000E 717400N	S of Little Keele River W of Rouge Mountain River	sand & gravel	1-3	15.00	A) B) C) D) E) F)	37.300 0.000 0.000 37.300 0.000 0.000	glaciofluvial glaciofluvial terrace deposits	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoREHOLES/ MAX DEPTH (m)	No. of TESTPITS/ MAX DEPTH (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	access by snow road 16 km to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.133
fair to good low	-	access by snow road 35 km NE to W bank of Mackenzie River	active channel of Catherine Creek	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	7.134
fair to good low	-	access by snow road 35 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	7.135
fair to good low	-	access by snow road 35 km NE to W bank of Mackenzie River	active channel of Carcajou River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	7.136
fair to good low to moderate	-	access by snow road 35 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	7.137
fair to good low to moderate	-	access by snow road 35 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	7.138
fair to good low	-	access by snow road 35 km NE to W bank of Mackenzie River	active channel of Dodo Creek	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	7.139
fair to good low	-	access by snow road 40 km NE to W bank of Mackenzie River	active channel of Carcajou River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	7.140
fair to good low	-	access by snow road 50 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent	7.141
fair to good low	-	access by snow road 50 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.142

SITE IDENTIFICATION					SOURCE DESCRIPTION					
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM	
7.143	96-D(10)	AREA VIII-GF (35)	ZONE 9 604000E 7164000N	S & W of Rouge Mountain River	gravel & sand	2-3	15.00	A) 250.100 B) 0.000 C) 0.000 D) 250.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial deposit	
7.144	96-D(15)	AREA I-Gfc(35)	ZONE 9 613000E 7204000N	S bank of Slater River	gravel & sand	2-3	10.50	A) 10.000 B) 0.000 C) 0.000 D) 10.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposit	
7.145	96-D(16)	AREA I-E(35)	ZONE 9 619000E 7202000N	S of Slater River	sand & gravel	3	6.00	A) 0.021 B) 0.000 C) 0.000 D) 0.021 E) 0.000 F) 0.000	glaciofluvial eskers	
7.146	96-D(16)	AREA II-E(35)	ZONE 9 623000E 7192000N	N of Little Bear River S of Slater River	sand & gravel	3	6.00	A) 0.043 B) 0.000 C) 0.000 D) 0.043 E) 0.000 F) 0.000	glaciofluvial eskers	
7.147	96-D(9)	AREA II-F(35)	ZONE 9 625000E 7180000N	active channel of Little Bear River	gravel, sand & silt	1-3	6.00	A) 85.100 B) 0.000 C) 0.000 D) 85.100 E) 0.000 F) 0.000	fluvial fluvial terraces & plains	
7.148	96-D(9)	AREA III-F(35)	ZONE 9 634000E 7164000N	active channels of Little Bear River & Ration Creek	gravel	1-3	10.50	A) 355.900 B) 0.000 C) 0.000 D) 355.900 E) 0.000 F) 0.000	fluvial fluvial terraces & fans	
7.149	96-D(9)	AREA IV-Gf(35)	ZONE 9 640000E 7160000N	active channel S of Ration Creek	gravel & sand	2-3	6.00	A) 37.300 B) 0.000 C) 0.000 D) 37.300 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terraces	
7.150	96-D(7)	AREA VII-F(35)	ZONE 9 613000E 7150000N	active channel of Little Bear River	gravel, sand & silt	1-3	6.00	A) 15.700 B) 0.000 C) 0.000 D) 15.700 E) 0.000 F) 0.000	fluvial & glacio- fluvial - fluvial & glaciofluvial deposits	
7.151	96-D(7)	AREA VI-F(35)	ZONE 9 614000E 7142000N	active channel of Inlin Brook	gravel & sand	1-3	2.50	A) 44.300 B) 0.000 C) 0.000 D) 44.300 E) 0.000 F) 0.000	fluvial fluvial plains & fans	
7.152	96-D(8)	AREA VI-F(35)	ZONE 9 633000E 7132000N	active channel of Keele River	gravel & sand	1-3	2.50	A) 59.100 B) 0.000 C) 0.000 D) 59.100 E) 0.000 F) 0.000	fluvial fluvial plains & fans	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low	-	access by snow road 48 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	7.143
fair to good low	-	access by snow road 18 km to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.144
good low	-	access by snow road 15 km to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.145
good low	-	access by snow road 18 km to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	7.146
Fair to good low	silt & peat	access by snow road 25 km NE to W bank of Mackenzie River	active channel of Little Bear River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	7.147
Fair to good low	-	access by snow road 35 km NE to W bank of Mackenzie River	active channel of Little Bear River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	7.148
Fair to good low	-	access by snow road 35 km NE to W bank of Mackenzie River	active channel of Ration Creek	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	7.149
Fair to good low	-	access by snow road 53 km NE to W bank of Mackenzie River	active channel of Little Bear River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	7.150
Fair to good low	-	access by snow road 68 km NE to W bank of Mackenzie River	active channel of Inlin Brook	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	7.151
Fair to good low	-	access by snow road 64 km NE to W bank of Mackenzie River	active channel of Keele River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	7.152

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
7.153	96-C(13)	FN-20(8)	ZONE 10 362000E 7202000N	16.9 km W of Fort Norman at confluence of Mackenzie & Little Bear Rivers	silts & sands -stratified -pockets of gravel -volumes not determined	4	4.60	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.023	alluvial alluvial terrace	
7.154	96-C(13)	FN-21(8) AREA II-Af(33)	ZONE 10 364000E 7200000N	16 km SW of Fort Norman on Little Bear River	gravel -coarse to medium grained -well graded -clean -volumes not determined	1-2	1.50	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace and plain deposits	
7.155	96-C(13)	96-C-B1(1) FN-19(8) Map 5 (40) Area II-GF (33)	ZONE 10 365000E 7195000N	12.9km SW of Fort Norman near Little Bear River	gravel (areas A & C) -fine to coarse -poorly to well graded -sandy	2	4.50	A) B) C) D) E) F)	222.000 67.000 45.000 110.000 0.000 0.000	glaciofluvial outwash plain	
7.156	96-E(6)	AREA I-Af(31) 110B(38) 110B(41)	ZONE 9 592000E 7248000N	along Mackenzie Hwy NW of Norman Wells	gravel, sand & silt	2-3	4.20	A) B) C) D) E) F)	0.825 0.825 0.000 0.000 0.000 0.000	alluvial alluvial fans	
7.157	96-E(6)	103(38) 103(41)	ZONE 9 586000E 7248000N	along Mackenzie Hwy at (KP 640)	sand -medium grained -poorly graded -trace silt -volumes not determined	4	3.50	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000		
7.158	96-E(7)	113(38) 113(41)	ZONE 9 595000E 7244000N	S of Mackenzie Hwy N of Mackenzie River	sand & gravel	1	5.50	A) B) C) D) E) F)	0.150 0.150 0.000 0.000 0.000 0.000		
7.159	96-E(7)	B.P.154(46) 127,128(49)	ZONE 09 611000E 7240000N	S of Mackenzie Highway (KP 1000)	sand, silt, clay, gravel	NG & G	0.00	A) B) C) D) E) F)	0.150 0.000 0.000 0.150 0.000 0.000	glaciolacustrine/morainal beach ridge over till	
7.160	96-E(1)	B.P.153(46) 106,107(49) 108(49)	ZONE 09 622000E 7232000N	N of Mackenzie Highway (KP 985)	sand and silt and clay	NG	0.00	A) B) C) D) E) F)	0.200 0.000 0.000 0.200 0.000 0.000	glaciolacustrine/morainal beach deposit over moraine	
7.161	96-E(1)	B.P.151,152(46) 95,96,97(49)	ZONE 09 632000E 7224000N	along Mackenzie Highway (KP 972)	sand and silt and clay	NG	0.00	A) B) C) D) E) F)	1.100 0.000 0.000 1.100 0.000 0.000	glaciolacustrine/morainal beach deposit over moraine	
7.162	96-E(1)	B.P.148,149(46) B.P.150(46) 89,90(49)	ZONE 9 638000E 7218000N	S of Mackenzie Highway (KP 962)	Silt and clay (till)	NG	0.00	A) B) C) D) E) F)	1.000 0.000 0.000 1.000 0.000 0.000	moraine morainal plain	

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
Fair	topsoil 0-0.3	Mackenzie River, existing seismic cutline	long haul, poor quality material, better quality material closer to Fort Norman existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	1 1 1 0	poor	poor to unsuitable low	7.153	
-	none	Mackenzie River & Little Bear River	deposits are in active floodplain of Little Bear River, access difficult, long haul by water transportation	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good* medium to high	7.154	
well drained low to medium	silty sand 0.6-3.0	undeveloped -seismic cutlines -barge	buffer zone next to creeks due to siltation and slope stability problems, major source for Fort Norman, Little Bear River -potential spawning gravels	5/ 8.50	5/ 2.10	A) B) C) D)	8 14 4 1	good	good to excellent* high	7.155	
good low	-	access by proposed Mackenzie Hwy which crosses deposit	-	1/ 5.50	0/ 0.00	A) B) C) D)	1 1 0 0	poor	favourable medium	7.156	
fair low to medium	peat 0-0.5	Mackenzie Hwy	-	1/ 5.50	0/ 0.00	A) B) C) D)	4 1 0 0	poor	unsuitable to poor low	7.157	
excellent low	clay 0-2.0	-	-	2/ 8.50	0/ 0.00	A) B) C) D)	9 1 0 0	poor	high high	7.158	
fair low	-	proposed Mackenzie Highway crosses deposit	-	12/ 9.00	0/ 0.00	A) B) C) D)	50 9 0 0	fair	favourable medium	7.159	
fair low	-	proposed Mackenzie Highway crosses deposit	-	4/ 6.00	0/ 0.00	A) B) C) D)	20 10 0 3	fair	poor low	7.160	
fair low	-	proposed Mackenzie Highway crosses deposit	-	13/ 9.00	0/ 0.00	A) B) C) D)	87 21 0 7	fair	poor low	7.161	
fair to poor low to high	-	proposed Mackenzie Highway crosses deposit	-	26/ 9.00	0/ 0.00	A) B) C) D)	151 58 0 14	fair	poor low	7.162	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM		
7.163	96-E(7)	132, 133(49) 138, 139, 140(49)	ZONE 09 607000E 7243000N	N of Norman Wells on Mackenzie Highway (KP 1003)	sand, gravel, silt, clay	3 to NG	0.00	A) B) C) D) E) F)	0.690 0.000 0.000 0.690 0.000 0.000	alluvial alluvial fan & terrace complex	
7.164	96-E(7)	131, 136, 137(49)	ZONE 09 609000E 7242000N	N of Norman Wells on Mackenzie Highway (KP 1002)	clay & sand	4 - NG	0.00	A) B) C) D) E) F)	0.600 0.000 0.000 0.600 0.000 0.000	glaciolacustrine glaciolacustrine beach	
7.165	96-E(7)	129, 130(49)	ZONE 09 611000E 7241000N	N of Norman Wells on Mackenzie Highway (KP 1000)	gravel, sandstone, shale, clay	2-4 & 5	0.00	A) B) C) D) E) F)	0.500 0.000 0.000 0.500 0.000 0.000	glaciolacustrine/bedrock beach ridge over bedrock	
7.166	96-E(1)	102, 103(49)	ZONE 09 625000E 7230000N	along Mackenzie Highway (KP 979)	sand, gravel, clay, shale	2-5 & NG	0.00	A) B) C) D) E) F)	0.530 0.000 0.000 0.530 0.000 0.000	glaciolacustrine/bedrock beach ridge and bedrock	
7.167	96-E(1)	98, 99, 100(49)	ZONE 09 630000E 7228000N	along Mackenzie Highway (KP 975)	clay & shale	NG to 5	0.00	A) B) C) D) E) F)	1.100 0.000 0.000 1.100 0.000 0.000	morainal over bedrock moraine veneer over bedrock	
7.168	96-F(4)	84, 85(49)	ZONE 10 365000E 7213000N	N of Mackenzie River along Mackenzie Highway (kp 955)	clay, shale	NG to 5	0.00	A) B) C) D) E) F)	1.000 0.000 0.000 1.000 0.000 0.000	morainal & bedrock moraine plain over bedrock	
7.169	96-F(4)	81, 82, 83(49)	ZONE 10 367000E 7212000N	N of Mackenzie River along Mackenzie Highway (KP 954)	clay, sand -limestone	4 to 5	0.00	A) B) C) D) E) F)	1.500 0.000 0.000 1.500 0.000 0.000	morainal & bedrock moraine plain over bedrock	
7.170	96-C(13)	79, 80(49)	ZONE 10 367000E 7212000N	along Mackenzie Highway (KP 952)	clay	NG	0.00	A) B) C) D) E) F)	0.760 0.000 0.000 0.760 0.000 0.000	morainal moraine plain	
7.171	96-C(13)	76, 77, 78(49)	ZONE 10 368000E 7211000N	along Mackenzie Highway (KP 950)	clay	NG	0.00	A) B) C) D) E) F)	0.600 0.000 0.000 0.600 0.000 0.000	morainal moraine plain	
7.172	96-C(13)	71, 72(49)	ZONE 10 371000E 7210000N	along Mackenzie Highway (KP 946)	sand, gravel and clay	3 - NG	0.00	A) B) C) D) E) F)	0.760 0.000 0.000 0.760 0.000 0.000	morainal moraine plain	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	proposed Mackenzie Highway - 3 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable medium	7.163
fair to good low	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	7.164
fair to good low	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable to poor medium to low	7.165
fair to good low	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable to poor medium to low	7.166
fair low to high	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	7.167
fair low to moderate	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	7.168
fair low to moderate	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable to poor medium to low	7.169
fair to poor low to moderate	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	7.170
fair to poor low to moderate	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	7.171
fair to poor low to moderate	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable to poor medium to low	7.172

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
7.173	96-C(13)	67,68(49)	ZONE 10 374000E 7208000N	along Mackenzie Highway (KP 942)	clay	NG	0.00	A) B) C) D) E) F)	0.495 0.000 0.000 0.495 0.000 0.000	morainal moraine plain		
7.174	96-C(13)	65,66(49)	ZONE 10 374000E 7206000N	along Mackenzie Highway (KP 941)	clay	NG	0.00	A) B) C) D) E) F)	0.750 0.000 0.000 0.750 0.000 0.000	morainal moraine plain		
7.175	96-C(13)	61,62,63,64(49)	ZONE 10 375000E 7204000N	along Mackenzie Highway (KP 939)	clay, sand -some gravel	3 to NG	0.00	A) B) C) D) E) F)	1.100 0.000 0.000 1.100 0.000 0.000	morainal & glaciofluvial moraine plain & glaciofluvial channel		
8.001	96-C(14)	FN-14(8) MAP5(40) 51(49)	ZONE 10 379000E 7201000N	0.8 km NE of Fort Norman townsite adjacent to airstrip	sand -fine grained -silty	3	3.00	A) B) C) D) E) F)	0.230 0.138 0.069 0.023 0.000 0.000	alluvial terraces existing borrow pit		
8.002	96-C(13)	FN-23(8) MAP5(40)	ZONE 10 380000E 7199000N	8 km S of Fort Norman, N bank of Mackenzie River	sand & gravel -medium grained -stratified	3	1.50	A) B) C) D) E) F)	0.005 0.005 0.000 0.000 0.000 0.000	alluvial alluvial bar or terrace		
8.003	96-C(13)	FN-30X(8)	ZONE 10 382000E 7203000N	1.6 km N of Fort Norman, E bank of Great Bear River	sand -silty -very fine grained -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine lake plain		
8.004	96-C(14)	FN-10(8)	ZONE 10 383000E 7205000N	6.4 km N of Fort Norman, W bank of Great Bear River	sand -silty -fine grained -small gravel pockets	4	1.80	A) B) C) D) E) F)	0.300 0.120 0.060 0.120 0.000 0.000	alluvial alluvial terrace		
8.005	96-C(14)	FN-9X(8)	ZONE 10 384000E 7207000N	9.6 km N of Fort Norman at confluence of the Brackett & Great Bear Rivers	silt -sandy -trace clay -gravel layers & pockets -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial floodplain		
8.006	96-C(14)	FN-13(8)	ZONE 10 384000E 7205000N	8 km NE of Fort Norman, SE bank of Great Bear River	sand -very silty -pockets of gravel	4	4.60	A) B) C) D) E) F)	0.750 0.375 0.150 0.225 0.000 0.000	alluvial river terrace		
8.007	96-C(14)	FN-12X(8)	ZONE 10 385000E 7206000N	9.6 km N of Fort Norman E bank of Great Bear River	Tertiary sands & gravel -medium to coarse grained -volumes not determined	2	12.20	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial (Tertiary) river bank		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
fair low to high	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor poor	poor low	7.173	
fair low to high	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor poor	poor low	7.174	
fair low to moderate	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor poor	favourable to poor medium to low	7.175	
fair unfrozen	topsoil & silt 0-0.2	next to airstrip on outskirts of Fort Norman	quality of material poor, uses to be restricted to local needs, airport borrow pit, high water table in area	0/ 0.00	2/ 1.80	A) B) C) D)	2 2 0 0	poor	poor to favourable* low to medium	8.001	
good unfrozen	silt 0-0.3	at edge of Fort Norman existing access road	accessible only during low flow periods of Mackenzie River, used for domestic requirements of Fort Norman	0/ 0.00	1/ 3.00	A) B) C) D)	1 1 0 0	poor	favourable to good* medium to high	8.002	
poor low to medium	topsoil & peat 0-0.2	existing seismic cut line	material of low quality, access is across thermally sensitive terrain	5/ 7.30	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor to unsuitable low	8.003	
fair medium to high	organic topsoil no existing road access 0-0.2		for marginal general fill purposes, difficult access, buffer zone next to river	3/ 4.90	2/ 1.50	A) B) C) D)	0 0 0 0	poor	poor to unsuitable low	8.004	
fair high	organic topsoil - 0-0.2		materials of granular quality not encountered, spawning beds upstream along the Brackett River	0/ 0.00	3/ 1.30	A) B) C) D)	0 0 0 0	poor	unsuitable* low	8.005	
fair medium	topsoil 0-0.2 m	access difficult, existing seismic cut line across poorly drained terrain	access difficult, low quality of granular materials, spawning beds in Brackett River	6/ 6.70	0/ 0.00	A) B) C) D)	3 2 1 0	fair	poor to unsuitable* low	8.006	
fair medium to high	glac/lacus sand and silt	remotely situated	excessive depths of overburden, very difficult access	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	8.007	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
8.008	96-C(14)	FN-11X(8)	ZONE 10 386000E 7207000N	11.2 km N of Fort Norman, E bank of Great Bear River	sand -fine grained -silty -volumes not determined	4	4.60	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolastrine lake plain	
8.009	96-C(14)	IPP-87kmp(23)	ZONE 10 385000E 7200000N	E of Great Bear River N of Mackenzie River	sand & gravel	2	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.005	alluvial alluvial terrace	
8.010	96-C(14)	FN-8(8)	ZONE 10 388000E 7199000N	6.4 km E of Fort Norman, N bank of Mackenzie River	sands & gravels -stratified -medium to coarse grained -trace cobbles & boulders -volumes not determined	2	13.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine lake plain	
8.011	96-C(14)	FN-16(8)	ZONE 10 390000E 7203000N	12.9 km NE of Fort Norman, N of Mackenzie River	sand -very fine gravel -trace silt	4	6.00	A) B) C) D) E) F)	0.750 0.150 0.075 0.525 0.000 0.000	aeolian sand dunes	
8.012	96-C(14)	AREA XXVI-E(33)	ZONE 10 395000E 7207000N	N of Lake Tagatui	sand -fine grained -silty	4	5.00	A) B) C) D) E) F)	9.000 0.000 0.000 9.000 0.000 0.000	aeolian sand dunes	
8.013	96-C(14)	AREA XXVI-E(33)	ZONE 10 395000E 7203000N	SE of Lake Tagatui W of Loon Lake	sand -fine grained -silty	4	5.00	A) B) C) D) E) F)	4.500 0.000 0.000 4.500 0.000 0.000	aeolian sand dunes	
8.014	96-C(14)	AREA XXVI-E(33)	ZONE 10 402000E 7203000N	W of Loon Lake	sand -fine grained -silty	4	5.00	A) B) C) D) E) F)	9.000 0.000 0.000 9.000 0.000 0.000	aeolian sand dunes	
8.015	96-C(14)	258(4) B.P. 136(45) 17(49)	ZONE 10 402000E 7196000N	24 km SE of Fort Norman proposed Hwy (KP 914-916)	sand -some silt -fine grained -volumes not determined	NG	0.00	A) B) C) D) E) F)	1.000 0.000 0.000 1.000 0.000 0.000	glaciolacustrine plain	
8.016	96C(14)	257(4) AREA XXV-E(33) B.P. 134(45) 18, 19, 30(49)	ZONE 10 404000E 7193000N	27.4 km SE of Fort Norman proposed Hwy (KP 911)	sand -fine grained -poorly graded	4 to NG	0.00	A) B) C) D) E) F)	1.690 0.085 0.060 1.545 0.000 0.000	aeolian sand dunes	
8.017	96-C(15)	256(4) AREA XXV-E(33) 29(49)	ZONE 10 406000E 7187000N	34 km SE of Fort Norman 0.8 km E of proposed Hwy (KP 906)	sand -fine grained -poorly graded	4 to NG	0.00	A) B) C) D) E) F)	1.100 0.400 0.200 0.500 0.000 0.000	aeolian sand dune	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair medium	topsoil 0-0.2	no existing land access	only suitable for very marginal general fill requirements, sources of similar quality on outskirts of town, lack of access	0/ 0.00	1/ 4.60	A) B) C) D)	1 1 0 0	poor	poor low	8.008
fair to good low	-	access via proposed Mackenzie Hwy	existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable to good medium to high	8.009
good	topsoil & silty clay, thick	winter road proposed hwy right of way	excessive overburden depths	17/ 12.80	0/ 0.00	A) B) C) D)	5 2 1 0	fair	unsuitable low	8.010
good unfrozen	topsoil 0-0.2	an existing seismic cutline	must cross thermally sensitive terrain, equal quality material closer to Fort Norman	0/ 0.00	1/ 1.50	A) B) C) D)	1 1 0 0	poor	poor low	8.011
fair to good low to moderate	-	access by snow road 8 km SW to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	8.012
fair to good low to moderate	-	access by snow road 3 km SW to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	8.013
fair to good low to moderate	-	access by snow road 6 km SW to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	8.014
fair high	organic topsoil 0-0.3	CNT line, proposed hwy	high ground ice content, materials of granular quality not established	11/ 15.80	0/ 0.00	A) B) C) D)	37 21 0 0	poor	unsuitable low	8.015
fair	organic topsoil 0-0.2	CNT line, proposed hwy	may be used as low quality fill	9/ 9.10	0/ 0.00	A) B) C) D)	36 19 0 0	poor	poor low	8.016
fair low	organic topsoil 0-0.2	CNT line	may be used as low quality fill	2/ 13.70	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	8.017

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (in)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
8.018	96-C(15)	254(4) AREA XXV-E(33) 22,27(49)	ZONE 10 408000E 7187000N	33.8 km SE of Fort Norman 2.4 km E of proposed Hwy (KP 906)	sand -trace silt -fine grained -poorly graded	4 to NG	0.00	A) 3.760 B) 0.230 C) 0.230 D) 3.300 E) 0.000 F) 0.000	aeolian sand dune			
8.019	96-C(15)	253(4) AREA XXV-E(33)	ZONE 10 410000E 7189000N	35.2km SE of Fort Norman 6.4 km E of proposed Hwy (KP 908)	sand -trace silt -fine grained -poorly graded	4 to NG	0.00	A) 1.500 B) 0.200 C) 0.300 D) 1.000 E) 0.000 F) 0.000	aeolian sand dunes			
8.020	96-C(15)	255(4) AREA XXV-E(33) 23(49)	ZONE 10 406000E 7183000N	35.4 km SE of Fort Norman proposed Hwy (KP 898-901)	sand -trace silt -fine grained -poorly graded	4 to NG	0.00	A) 5.300 B) 1.600 C) 1.100 D) 2.600 E) 0.000 F) 0.000	aeolian sand dunes			
8.021	96-C(15)	252(4) AREA XXV-E(33)	ZONE 10 412000E 7188000N	37 km SE of Fort Norman 6.4 km E of proposed Hwy (KP 908)	sand -trace silt -fine grained -poorly graded	4 to NG	0.00	A) 0.760 B) 0.150 C) 0.150 D) 0.460 E) 0.000 F) 0.000	aeolian sand dunes			
8.022	96-C(10)	249(4) B.P. 133(45) 25,26(49)	ZONE 10 406000E 7178000N	25 mi SE of Fort Norman proposed Hwy (KP 896)	sand -fine grained -poorly graded	4	4.60	A) 3.500 B) 0.130 C) 0.130 D) 3.270 E) 0.000 F) 0.000	aeolian sand dunes			
8.023	96-C(10)	250-X(4)	ZONE 10 408000E 7178000N	42 km SE of Fort Norman proposed Hwy (KP 892-895)	sand, some silt -fine grained -poorly graded -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine plain			
8.024	96-C(10)	96-C-B2(1) 1508H(3,21,22) B.P.129,130(44) 131,132(44) AREA XXV-E(33) 28,32,38 (49)	ZONE 10 409000E 7178000N	E side of Mackenzie River across from Old Fort Point	sand -medium to fine -poorly graded -trace silt	4	30.50	A) 29.300 B) 11.700 C) 8.800 D) 8.800 E) 0.000 F) 0.000	aeolian sand dunes			
8.025	96-C(15)	251(4) AREA XXV-E(33)	ZONE 10 414000E 7183000N	37 km SE of Fort Norman 6.4 km E of proposed Hwy (KP 908)	sand -trace silt -fine grained -poorly graded	4 to NG	0.00	A) 3.800 B) 0.000 C) 2.300 D) 1.500 E) 0.000 F) 0.000	aeolian sand dunes			
8.026	96-C(15)	AREA XXIV-GF (33)	ZONE 10 426000E 7203000N	W of St Charles Creek	sand -fine grained	4	9.00	A) 113.400 B) 0.000 C) 0.000 D) 113.400 E) 0.000 F) 0.000	glaciofluvial outwash plain			
8.027	96-C(16)	AREA XXIII-Gfc (33)	ZONE 10 437000E 7203000N	along St Charles Creek	sand & gravel	2-3	5.00	A) 14.500 B) 0.000 C) 0.000 D) 14.500 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposit			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoREHOLES/ MAX DEPTH (m)	No. of TESTPITS/ MAX DEPTH (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair low	organic topsoil 0-0.2	seismic cutline from CNT line	may be used for low quality fill	2/ 4.90	0/ 0.00	A) B) C) D)	2 1 0 1	poor	poor low	8.018
fair low	organic topsoil 0-0.2	seismic cutline from CNT line	may be used for low quality fill	1/ 5.20	0/ 0.00	A) B) C) D)	1 1 0 1	poor	poor low	8.019
fair moderate	organic topsoil 0-0.3	proposed hwy traverses the site	may be used as low quality fill	4/ 13.90	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	8.020
fair low to moderate	organic topsoil 0-0.2	seismic cutline from CNT line	may be used for low quality fill	2/ 5.20	0/ 0.00	A) B) C) D)	1 1 0 0	poor	poor low	8.021
fair moderate	organic topsoil 0-0.3	seismic cutline from CNT line	may be used for low quality fill requirements	6/ 6.00	0/ 0.00	A) B) C) D)	24 11 0 0	poor	poor low	8.022
fair high	peat & org. topsoil, 0-0.3	CNT line, proposed hwy	materials of granular quality not established	4/ 13.70	0/ 0.00	A) B) C) D)	4 4 0 0	poor	unsuitable low	8.023
well drained low	thin	-	areas adjacent to dunes thermally sensitive	22/ 9.00	2/ 1.80	A) B) C) D)	147 74 0 0	fair	poor low	8.024
good low to moderate	organic topsoil 0-0.2	seismic cutline from CNT line	not a source of granular material, may be used for low quality fill	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	8.025
fair to good low	-	access by snow road 23 km SW to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to poor medium to low	8.026
fair to good low	-	access by snow road 35 km SW to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	8.027

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
8.028	96-C(16)	AREA XXIII-Gfc (33)	ZONE 10 448000E 719900N	along St Charles Creek	sand & gravel	2-3	5.00	A) B) C) D) E) F)	14.500 0.000 0.000 14.500 0.000 0.000	glaciofluvial glaciofluvial channelled deposit		
8.029	96-C(15)	AREA XXIV-GF (33)	ZONE 10 424000E 720000N	S of St Charles Creek	sand -fine grained	4	9.00	A) B) C) D) E) F)	28.300 0.000 0.000 28.300 0.000 0.000	glaciofluvial outwash plain		
8.030	96-C(9)	96-C-B3(1) AREA XXI-E(33)	ZONE 10 427000E 717700N	3.2km N of Big Smith Creek, 16km E of Macken- zie River	sand -poorly graded -fine to medium -some gravel -trace fines	3	15.00	A) B) C) D) E) F)	5.100 2.000 1.500 1.600 0.000 0.000	glaciofluvial esker & kames (discontinuous)		
8.031	96-C(10)	248-X(4)	ZONE 10 410000E 716900N	1.6 km N of Big Smith Creek, 2.01 km W of proposed Hwy (KP 882)	sand & silt -fine grained -volumes not applicable	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine deltaic plains deposits		
8.032	96-C(10)	245(4) B.P. 126, 127(45) 37(49)	ZONE 10 413000E 716400N	floodplain of Big Smith Creek	sand -poorly to well graded -fine to coarse grained -volumes not determined	4	0.00	A) B) C) D) E) F)	0.400 0.000 0.000 0.400 0.000 0.000	alluvial alluvial floodplain		
8.033	96-C(10)	244(4)	ZONE 10 411000E 716200N	S of Big Smith Creek 0.8km W of proposed Hwy (KP 875)	sands -poorly graded -fine grained -trace silt -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine deltaic plain deposit		
8.034	96-C(10)	243(4)	ZONE 10 417000E 716000N	6.4km S of Big Smith Creek, 7.2km E of Mackenzie River	glacial till -non sorted -non stratified mixed -grain sediment -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.010	morainal drumlinoid moraine		
8.035	96-C(10)	238(4)	ZONE 10 421000E 716500N	4km E of Big Smith Creek	silt & sand -fine grained -trace gravel -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial fan		
8.036	96-C(10)	239(4)	ZONE 10 423000E 716500N	4km E of Big Smith Creek	sandy silts & silty sands -trace gravel -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial fan and slope wash deposits		
8.037	96-C(4)	237(4)	ZONE 10 422000E 716400N	4.8km E of Big Smith Creek	silts & sand -poorly sorted -some rock fragments -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	colluvial slope wash deposits		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boresholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	access by snow road 45 km SW to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	8.028
fair to good low	-	access by snow road 20 km SW to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to poor medium to low	8.029
well drained unfrozen	-	undeveloped	avoid minor stream crossing	1/ 2.00	1/ 2.10	A) B) C) D)	0 1 0 0	poor	favourable medium	8.030
good high	org. topsoil 0-0.3	access trail from CNT line	surrounding area poorly drained & thermally sensitive terrain, sediments are high in ground ice content	3/ 6.70	0/ 0.00	A) B) C) D)	4 2 0 1	fair	unsuitable low	8.031
fair	peat & org. silt, 0-0.5	CNT line or proposed Hwy	deposits in active stream channel of Big Smith Creek	15/ 9.00	0/ 0.00	A) B) C) D)	77 38 0 2	poor	poor* low	8.032
fair low	topsoil & silt 0-1.0	short access trail from CNT line	suitable for low quality marginal fill	3/ 6.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	8.033
fair	-	-	very marginal material for general fill only existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor to unsuitable low	8.034
fair high	-	inaccessible	inaccessible, low quality general fill materials only	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to unsuitable low	8.035
fair variable	-	inaccessible	deposits unsuitable for construction purposes	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	unsuitable low	8.036
- moderate	-	currently inaccessible	difficult access	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	8.037

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
8.038	96-C(10)	96-C-B4(1) 242(4) 236(4) 235(4)	ZONE 10 422000E 7160000N	W side of McConnell Range, 16km SE of Old Fort Point	sand and gravel -interbedded fine sand with well graded gravels	2	3.00	R) 2.800 B) 1.400 C) 0.800 D) 0.600 E) 0.000 F) 0.000	glaciofluvial kame/esker complex			
8.039	96-C(10)	234(4) P-242(3) P-242(22) P-242(21)	ZONE 10 420000E 7160000N	9.7km E of Mackenzie R., 4.8km N of Little Smith Creek	dolomite & shale (Franklin Mountain formation) -unlimited volumes	5	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock			
8.040	96-C(10)	232(4)	ZONE 10 423000E 7156000N	4km N of Little Smith Creek, 6.4km E of proposed Hwy (KP 864)	sand & gravel -trace silt -sand -medium to coarse -gravel -fine	2	3.00	R) 0.380 B) 0.190 C) 0.110 D) 0.080 E) 0.000 F) 0.000	glaciofluvial esker ridge			
8.041	96-C(10)	233(4)	ZONE 10 425000E 7157000N	N side of Little Smith Creek	silty sand & gravel -minor silt & till inclusions -volumes not determined	3	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker ridge			
8.042	96-C(12)	AREA XXII-E(33)	ZONE 10 442000E 7168000N	SE of Big Smith Creek	sand & gravel	2-3	6.00	R) 0.061 B) 0.000 C) 0.000 D) 0.061 E) 0.000 F) 0.000	glaciofluvial eskers			
8.043	96-B(13)	AREA I-Gfc(32)	ZONE 10 456000E 7196000N	along the St Charles Creek	sand & gravel	2-3	5.00	R) 18.200 B) 0.000 C) 0.000 D) 18.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
8.044	96-B(13)	AREA I-Gfc(32)	ZONE 10 466000E 7187000N	along the St Charles Creek	sand & gravel	2-3	5.00	R) 12.100 B) 0.000 C) 0.000 D) 12.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
8.045	96-C(14)	FN-18X(8)	ZONE 10 388000E 7197000N	12.9 km E of Fort Norman, S bank of Mackenzie River	silt -sandy -pockets of sand -volumes not determined	NG	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial river bar			
8.046	96-C(10)	247(4)	ZONE 10 401000E 7173000N	deposit dissected by Little Birch River	silt & silty sand -volumes not determined	4 to NG	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
8.047	96-C(10)	246(4)	ZONE 10 402000E 7170000N	9.7km W. of Old Fort Point, W bank of Mackenzie River	silt & sand -stratified fine grained silty sands & silts -volumes not determined	4	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
few wet depress. unfrozen	silt 0.2-0.7	snow road, extension of existing seismic cutlines	buffer zone between develop- ment and tributary stream	1/ 8.50	1/ 1.60	A) B) C) D)	0 1 0 0	poor	favourable medium	8.038
good	-	existing seismic cutlines	quarry operation, surficial zone slightly fractured	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	Fair	good high	8.039
good low	org. topsoil 0.2-0.5	seismic cutlines from CNT line	lack of naturally occurring granular material in general area, must cross small stream	4/ 6.00	0/ 0.00	A) B) C) D)	3 3 1 1	Fair	good high	8.040
-	-	existing seismic cutline	long haul distance & 2.4km new access road	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	8.041
good low	-	access by snow road 24 km SW to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	8.042
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	8.043
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	8.044
fair	topsoil 0-0.4	access to Mackenzie River	deposits in active stream channel	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to unsuitable*	8.045
fair	top soil and organic silt	access difficult	irregular terrain, must cross Mackenzie River, very marginal fill material only	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	8.046
fair	topsoil and organic silt	must cross Mackenzie River	access difficult, must cross Mackenzie River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	8.047

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/LANDFORM			
8.048	96-C(9)	AREA IV-F(33)	ZONE 10 371000E 717000N	W of Yellow Lake W of East Little Bear River	sand -coarse grained	3-4	15.00	A) 287.400 B) 0.000 C) 0.000 D) 287.400 E) 0.000 F) 0.000	fluvial fans or fan aprons			
8.049	96-C(9)	AREA V-GF(33)	ZONE 10 380000E 717300N	W of MacKay Range	sand & gravel	3	5.00	A) 6.000 B) 0.000 C) 0.000 D) 6.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial deposits			
8.050	96-C(10)	AREA V-E(33)	ZONE 10 388000E 717200N	W of MacKay Range	sand & gravel	2-3	6.00	A) 0.023 B) 0.000 C) 0.000 D) 0.023 E) 0.000 F) 0.000	glaciofluvial eskers			
8.051	96-C(10)	AREA V-GF(33)	ZONE 10 393000E 716100N	NE of Tote Lake	sand & gravel	3	5.00	A) 1.500 B) 0.000 C) 0.000 D) 1.500 E) 0.000 F) 0.000	glaciofluvial glaciofluvial deposits			
8.052	96-C(7)	230(4) AREA XVIII -At(33)	ZONE 10 409000E 714900N	W. of Mackenzie River 3.2km N of Keele River	silty sand & silts -fine grained -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
8.053	96-C(6)	AREA VII-Gfc (33)	ZONE 10 379000E 713000N	SW of Stewart Lake N of Keele River	sand & gravel	2-3	6.00	A) 28.300 B) 0.000 C) 0.000 D) 28.300 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
8.054	96-C(13)	B.P.146,147(45) 1,2,3,4(49)	ZONE 10 380000E 720000N	S of Mackenzie Highway (KP 930)	sand, silt & clay	NG	0.00	A) 3.400 B) 0.000 C) 0.000 D) 3.400 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			
8.055	96-C(14)	B.P.144,145(45) 5,6(49)	ZONE 10 383000E 720000N	S of Mackenzie Highway (KP 927)	sand, silt & clay	NG	0.00	A) 2.500 B) 0.000 C) 0.000 D) 2.500 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			
8.056	96-C(14)	B.P.142,143(45) 7,8(49) 9,10(49)	ZONE 10 388000E 720000N	S of Mackenzie Highway (KP 924)	clay, silt & sand	NG	0.00	A) 2.100 B) 0.000 C) 0.000 D) 2.100 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			
8.057	96-C(14)	B.P.137,138(45) B.P.139(45) B.P.140,141(45) 11,12(49) 13,14,15(49)	ZONE 10 395000E 719900N	along the Mackenzie Highway (KP 916)	clay & silt -some sand	4 to NG	0.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low to moderate	-	access by snow road 27 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	8.049	
good low	aeolian silt veneer	access by snow road 20 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	8.049	
good low	-	access by snow road 13 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	8.050	
fair to good low	-	access by snow road 10 km E to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	8.051	
fair	topsoil & silt	access difficult	must cross Mackenzie River, very marginal general fill material only	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	8.052	
fair to good low	-	access by snow road 39 km E to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	8.053	
fair to poor low to high	-	proposed Mackenzie Highway crosses deposit	-	11/ 9.00	0/ 0.00	A) 58 B) 28 C) 0 D) 8	fair	poor low	8.054	
fair to poor low to high	-	proposed Mackenzie Highway crosses deposit	-	9/ 7.50	0/ 0.00	A) 52 B) 25 C) 0 D) 9	fair	poor low	8.055	
fair to poor low to high	-	proposed Mackenzie Highway crosses deposit	-	8/ 9.00	0/ 0.00	A) 48 B) 24 C) 0 D) 7	fair	poor low	8.056	
fair to poor low to high	-	proposed Mackenzie Highway crosses deposit	-	29/ 9.00	0/ 0.00	A) 141 B) 68 C) 0 D) 19	fair-good	poor low	8.057	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
8.058	96-C(15)	B.P. 135(45)	ZONE 10 402000E 7194000N	along the Mackenzie Highway (KP 906)	sand, clay, silt	2-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine plain			
8.059	96-C(10)	B.P. 124, 125(45) B.P. 128(45) 34, 35(49)	ZONE 10 411000E 7173000N	E of Mackenzie River, W of Mackenzie Highway (KP 880)	sand -fine grained -clay & silt	3-4	0.00	A) 0.280 B) 0.000 C) 0.000 D) 0.280 E) 0.000 F) 0.000	glaciolacustrine plain			
8.060	96-C(10)	B.P. 121, 122(45) B.P. 123(45) 36(49)	ZONE 10 412000E 7167000N	along Mackenzie Highway (KP 876), E of Mackenzie River	sand -fine grained -volumes not determined	4 & NG	0.00	A) 0.400 B) 0.000 C) 0.000 D) 0.400 E) 0.000 F) 0.000	glaciolacustrine plain			
8.061	96-C(10)	B.P. 118, 119(45) B.P. 120(45)	ZONE 10 418000E 7156000N	E of Mackenzie Highway (KP 864)	clay and silt till -volumes not determined	NG & 2-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	moraine plain			
8.062	96-C(7)	B.P. 117(45)	ZONE 10 416000E 7152000N	W of Mackenzie Highway (KP 859)	sand and gravel -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine plain			
8.063	96-C(14)	39, 40(49)	ZONE 10 399000E 7198000N	along Mackenzie Highway (KP 912)	sand -fine grained	4 to NG	0.00	A) 0.720 B) 0.000 C) 0.000 D) 0.720 E) 0.000 F) 0.000	aeolian sand dunes			
8.064	96-E(15)	20(49)	ZONE 10 404000E 7190000N	along the Mackenzie Highway (KP 901)	sand -fine grained	4 to NG	0.00	A) 0.750 B) 0.000 C) 0.000 D) 0.750 E) 0.000 F) 0.000	aeolian sand dunes			
8.065	96-C(15)	31(49)	ZONE 10 405000E 7188000N	along the Mackenzie Highway (KP 899)	sand -fine grained	4 to NG	0.00	A) 0.750 B) 0.000 C) 0.000 D) 0.750 E) 0.000 F) 0.000	aeolian sand dunes			
8.066	96-C(10)	33(49)	ZONE 10 411000E 7177000N	along Mackenzie Highway (KP 882)	sand -fine grained	4 to NG	0.00	A) 0.400 B) 0.000 C) 0.000 D) 0.400 E) 0.000 F) 0.000	aeolian sand dunes			
9.001	96-C(7)	231(4)	ZONE 10 417000E 7147000N	alluvial flood plain of Little Smith Creek	silt, sand & gravel -stratified sand with silt & gravel layers -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial floodplain and terraces			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to poor low to high	-	proposed Mackenzie Highway crosses deposit	-	6/ 4.50	0/ 0.00	A) 28 B) 14 C) 0 D) 0	poor	poor low	8.058	
fair to poor low to high	-	proposed Mackenzie Highway crosses deposit	-	17/ 9.00	0/ 0.00	A) 93 B) 44 C) 0 D) 2	poor	poor low	8.059	
fair to poor low to moderate	-	proposed Mackenzie Highway crosses deposit	-	16/ 9.00	0/ 0.00	A) 91 B) 47 C) 0 D) 6	fair-good	poor low	8.060	
fair to poor low to moderate	-	proposed Mackenzie Highway crosses deposit	-	20/ 9.00	0/ 0.00	A) 108 B) 54 C) 0 D) 19	fair	poor low	8.061	
fair to poor low to moderate	-	proposed Mackenzie Highway crosses deposit	-	6/ 7.50	0/ 0.00	A) 36 B) 17 C) 0 D) 0	poor	favourable medium	8.062	
fair to good low	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	8.063	
fair to good low	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	favourable to poor medium to low	8.064	
fair to good low	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	favourable to poor medium to low	8.065	
fair to good low	-	proposed Mackenzie Highway crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	favourable to poor medium to low	8.066	
fair	org. silt	existing winter road	deposits are located in active stream channel of Little Smith Creek	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	9.001	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
9.002	96-C(7)	228(4)	ZONE 10 417000E 7147000N	S of Little Smith Creek on proposed Hwy (KP 856-859)	sand & gravel -stratified sand -fine to medium gravel -medium	2	4.60	A) B) C) D) E) F)	6.000 2.400 0.600 3.000 0.000 0.000	glaciofluvial outwash plain		
9.003	96-C(7)	IPP-160kmp(23) AREA XIX-Gfc (33)	ZONE 10 418000E 7146000N	S of Little Smith River E of Mackenzie River	sand & gravel	2	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.010	glaciofluvial glaciofluvial channelled deposits		
9.004	96-C(7)	227(4) P-227(3) P-227(22) P-227(21) Area XIX-Gp(33)	ZONE 10 421000E 7149000N	S bank of Little Smith Creek, 4.8km E of proposed Hwy (KP 858)	sand & gravel -stratified sand -fine to medium gravel -medium grained	2	4.60	A) B) C) D) E) F)	19.000 7.600 5.700 5.700 0.000 0.000	glaciofluvial outwash plain		
9.005	96-C(7)	225(4) Area XIX-Gp(33)	ZONE 10 422000E 7149000N	3.2km SE of Little Smith Creek	sand & gravel -fine grained -silty to clayey till -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial outwash plain		
9.006	96-C(7)	226(4) P-226(3) P-226(22)	ZONE 10 426000E 7153000N	1.6km SE of Little Smith Creek, 11.3 km NE of proposed Hwy (KP 858)	limestone -interbedded with shale -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock ridge		
9.007	96-C(7)	221(4)	ZONE 10 416000E 7141000N	3.2km S of Little Smith Creek, 2.4km W of proposed Hwy (KP 853)	limestone & dolomite -volumes not determined	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock cored terrace		
9.008	96-C(7)	224(4) Area XIX-E(33)	ZONE 10 427000E 7144000N	8.9km S of Little Smith Creek, 6km E of proposed Hwy (KP 851)	gravel & sand -trace silt sand -fine to medium gravels -coarse	2	0.00	A) B) C) D) E) F)	1.500 0.500 0.300 0.700 0.000 0.000	glaciofluvial kame/esker complex		
9.009	96-C(7)	218(4) B.P. 115, 116(45)	ZONE 10 425000E 7136000N	5.8km N of Saline River	dolomite -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock ridges		
9.010	96-C(7)	220(4)	ZONE 10 428000E 7136000N	4.8km N of Saline River	limestone -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock ridge		
9.011	96-C(7)	217(4) B.P. 113(45)	ZONE 10 425000E 7132000N	4km NW of Saline River, E bank of Mackenzie River	silt & sand -gravel layers -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.005	alluvial alluvial fan		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
well unfrozen	topsoil 0-0.2	CNT line & proposed Hwy	buffer zone next to Little Smith Creek	7/ 7.60	1/ 1.80	A) B) C) D)	9 5 2 2	fair/good good high	9.002		
good low	-	access via proposed Mackenzie Hwy	existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor good high	9.003		
well low	topsoil 0-0.3	seismic cutline from CNT line	buffer zone next to Little Smith Creek	8/ 6.40	0/ 0.00	A) B) C) D)	7 5 1 1	fair good high	9.004		
well	-	existing seismic cutlines must cross small streams, small quantities of doubtful quality material		0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none poor low	9.005		
good low to medium	topsoil & silt 0-0.6	seismic cutline from CNT line	bedrock surficially weathered -quarrying operation	1/ 4.00	0/ 0.00	A) B) C) D)	0 0 0 0	fair good high	9.006		
good high	fluvial silt 1.8-2.4	seismic cutline from CNT line	quarry operation, thick overburden ground with high ice content	3/ 5.80	0/ 0.00	A) B) C) D)	0 0 0 0	poor poor to unsuitable low	9.007		
well moderate	topsoil 0.2-0.5	seismic cutlines access very difficult	access difficult, crossing deeply incised stream channels	7/ 6.70	0/ 0.00	A) B) C) D)	4 2 1 2	fair favourable medium	9.008		
fair	-	extension of existing seismic cutline	quarrying operation	18/ 9.00	0/ 0.00	A) B) C) D)	146 63 0 11	fair good high	9.009		
good unfrozen	peat	CNT line & proposed Hwy	quarrying operation	2/ 4.60	0/ 0.00	A) B) C) D)	0 0 0 0	fair good high	9.010		
fair	-	proposed Hwy	low quality general fill material only -existing pit	5/ 7.50	0/ 0.00	A) B) C) D)	25 13 0 6	fair poor low	9.011		

SITE IDENTIFICATION						SOURCE DESCRIPTION							
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM				
9.012	96-C(8)	215-X(4) B.P. 112(45)	ZONE 10 428000E 7131000N	N bank of Saline River 0.8km E of proposed Hwy (KP 838)	sand & silt -some clay -fine grained -gravel in pockets -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace				
9.013	96-C(8)	219(4)	ZONE 10 435000E 7137000N	4.8km N of Saline River	sands & gravels -irregularly bedded -silt & till lenses -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial kame ridges				
9.014	96-C(8)	214(4)	ZONE 10 430000E 7131000N	alluvial plain of braided & meandering Saline River	sand & gravel -coarse grained -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial plain deposits				
9.015	96-C(8)	212(4)	ZONE 10 434000E 7133000N	S of Saline River	sand & gravel -silt & till pockets -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial kame fields				
9.016	96-C(8)	AREA XVI-GF(33)	ZONE 10 442000E 7134000N	active channel of Saline River	sand & gravel	2-3	6.00	A) 8.900 B) 0.000 C) 0.000 D) 8.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits				
9.017	96-C(8)	213(4) P-213(3) P-213(22) P-213(21) IPP-181kmp(23) B.P. 108, 109(45)	ZONE 10 430000E 7130000N	S bank of Saline River 0.8km E of proposed Mac- kenzie Hwy (KP 837)	sand -fine to medium grained -some silt -pockets of gravel	3	4.60	A) 3.800 B) 1.500 C) 1.200 D) 1.100 E) 0.000 F) 0.005	glaciofluvial glaciofluvial plain				
9.018	96-C(8)	211(4)	ZONE 10 433000E 7128000N	4km SE of Saline River	silty sand & gravel -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial outwash deposits				
9.019	96-C	206(4)	ZONE 10 435000E 7124000N	4.8km N of Steep Creek 11.2km S of Saline River	Ordovician & Silurian dolomite -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock				
9.020	96-C(1)	205(4)	ZONE 10 439000E 7125000N	11.2km S of Saline River	sand & gravel -silt & till lenses -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial kame field				
9.021	96-C(1)	208-X(4)	ZONE 10 433000E 7118000N	Steep Creek channel KP 824 on proposed Mackenzie Hwy	sand & gravel -variable silt content & gradation -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial sand & gravel bars				

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
well moderate	peat & org. silt 0-0.6	seismic cutline from CNT line	materials of granular quality not established	10/ 7.50	0/ 0.00	A) 46 B) 24 C) 0 D) 7	poor	poor to unsuitable low	9.012	
Fairly well	-	existing seismic cutlines	long haul distance, large degree of surficial material to be removed	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	9.013	
well	organic silt	existing winter road	deposits located in the stream channel of the Saline River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable* medium	9.014	
well low to medium	-	access difficult	irregular terrain & deeply incised stream channels	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	9.015	
fair to good low	-	access by snow road 10 km W to Mackenzie Hwy	active channel of Saline River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent* high	9.016	
well low	topsoil/inorg. silts 0.3-1.8	seismic cutlines from CNT line	buffer zone next to Saline River -existing pit	23/ 9.00	0/ 0.00	A) 134 B) 70 C) 1 D) 21	fair	favourable medium	9.017	
good	-	-	isolated pockets may have better quality materials	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	9.018	
poor moderate/high	glacial/lacus. silts & clays	-	bedrock slightly weathered within the surficial zone -quarrying operation	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	good high	9.019	
good	-	access difficult	rugged terrain, marginal fill material only	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	9.020	
good unfrozen	org. topsoil 0-0.8	CNT line & proposed Hwy traverse the site	deposits are in the active stream channel	4/ 4.60	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	favourable* medium	9.021	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
9.022	96-C(1)	207-X(4)	ZONE 10 435000E 712000N	N bank of Steep Creek, 2km SE of proposed Hwy (KP 827)	glacial till -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	morainal glacial till knoll			
9.023	96-C(1)	204(4)	ZONE 10 442000E 712200N	N of Steep Creek 14.5km S of Saline River	sand & gravel -washed -silt & till lenses -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial kame field			
9.024	96-C(1)	96-C-B6(1) 209(4) IPP-193kmp(23)	ZONE 10 433000E 711700N	E of Birch Island on East Bank of Mackenzie River	sand -poorly graded, fine to coarse, silt varies gravel-well graded, fine to coarse, some silt	2-3	4.50	A) 1.800 B) 0.500 C) 0.500 D) 0.800 E) 0.000 F) 0.004	alluvial alluvial terrace			
9.025	96-C(1)	199(4)	ZONE 10 436000E 711700N	between Saline River & Blackwater River	Middle Devonian limestone -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock			
9.026	96-C(1)	P-199(3) P-199(22) P-199(21)	ZONE 10 438000E 711500N	8 km E of Mackenzie River	Devonian limestone	5	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	bedrock bedrock ridge			
9.027	96-C(1)	198-X(4)	ZONE 10 439000E 711100N	7.3km S of Steep Creek 4km E of proposed Hwy (KP 813)	limestone fragments in silt matrix -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	colluvial slope wash deposits			
9.028	96-C(1)	203(4)	ZONE 10 444000E 711800N	29km N of Blackwater River	sand & gravel -silt & till lenses -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial kame field			
9.029	96-C(1)	201(4)	ZONE 10 446000E 711700N	24km N of Blackwater River	sand & gravel -irregularly bedded -silt & till lenses -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial kame field			
9.030	96-C(1)	202(4)	ZONE 10 448000E 711700N	29km N of Blackwater River	sand & gravel -irregular bedding -silt & till lenses -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial kame field			
9.031	96-C(1)	200(4)	ZONE 10 446000E 711200N	22.5km N of Blackwater River	sand-some gravel -irregularly bedded -silt & till lenses -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker/kame complex			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boresholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good moderate	topsoil & org. silt 0-0.3	seismic cutline from CNT & proposed Hwy	materials of granular quality not established	3/ 6.70	0/ 0.00	A) B) C) D)	0 0 0 0	poor	unsuitable low	9.022
well low to medium	-	access extremely difficult	long haul distance, must cross deeply incised gullies	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	9.023
good unfrozen	thin mat of vegetation	proposed Mackenzie Hwy traverses site	buffer zones near MacKenzie R. & Steep Creek, existing pit	4/ 1.40	1/ 1.80	A) B) C) D)	0 1 0 0	poor	favourable medium	9.024
good	-	CNT pole line or proposed Hwy	bedrock slightly weathered in surficial zone -quarrying operation	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	fair	good high	9.025
good low to unfrozen	0-1.5 m	access by snow road to proposed Mackenzie Hwy 5 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	9.026
poor moderately high	org. topsoil 0-0.3	seismic cutlines from CNT pole line	must cross highly thermally sensitive terrain, ground ice contents high, access difficult	4/ 3.40	0/ 0.00	A) B) C) D)	3 1 1 1	fair	poor low	9.027
well low to medium	-	access extremely diffi- cult	must cross deeply incised gullies, long haul distance	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	9.028
well	-	poor	long haul distance, marginal fill material only	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	9.029
well	-	no existing access	long haul distance, marginal fill material only	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	9.030
well	-	-	long haul (13.6km) distance	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	9.031

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
9.032	96-C(1)	P-197(3) P-197(22) P-197(21)	ZONE 10 435000E 7104000N	4.8 km E of Mackenzie River	sand & gravel	2-3	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	glaciofluvial outwash plain			
9.033	96-C(1)	196(4) AREA XIII -Gp(32)	ZONE 10 433000E 7102000N	11.2km N of Blackwater River, 3.7km W of proposed Mackenzie Hwy (KP 807)	gravel & sand -stratified -well graded sand -coarse grained gravel -medium to coarse grained	1	4.60	A) 30.000 B) 0.000 C) 30.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
9.034	96-C(10)	96-C-BS(1) IPP-211kmp (23) AREA XIII -Gp(32) 197(4)	ZONE 10 436000E 7105000N	11.3km N of Blackwater River	sand & gravel stratified sand - medium to coarse, poorly to well graded, gravel - fine to coarse, chert in samples	1	4.50	A) 19.700 B) 2.000 C) 2.000 D) 15.700 E) 0.000 F) 0.004	glaciofluvial outwash plain			
9.035	96-C(1)	193(4)	ZONE 10 444000E 7104000N	9.7km N of Blackwater River on western toe of McConnell range	sandy, silty gravel -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial fans & cones			
9.036	96-C(1)	192(4)	ZONE 10 445000E 7098000N	6.9km N of Blackwater River, western toe of McConnell range	Devonian limestone -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock ridge			
9.037	96-C(1)	95N(16) 195(4), N-1(13) AREA XIII -Gp(32) B.P. 98, 98R(44)	ZONE 10 436000E 7098000N	8km N of Blackwater River adjacent to proposed Mackenzie Hwy (KP 801)	gravel & sand -stratified -well graded sand -coarse grained gravel -medium to coarse grained	1	4.60	A) 7.700 B) 3.100 C) 1.500 D) 3.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
9.038	96-C(1)	95-N(16) 194(4) AREA XIII -Gp(32) B.P. 94(44)	ZONE 10 437000E 7097000N	8km NW of Blackwater River	sand & gravel -well graded -stratified -volumes not determined	2	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
9.039	95-N(16)	N-2(13)	ZONE 10 434000E 7095000N	E bank of Mackenzie River S of Dahadinni River	gravel & sand -alluvial veneer silt & sand	2-3	30.00	A) 65.000 B) 0.000 C) 0.000 D) 65.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
9.040	95-N(16)	188-X(4) N-50(13)	ZONE 10 444000E 7092000N	active stream channel at Blackwater River	sand & gravel -stratified -variable gradation -variable silt content -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial plain			
9.041	95-N(10)	95-N-B1(1) P-191(3), 191(4) N-22(13) P-87(20) P-191(22) P-191(21)	ZONE 10 448000E 7092000N	N of Blackwater River	gravel -well graded, fine to coarse, cobblely, matrix of coarse sand sand - poorly graded, fine to medium	1-2	4.50	A) 22.200 B) 11.100 C) 6.700 D) 4.400 E) 0.000 F) 0.000	glaciofluvial outwash plain			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
well drained low	- 0-0.3	access by snow road to proposed Mackenzie Hwy 3 km E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.032
good low	org. topsoil 0-0.6	seismic cutlines from CNT must cross thermally sensitive line & proposed Mackenzie terrain Hwy		7/ 5.20	0/ 0.00	A) B) C) D)	8 4 1 2	fair	excellent high	9.033
good unfrozen to low	0-0.3	CNT line & proposed Mackenzie Highway	Buffer zone between development areas & highway for aesthetic reasons, existing pit	12/ 7.30	1/ 2.10	A) B) C) D)	2 3 1 2	fair	excellent high	9.034
good W, poor E high	silty sand	difficult access	doubtful quality, ice rich sediments, difficult access	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to unsuitable low	9.035
good moderate/high	glac/lacus silt & clay, thin	difficult access	bedrock slightly weathered in surficial zone - quarry operation	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good high	9.036
good low	org. topsoil 0-0.3	CNT line & proposed Mackenzie Hwy	buffer zone next to Mackenzie Hwy for aesthetic reasons	14/ 7.50	0/ 0.00	A) B) C) D)	43 22 1 2	fair	excellent high	9.037
-	org. topsoil thin layer	existing seismic cutlines - from proposed Mackenzie Hwy		5/ 7.50	0/ 0.00	A) B) C) D)	26 15 0 0	poor	good to excellent high	9.038
good low	-	5 km W of proposed Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.039
-	-	CNT line & proposed Mackenzie Hwy	inactive stream channel	7/ 12.20	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable* medium	9.040
well drained unfrozen to low	silt & org.silt - 0-0.3		buffer zone between development & Blackwater River	0/ 0.00	3/ 2.10	A) B) C) D)	0 4 1 3	good	good to excellent high	9.041

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
9.042	95-N(16)	N-50(13) P-84, 85, 86(20) P-88(20)	ZONE 10 449000E 7089000N	active channel Blackwater River	gravel & silt	2-3	13.00	A) 34.700 B) 0.000 C) 0.000 D) 34.700 E) 0.000 F) 0.000	alluvial alluvial plain			
9.043	95-N(16)	189-X(4) N-6(13)	ZONE 10 444000E 7090000N	30m S of Blackwater River adjacent to proposed Mackenzie Hwy	gravel, sandy -some silt -well graded -medium grained	3	0.00	A) 0.038 B) 0.011 C) 0.008 D) 0.019 E) 0.000 F) 0.000	alluvial alluvial gravels over till			
9.044	95-N(16)	190(4) N-23(13) IPP-224kmp(23)	ZONE 10 445000E 7090000N	S bank of Blackwater R., E of proposed Hwy (KP 792)	gravel & sand -well graded -medium to coarse grained -stratified	1	0.00	A) 7.600 B) 0.000 C) 7.600 D) 0.000 E) 0.000 F) 0.020	glaciofluvial glaciofluvial plain			
9.045	96-B(12)	AREA I-E(32)	ZONE 10 458000E 7172000N	S of St Charles Creek	sand & gravel	2-3	3.00	A) 0.050 B) 0.000 C) 0.000 D) 0.050 E) 0.000 F) 0.000	glaciofluvial eskers			
9.046	96-B(12)	AREA I-Gfc(32)	ZONE 10 458000E 7179000N	S of St Charles Creek	sand & gravel	2-3	5.00	A) 1.800 B) 0.000 C) 0.000 D) 1.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.047	96-B(13)	AREA I-Gfc(32)	ZONE 10 467000E 7181000N	S of St Charles Creek	sand & gravel	2-3	5.00	A) 12.100 B) 0.000 C) 0.000 D) 12.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.048	96-B(12)	AREA I-Gfc(32)	ZONE 10 467000E 7172000N	S of St Charles Creek	sand & gravel	2-3	5.00	A) 1.800 B) 0.000 C) 0.000 D) 1.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.049	96-B(11)	AREA I-Gfc(32)	ZONE 10 480000E 7174000N	along St Charles Creek	sand & gravel	2-3	5.00	A) 12.100 B) 0.000 C) 0.000 D) 12.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposit			
9.050	96-B(11)	AREA I-E(32)	ZONE 10 480000E 7168000N	SE of St Charles Creek	sand & gravel	2-3	3.00	A) 0.050 B) 0.000 C) 0.000 D) 0.050 E) 0.000 F) 0.000	glaciofluvial eskers			
9.051	96-B(11)	AREA I-Gf(32)	ZONE 10 477000E 7167000N	SE of St Charles Creek	sand & gravel	2-3	5.00	A) 1.100 B) 0.000 C) 0.000 D) 1.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	access along proposed Mackenzie Hwy 5 km to the W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	9.042
well	topsoil 0-0.5	short access trail	difficult access to top of knoll, better quality materials available in vicinity	3/ 5.20	0/ 0.00	A) B) C) D)	1 1 1 1	fair	favourable to poor low to medium	9.043
well	org. topsoil 0-0.3	CNT line or proposed Mackenzie Hwy	Blackwater River noted for extensive volumes of poten- tial spawning gravels, buffer zone next to Blackwater River -existing pit	5/ 4.60	0/ 0.00	A) B) C) D)	4 3 1 2	fair	excellent high	9.044
good low	-	remote location E of McConnell River, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.045
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.046
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.047
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.048
fair to good low	-	remote location E of Camsell River, access by snow road W to the Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.049
good low	-	remote location E of McConnell River, access by snow road to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.050
fair to good low	-	remote location E of Camsell River, access by snow road W to the Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.051

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9.052	96-B(6)	AREA III Gf(32)	ZONE 10 482000E 7146000N	NW of Blackwater Lake	sand & gravel	2-3	5.00	A) 18.800 B) 0.000 C) 0.000 D) 18.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terraces			
9.053	96-B(6)	AREA III Gf(32)	ZONE 10 498000E 7148000N	N of Blackwater Lake	sand & gravel	2-3	8.00	A) 15.000 B) 0.000 C) 0.000 D) 15.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
9.054	96-B(7)	AREA III Gf(32)	ZONE 10 512000E 7143000N	NE of Blackwater Lake	sand & gravel	2-3	8.00	A) 18.000 B) 0.000 C) 0.000 D) 18.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
9.055	96-B(3)	AREA VI-Gfc(32)	ZONE 10 500000E 7124000N	N of Blackwater Lake	sand & gravel	2-3	8.00	A) 53.800 B) 0.000 C) 0.000 D) 53.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.056	96-B(4)	AREA VIII-Gfc (32)	ZONE 10 461000E 7122000N	in the Franklin Mountains NW of Twin Peaks	sand & gravel	2-3	5.00	A) 1.240 B) 0.000 C) 0.000 D) 1.240 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.057	96-B(4)	AREA VIII-F(32)	ZONE 10 464000E 7115000N	E slope of McConnell Range	sand & gravel	2-3	3.00	A) 3.400 B) 0.000 C) 0.000 D) 3.400 E) 0.000 F) 0.000	fluvial fluvial deposits			
9.058	96-B(4)	AREA VIII-GF (32)	ZONE 10 464000E 7117000N	E of McConnell Range	sand & gravel	2-3	8.00	A) 142.400 B) 0.000 C) 0.000 D) 142.400 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain deposits			
9.059	96-B(4)	AREA VIII-F(32)	ZONE 10 472000E 7106000N	W of Twin Peaks	sand & gravel	2-3	3.00	A) 0.838 B) 0.000 C) 0.000 D) 0.838 E) 0.000 F) 0.000	fluvial fluvial deposits			
9.060	96-B(4)	AREA VIII-Gfc (32)	ZONE 10 476000E 7109000N	N of Twin Peaks	sand & gravel	2-3	5.00	A) 2.500 B) 0.000 C) 0.000 D) 2.500 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.061	96-B(3)	AREA VII-Gfc (32)	ZONE 10 492000E 7111000N	W of Blackwater Lake	sand & gravel	2-3	5.00	A) 10.900 B) 0.000 C) 0.000 D) 10.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
Fair to good low	-	remote location E of McConnell River, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.052
Fair to good low	-	remote location E of McConnell River, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.053
Fair to good low	-	remote location E of McConnell River, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.054
Fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.055
Fair to good low	-	remote location in the McConnell Range, access by snow road E, S & W to the Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.056
Fair to good low	-	remote location in the McConnell Range, access by snow road E, S & W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.057
Fair to good low	-	remote location in the McConnell Range, access by snow road E, S & W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.058
Fair to good low	-	remote location in the McConnell Range, access by snow road S & W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.059
Fair to good low	-	remote location on E side of McConnell Range, access by snow road S and W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.060
Fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.061

SITE IDENTIFICATION						SOURCE DESCRIPTION						
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9.062	96-B(3)	AREA VII-Gfc (32)	ZONE 10 487000E 7102000N	W of Blackwater Lake.	sand & gravel	2-3	5.00	R) 5.200 B) 0.000 C) 0.000 D) 5.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.063	96-B(2)	AREA VI-Gfc(32)	ZONE 10 502000E 7114000N	E bank of Blackwater Lake	sand & gravel	2-3	8.00	R) 26.900 B) 0.000 C) 0.000 D) 26.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.064	96-B(2)	AREA VI-Gfc(32)	ZONE 10 502000E 7106000N	E of Blackwater Lake	sand & gravel	2-3	8.00	R) 26.900 B) 0.000 C) 0.000 D) 26.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.065	96-B(2)	AREA VI-E(32)	ZONE 10 505000E 7103000N	E of Blackwater Lake	sand & gravel	2-3	3.00	R) 0.470 B) 0.000 C) 0.000 D) 0.470 E) 0.000 F) 0.000	glaciofluvial eskers			
9.066	96-B(2)	AREA VI-E(32)	ZONE 10 502000E 7104000N	E of Blackwater Lake	sand & gravel	2-3	3.00	R) 0.470 B) 0.000 C) 0.000 D) 0.470 E) 0.000 F) 0.000	glaciofluvial eskers			
9.067	96-B(2)	AREA VI-Gfc(32)	ZONE 10 503000E 7100000N	E of Blackwater Lake	sand & gravel	2-3	8.00	R) 53.800 B) 0.000 C) 0.000 D) 53.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial channelled deposits			
9.068	95-O(13)	O-49(16)	ZONE 10 470000E 7084000N	active channel of Blackwater River	gravel & sand +trace silt	2-3	10.00	R) 144.800 B) 0.000 C) 0.000 D) 144.800 E) 0.000 F) 0.000	alluvial alluvial plain			
9.069	95-O(14)	O-47(16)	ZONE 10 480000E 7096000N	9.7 km N of Blackwater River, 9.7km W of Blackwater Lake	gravel +some sand	2-3	15.00	R) 32.700 B) 0.000 C) 0.000 D) 32.700 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge			
9.070	95-O(14)	O-46(16)	ZONE 10 486000E 7093000N	3.2 km N of Blackwater Lake	gravel +some sand	2-3	15.00	R) 3.100 B) 0.000 C) 0.000 D) 3.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
9.071	96-C(6)	AREA VIII-E(33)	ZONE 10 393000E 7133000N	SE of Stewart Lake N of Keele River	sand & gravel	2-3	6.00	R) 0.031 B) 0.000 C) 0.000 D) 0.031 E) 0.000 F) 0.000	glaciofluvial eskers			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.062
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	shoreline of Blackwater Lake	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	9.063
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	near shoreline of Blackwater Lake	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	9.064
good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.065
good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	near shoreline of Blackwater Lake	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	9.066
fair to good low	-	remote location E of McConnell Range, access by snow road W to Mackenzie Valley	part of deposit near shoreline of Blackwater Lake	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent*	9.067
good low	-	35 km E of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	9.068
good low	-	35 km E of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good*	9.069
good low	-	40 km E of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	9.070
fair to good low	-	access by snow road 24 km NE to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.071

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9.072	96-C(3)	AREA X-F(33)	ZONE 10 418000E 7110000N	active channel of Redstone River	gravel & silt	3-4	5.00	A) 112.400 B) 0.000 C) 0.000 D) 112.400 E) 0.000 F) 0.000	fluvial floodplain	
9.073	96-C(7)	229(4) AREA X-Ap(33)	ZONE 10 410000E 7142000N	Keele River alluvial flood plain	silt & sand -stratified gravel -bars -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial flood plain	
9.074	96-C(7)	223(4)	ZONE 10 413000E 7138000N	W bank of Mackenzie R., S of the mouth of the Keele River	silty sand -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace	
9.075	96-C(7)	222(4)	ZONE 10 415000E 7134000N	W bank of Mackenzie River 9.7km N of Redstone River	silty sand -fine grained -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace	
9.076	96-C(8)	216(4) AREA X-Ap(33)	ZONE 10 425000E 7128000N	W of Mackenzie River -flood plain of Redstone River	silt & sand -stratified -gravel layers & pockets -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial flood plain	
9.077	96-C(2)	AREA X-F(33)	ZONE 10 390000E 7127000N	active channel of Keele River	gravel & silt	3-4	5.00	A) 337.100 B) 0.000 C) 0.000 D) 337.100 E) 0.000 F) 0.000	fluvial floodplain	
9.078	96-C(2)	210(4) AREA X-Ap(33)	ZONE 10 429000E 7120000N	W of Mackenzie River, 9.7km S of Redstone River	silty sand -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace	
9.079	95-N(13)	N-64(13)	ZONE 10 368000E 7098000N	12.9 km NW of Redstone River	gravel -sandy	2-3	7.60	A) 4.400 B) 0.000 C) 0.000 D) 4.400 E) 0.000 F) 0.000	alluvial alluvial fan	
9.080	95-N(13)	N-65(13)	ZONE 10 369000E 7093000N	6.4 km NW of Redstone River	gravel -sandy	2-3	7.60	A) 6.200 B) 0.000 C) 0.000 D) 6.200 E) 0.000 F) 0.000	alluvial alluvial fan	
9.081	95-N(13)	N-15(13)	ZONE 10 374000E 7089000N	W bank of Redstone River	gravel & sand	2-3	15.20	A) 44.500 B) 0.000 C) 0.000 D) 44.500 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	access by snow road 7-70 km E to W bank of Mackenzie River	active channel of Redstone River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good* medium to high	9.072
fair	-	must cross Mackenzie R.	crossing of Mackenzie River, deposits are in the active channel	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable* medium	9.073
fair	topsoil & silt	access difficult	must cross Mackenzie River, very marginal fill material only	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	9.074
fair	topsoil & silt	access difficult	must cross Mackenzie River, rugged terrain, very marginal fill material only	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	9.075
fair	-	must cross Mackenzie River	deposits located in the active stream channel of Redstone River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor* low	9.076
fair to good low	-	access by snow road 1-35 km E to W bank of Mackenzie River	active channel of Keele River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good* medium to high	9.077
fair	topsoil & silt thickly layered	access difficult	must cross Mackenzie River, very marginal general fill material only	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	9.078
good low to moderate	-	55-60 km W of Mackenzie River, no access except for snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.079
good low to moderate	-	55-60 km W of Mackenzie River, no access except for snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.080
good low	-	55-60 km W of Mackenzie River, no access except for snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.081

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BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
9.082	95-N(13)	N-41,66,67(13)	ZONE 10 376000E 7089000N	active channel of Redstone River	gravel -sandy	1-3	8.00	R) 60.000 B) 0.000 C) 0.000 D) 60.000 E) 0.000 F) 0.000	alluvial alluvial fan and plain deposits			
9.083	95-N(14)	N-42,43(13)	ZONE 10 398000E 7091000N	active channel of Redstone River	gravel & sand	1-3	10.00	R) 66.700 B) 0.000 C) 0.000 D) 66.700 E) 0.000 F) 0.000	alluvial alluvial plain & terrace			
9.084	95-N(12)	N-37,38,39(13) N-40,8,9,10(13) N-11,34(13)	ZONE 10 380000E 7057000N	active channel of Redstone River	gravel & sand	1-3	12.00	R) 127.600 B) 0.000 C) 0.000 D) 127.600 E) 0.000 F) 0.000	glaciofluvial & alluvial terraces			
9.085	95-N(10)	N-56,57(13)	ZONE 10 394000E 7064000N	active channel of Dahadinni River 8 km SW of Mount Haywood	sand & gravel	1-3	13.00	R) 3.200 B) 0.000 C) 0.000 D) 3.200 E) 0.000 F) 0.000	alluvial alluvial plains & terraces			
9.086	95-N(15)	N-44,45,46(13) N-47,48(13) C-28(20) R-72,73(20)	ZONE 10 414000E 7082000N	active channel of Dahadinni River	gravel & sand	1-3	13.00	R) 148.000 B) 0.000 C) 0.000 D) 148.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
9.087	95-N(16)	N-3(13)	ZONE 10 436000E 7092000N	S of Mackenzie River 4.8 km SE of Dahadinni River	gravel & sand -alluvial veneer silt & sand	2-3	30.00	R) 39.400 B) 0.000 C) 0.000 D) 39.400 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
9.088	95-N(16)	N-49(13)	ZONE 10 438000E 7090000N	SW of Mackenzie River 6.4 km SE of Dahadinni River	gravel & silt	2-3	10.00	R) 18.300 B) 0.000 C) 0.000 D) 18.300 E) 0.000 F) 0.000	alluvial alluvial plain			
9.089	95-N(16)	N-4(13)	ZONE 10 440000E 7091000N	S bank of Mackenzie River	gravel & sand -silt & sand alluvial veneer	2-3	30.00	R) 117.000 B) 0.000 C) 0.000 D) 117.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
9.090	95-N(16)	187(4) N-4(13)	ZONE 10 441000E 7091000N	opposite mouth of Blackwater River on W bank of Mackenzie River	gravel & sand -stratified -well graded -volumes not determined	2	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
9.091	95-N(16)	186(4)	ZONE 10 442000E 7088000N	2.4km S of Blackwater River, 2.4km W of Hwy (KP 792)	sand & gravel -stratified -well graded -volumes not determined	2	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	55-60 km W of Mackenzie River, access by snow roads	active channel of Redstone River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	9.082
fair to good low	-	W side of Mackenzie River, access via snow roads	active channel of Redstone River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	9.083
fair to good low	-	70 km W of Mackenzie River, access by snow roads	active channel of Redstone River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	9.084
fair to good low	-	45 km W of Mackenzie River, no access except for snow roads	active channel of Dahadinni River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	9.085
fair to good low	-	must cross Mackenzie River to reach proposed Mackenzie Hwy	active channel of Dahadinni River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	9.086
fair to good low	-	must cross Mackenzie River to reach proposed Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.087
fair to good low	-	must cross Mackenzie River to reach proposed Mackenzie Hwy	active channel of small creek	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good* medium to high	9.088
fair to good low to moderate	silt veneer	must cross Mackenzie River to reach proposed Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	9.089
well	org. topsoil & silt	access difficult, must cross Mackenzie R.	difficulties in crossing the Mackenzie River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	9.090
well	org. topsoil & silt	difficult access must cross Mackenzie River	crossing Mackenzie River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	9.091

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
9.092	96-C(7)	B.P. 114(45)	ZONE 10 426000E 713300N	N of Saline River E of Mackenzie Highway (KP 839)	clay -silt -tilt -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	moraine morainal plain		
9.093	96-C(7)	B.P. 110, 111(45)	ZONE 10 428000E 712900N	S of Saline River West of Mackenzie Highway (KP 833)	sand -silt -clay -volumes not determined	NG & 2-4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	fluvial fluvial terrace		
9.094	96-C(1)	B.P. 104, 105(45) B.P. 106, 107(45)	ZONE 10 431000E 712400N	along Mackenzie Highway (KP 826)	fine sand -silt -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	fluvial fluvial terrace		
9.095	96-C(1)	B.P. 100, 101(44) B.P. 102, 103(44)	ZONE 10 434000E 711200N	along the Mackenzie Highway (KP 813)	sand -silt -clay -volumes not determined	NG & 2-4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
9.096	96-C(1)	B.P. 99(44)	ZONE 10 438000E 710200N	W of Mackenzie Highway (KP 800)	sand and gravel	3	9.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial glaciofluvial plain		
9.097	96-C(1)	B.P. 95, 96(44)	ZONE 10 440000E 709800N	E of Mackenzie Highway (KP 794)	sand and silt and clay -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
9.098	95-N(16)	B.P. 93(44) B.P. 97(44)	ZONE 10 441000E 709600N	W of Mackenzie Highway (KP 792)	sand and silt and clay	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
10.001	95-N(16)	185(4) N-5, 6(13) R-80(20)	ZONE 10 446000E 708500N	5km S of Blackwater River, Hwy (KP 785-789)	gravel-sandy, medium grained -traces silt, clay	3	0.00	A) B) C) D) E) F)	1.900 0.800 0.300 0.800 0.000 0.000	alluvial alluvial terrace		
10.002	95-D(13)	182(4)	ZONE 10 453000E 708400N	9.7km SE of Blackwater River, 2.4km E of Mackenzie River	Devonian limestone & dolomite -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock		
10.003	95-D(13)	181(4)	ZONE 10 454000E 708200N	9.7km E of Blackwater River, 4.8km E of Mackenzie River	Devonian limestone & dolomite -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boresholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to poor low to moderate	-	proposed Mackenzie Highway crosses deposit	-	7/ 7.50	0/ 0.00	A) B) C) D)	40 20 0 6	fair	poor low	9.092
fair low to moderate	-	proposed Mackenzie Highway crosses deposit	-	16/ 7.50	0/ 0.00	A) B) C) D)	67 35 0 71	fair	poor low	9.093
fair low to moderate	-	proposed Mackenzie Highway crosses deposit	-	26/ 9.00	0/ 0.00	A) B) C) D)	156 79 0 24	fair-good	poor low	9.094
poor to fair low to high	-	proposed Mackenzie Highway crosses deposit	-	24/ 9.00	0/ 0.00	A) B) C) D)	166 86 0 20	fair	poor low	9.095
fair to good low	-	proposed Mackenzie Highway crosses deposit	-	5/ 7.50	0/ 0.00	A) B) C) D)	15 14 0 0	fair	favourable to good medium to high	9.096
fair low to moderate	-	proposed Mackenzie Highway is 1 km W of deposit	-	7/ 7.50	0/ 0.00	A) B) C) D)	40 21 0 6	fair-good	poor low	9.097
fair low to moderate	-	proposed Mackenzie Highway is 1 km from deposit	-	9/ 7.50	0/ 0.00	A) B) C) D)	55 28 0 8	fair-good	poor low	9.098
Fair to good well	topsoil 0-0.3	CNT line or proposed Mackenzie Hwy	selective excavation may be necessary, buffer zone next to Mackenzie River	7/ 6.70	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable medium	10.001
	-	extension of an existing seismic cutline	bedrock slightly weathered in surficial zone, quarrying operation	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good to excellent high	10.002
	-	extension of existing seismic cutline	bedrock weathered in surficial zone, quarry operation	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good to excellent high	10.003

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM		
10.004	95-0(13)	184(4) 0-48(16)	ZONE 10 450000E 7079000N	16km S of Blackwater River, Hwy (KP 776-777)	gravel-some sand -traces silt & clay -medium to coarse grained	3	0.00	A) 1.100 B) 0.600 C) 0.300 D) 0.200 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.005	95-0(13)	183(4) 0-48(16) P-183(21)	ZONE 10 451000E 7078000N	17.7km S of Blackwater River, Hwy (KP 774-776)	gravel, sandy -some silty & clay -medium grained	3	0.00	A) 0.760 B) 0.150 C) 0.150 D) 0.460 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.006	95-0(13)	P-133(3) P-133(22)	ZONE 10 453000E 7075000N	1.6 km E of Mackenzie River N bank Lam Creek	gravel, sand & silt	2-4	3.00	A) 1.900 B) 0.000 C) 0.000 D) 1.900 E) 0.000 F) 0.000	alluvial alluvial plain		
10.007	95-0(12)	178(4) 0-68(16) IPP-257kmp(23) B.P. 86, 86R(44)	ZONE 10 457000E 7065000N	3.2km N of rainbow Creek E bank of Mackenzie R. Hwy (KP 758-761)	sand & gravel(some till) -stratified -medium grained -silt content variable	3 (some 4)	0.00	A) 1.500 B) 0.800 C) 0.400 D) 0.300 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.008	95-0(12)	177(4) 0-68(16) IPP-260kmp(23) B.P. 85 (44)	ZONE 10 460000E 7062000N	1.6km S of Rainbow Creek E bank of Mackenzie R. Hwy (KP 756-758)	sand & gravel -stratified -medium grained -silt content variable	3	0.00	A) 0.570 B) 0.400 C) 0.113 D) 0.057 E) 0.000 F) 0.003	alluvial alluvial terrace		
10.009	95-0(12)	176(4) 0-66(16) C-12(20) IPP-266kmp(23) B.P. 80, 81 (44) BP 82, 83, 84(44)	ZONE 10 461000E 7053000N	16km N of Ochre River, Hwy (KP 748-756)	sand & gravel -stratified -medium grained -varying silt content	3	0.00	A) 7.600 B) 3.000 C) 2.300 D) 2.300 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.010	95-0(12)	P-174(3) P-174(22) P-174(21)	ZONE 10 467000E 7054000N	6.4 E of Mackenzie River	gravel & sand	2-4	3.00	A) 1.900 B) 0.000 C) 0.000 D) 1.900 E) 0.000 F) 0.000	alluvial alluvial meander plain		
10.011	95-0(12)	175(4) V-16(20)	ZONE 10 470000E 7056000N	48.3km N of Wrigley, western flank of McConnell ridge	Devonian limestone & dolomite -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock		
10.012	95-0(12)	174(4) P-61, 62, 65(20) P-173(21)	ZONE 10 468000E 7052000N	48.3km N of Wrigley, E of Mackenzie River on Whitesand Creek	silty sand & gravel -stratified -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.013	95-0(12)	173(4)	ZONE 10 470000E 7051000N	43.5km N of Wrigley, 8km E of proposed Hwy (KP 904)	Devonian limestone & dolomite -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good	org. topsoil thin	CNT line or proposed Mackenzie Hwy	buffer zone between develop- ment & mackenzie River	5/ 7.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor to favourable low to medium	10.004	
fair	org. topsoil thin	CNT line & proposed Hwy	buffer zone between develop- ment & Mackenzie River	2/ 6.10	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor to favourable low to medium	10.005	
good low to moderate	0-1.0	access by snow road to proposed Mackenzie Hwy 2 km W	-existing pit	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	favourable to good medium to high	10.006	
fair	org. topsoil 0.3-2.0	CNT line or proposed Hwy	buffer zone between develop- ment & Mackenzie River	22/ 9.00	2/ 0.00	A) 86 B) 49 C) 0 D) 9	fair	poor to favourable low to medium	10.007	
fair	org. topsoil 0.3-2.0	CNT line proposed Hwy	buffer zone between develop- ment & Mackenzie River -existing pit	10/ 9.00	0/ 0.00	A) 37 B) 19 C) 0 D) 4	fair	poor to favourable low to medium	10.008	
well	org. topsoil & silt 0.3-3.0	CNT line & proposed Hwy	selective excavation	31/ 9.00	0/ 0.00	A) 166 B) 83 C) 0 D) 22	fair	favourable medium	10.009	
good low	0-0.5	access by snow road to proposed Mackenzie Hwy 5 km W	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	10.010	
well	-	extension of existing seismic cutline	quarrying operation	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	good high	10.011	
well	org. silt thin	-	deposits in active stream channel	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor to favourable* low to medium	10.012	
well	-	new short cutline from proposed gas pipeline route	quarrying operation	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	10.013	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
10.014	95-0(12)	170(4) 0-66(16) P-170(3) P-170(22) P-170(21) B.P. 79, 79R(44)	ZONE 10 463000E 704700N	Mouth of Whitesand Creek, N bank, Hwy (KP 740-745)	sand & gravel -stratified -medium grained -silt content variable	3	6.10	R) 1.500 B) 0.800 C) 0.500 D) 0.200 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.015	95-0(12)	172(4)	ZONE 10 467000E 704700N	41.8km N of Wrigley	sands & gravel -stratified -volumes not determined	4	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.005	alluvial alluvial terrace			
10.016	95-0(12)	169(4) 0-65(16) B.P. 76, 77(44) B.P. 78(44)	ZONE 10 464000E 704400N	Mouth of Whitesand Creek on S Bank Hwy (KP735-739)	sand & gravel -stratified -medium grained -silt content variable	2-3	0.00	R) 0.760 B) 0.456 C) 0.228 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.017	95-0(12)	166(4)	ZONE 10 470000E 704200N	1.6km N of Ochre River 4.8km E of proposed Mac- kenzie Hwy (KP 737)	dolomite & limestone -slightly weathered in surficial zone -sound & competent at depth -volumes unlimited	5	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock			
10.018	95-0(5)	167-X(4) P-54(20)	ZONE 10 469000E 704100N	N Bank of Ochre River 3.2km E of proposed Mackenzie Hwy (KP733)	silt with varying con- tents of sand & clay -volumes not determined	NG	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine terrace or plain			
10.019	95-0(5)	165(4) 0-64(16) P-51, 52, 53(20)	ZONE 10 468000E 703900N	32.2km N of Wrigley alluvial plain of meandering Ochre River	sand & gravel -volumes not determined	2-3	0.00	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial plain			
10.020	95-0(5)	168(4)	ZONE 10 466000E 703900N	Mouth of Ochre River on N Bank, Hwy (KP 730-733)	sand & gravel -stratified -medium grained -some silt	3	4.50	R) 2.300 B) 0.900 C) 0.700 D) 0.700 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.021	95-0(6)	0-57, 58, 13(16) 0-12, 14, 63(16) 0-64(16) R-44, 45, 46(20)	ZONE 10 490000E 704300N	active channel of Ochre River	gravel & sand	2-3	10.00	R) 158.600 B) 0.000 C) 0.000 D) 158.600 E) 0.000 F) 0.000	alluvial terraces & plains			
10.022	95-0(5)	164(4) 0-64(16) IPP-286kmp(23) B.P. 75(44)	ZONE 10 466000E 703700N	Mouth of Ochre River on South bank, adjacent to proposed Mackenzie Hwy (KP731)	sand & gravel -stratified -medium grained -variable silt content -volumes not determined	3	4.50	R) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.001	alluvial alluvial terrace			
10.023	95-0(5)	0-78, 79(16) R-54(20)	ZONE 10 466000E 703000N	19.3 km NW of Wrigley E bank of Mackenzie River	gravel & sand	2-3	24.00	R) 35.000 B) 0.000 C) 0.000 D) 35.000 E) 0.000 F) 0.000	alluvial alluvial plain			

Source Description				Tests and Assessments						
DRAINAGE/ ICE CONTENT	OVERBURDEN TYPE AND THICKNESS (m)	ACCESS	DEVELOPMENT CONSTRAINTS	NO. OF BOREHOLES/ TESTPITS/ MAX DEPTH (m)	NO. OF TESTPITS/ MAX DEPTH (m)	LABORATORY TESTING	DATA RELIABILITY	OVERALL ASSESSMENT/ STUDY PRIORITY	BORROW SOURCE NUMBER	
fair	org. topsoil thin to thick	CNT line & Hwy	buffer zone between development & Hwy for aesthetic reasons	22/ 10.70	0/ 0.00	A) B) C) D)	61 31 0 9	fair	good to excellent high	10.014
well	org. topsoil & seismic cut lines silt		close proximity of active stream channel, steep valley walls would hamper development -existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor to favourable* low to medium	10.015
fair unfrozen	topsoil & silt 0-0.3	CNT line or Hwy	may need selective excavation, area 'a' has better quality sand & gravel deposits, buffer zone between development & Hwy for aesthetic reasons	34/ 27.40	2/ 2.40	A) B) C) D)	177 95 0 16	fair	good to excellent high	10.016
good	glacial till thin	seismic cutline along N Bank of Ochre River	good quality fill can be produced from the fractured surficial bedrock zones, SW part of site best for quarry location	1/ 3.00	0/ 0.00	A) B) C) D)	1 0 0 0	poor	good high	10.017
high	org. topsoil 0-0.3	CNT line seismic cutline	ice rich silts, unsuitable for any construction purpose, granular quality materials not established	4/ 3.00	0/ 3.00	A) B) C) D)	0 0 0 0	poor	unsuitable low	10.018
good	organic silt	existing winter road	not recommended as deposits are in the active channel of the river	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable* medium	10.019
fair unfrozen	org. topsoil thin	CNT line or Hwy	buffer zones between development & Mackenzie & Ochre rivers	6/ 10.70	0/ 0.00	A) B) C) D)	7 7 0 0	poor	good to excellent high	10.020
fair to good low	-	0-35 km E of Mackenzie River, access by snow road and Mackenzie Hwy	active channel of Ochre River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good* high	10.021
fair unfrozen	org. topsoil 0-0.2	CNT line proposed Mackenzie Hwy	selective excavation could produce quality surface course & concrete aggregate, will need crushing, screening existing pit	10/ 9.10	0/ 0.00	A) B) C) D)	25 13 0 0	poor/fair	favourable medium	10.022
good low	-	access via Mackenzie Hwy 3 km to the E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	10.023

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM		
10.024	95-0(5)	161(4)	ZONE 10 475000E 7034000N	25.7km N of Wrigley, 3.2km S of Ochre River	Devonian limestone, lime- stone breccia & dolomite -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock	
10.025	95-0(5)	162(4)	ZONE 10 473000E 7033000N	9.7km S of Ochre river 2.4km E of proposed Mac- kenzie Hwy	a) till b)dolomite & limestone -volumes unlimited	a)NG,b)5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock ridge & glacial till	
10.026	95-0(5)	160(4) B.P. 70(44)	ZONE 10 472000E 7029000N	16.9km N of Wrigley	limestone -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock ridge	
10.027	95-0(5)	W-16X(9)	ZONE 10 467000E 7023000N	14.5 km NW of Wrigley W slope of Mount Gaudet	gravel -sandy -limestone fragments	3-4	10.00	A) B) C) D) E) F)	0.760 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace & fan	
10.028	95-0(5)	W-15X(9) R-50(20)	ZONE 10 469000E 7022000N	12.8 to 14.5 km NW of Wrigley, hills known as Mount Gaudet and Riche Qui Trempe a l'Eau.	limestone -dolomite -breccia -volumes unlimited	5	30.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock	
10.029	95-0(5)	445-1(25) B.P. 69(44)	ZONE 10 472000E 7025000N	E slope of Mount Gaudet	sand silt, gravel	sand 3-4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	colluvium slope deposits	
10.030	95-0(6)	159(4) P-44(20) IPP-298kmp(23)	ZONE 10 476000E 7027000N	3.2km N of Hodgson Creek 4.8km E of proposed Mackenzie Hwy (KP 717)	gravel -well graded, medium grained, trace silt	3	3.50	A) B) C) D) E) F)	0.760 0.456 0.228 0.760 0.000 0.001	alluvial alluvial fan	
10.031	95-0(6)	W-4X(9)	ZONE 10 485000E 7020000N	4 km E of Wrigley McConnell Range	Devonian limestone -brecciated dolomite -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock	
10.032	95-0(5)	W-14X(9)	ZONE 10 470000E 7019000N	11.2 km NW of Wrigley E bank of Mackenzie River - SE base of Roche Qui Trempe a l'Eau	limestone fragments (Devonian) -fine to coarse ground -intermixed with sands & silts -overlying bedrock	2-3	1.50	A) B) C) D) E) F)	0.190 0.000 0.040 0.150 0.000 0.000	colluvium bedrock fragments (colluvium)	
10.033	95-0(6)	95-0-B1(1), W-9(9),V-14(20) P-38,39(20) P-40,41(20) P-159(3,21,22) IPP-303kmp(23)	ZONE 10 477000E 7022000N	near Hodgson Creek on flank of McConnell Range	gravel -medium to coarse -well graded -occasional boulder -sand & silt lenses	2	2.00	A) B) C) D) E) F)	11.300 5.600 3.400 2.300 0.000 0.000	alluvial alluvial fan	

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
well drained	-	no existing access	blasting & crushing needed to produce aggregate, new access road to be built	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good to excellent high	10.024	
a)poor, b)well a)high, b)low	org. topsoil 0-0.3	ONT line proposed Mackenzie Hwy	blasting & crushing needed to produce aggregate	2/ 3.70	0/ 0.00	A) B) C) D)	0 0 0 0	fair	good high	10.025	
-	-	proposed Mackenzie Hwy	blasting needed to extract limestone, existing quarry	6/ 9.00	0/ 0.00	A) B) C) D)	39 20 0 5	fair	good high	10.026	
good unfrozen	topsoil 0-0.2	difficult access	thermal springs, access difficult, better quality material in study area	0/ 0.00	2/ 1.40	A) B) C) D)	0 2 1 0	poor	poor to favourable* low to medium	10.027	
well	colluvium 0-0.3	winter road, Mackenzie River	thermal springs fault zones	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable* medium	10.028	
fair to good low	-	access via proposed Mackenzie Hwy	-	5/ 8.50	0/ 0.00	A) B) C) D)	24 11 0 4	poor	favourable to poor medium to low	10.029	
well drained low	topsoil 0-0.2	no existing access from ONT line	lack of access existing pit	5/ 6.70	0/ 0.00	A) B) C) D)	0 1 1 2	fair	good high	10.030	
well	none	winter road & existing seismic cutlines	quarry operation	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.031	
good	topsoil 0-0.2	existing winter road 1.6 km to E of area	other sites with better quality & better access, thermal springs & unique surrounding vegetation	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable* medium	10.032	
well drained low to unfrozen	silt 0.3-1.5	snow roads	buffer zone next to Hodgson Creek	2/ 6.10	9/ 1.70	A) B) C) D)	0 5 1 1	poor	good high	10.033	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
10.034	95-0(5)	441-2(25) 441-1(25) B.P. 65(44)	ZONE 10 472000E 7018000N	E of Mackenzie River	sand, silt & till	4 to MG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine deposits		
10.035	95-0(5)	439-1(25)	ZONE 10 473000E 7015000N	N of Mackenzie Hwy E of Mackenzie River	sand & gravel -volumes not determined	2-3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.036	95-0(4)	W-12(19)	ZONE 10 472000E 7014000N	3.5 km N of Wrigley E bank of Mackenzie River	gravel -sandy -well graded -medium grained	2-3	3.00	A) 0.500 B) 0.200 C) 0.100 D) 0.200 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.037	95-0(4)	W-13(9) 438-1(25)	ZONE 10 473000E 7014000N	4 km N of Wrigley 0.8 km E of Mackenzie River	gravel -sandy -well graded -medium grained	2	1.50	A) 0.750 B) 0.300 C) 0.150 D) 0.300 E) 0.000 F) 0.000	glaciofluvial outwash deposit		
10.038	95-0(3)	W-7(9)	ZONE 10 476000E 7013000N	1.6 km NE of Wrigley S bank of Hodgson Creek	sand & gravel -clean -well graded -medium grained	1	3.00	A) 0.200 B) 0.060 C) 0.040 D) 0.100 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.039	95-0(3)	W-10X(9) 437-1(25)	ZONE 10 475000E 7012000N	0.8 km NW of Wrigley W bank of Hodgson Creek	gravel -sandy -medium to coarse grained -well graded	2	1.50	A) 0.230 B) 0.023 C) 0.023 D) 0.184 E) 0.000 F) 0.000	alluvial alluvial terrace remnant		
10.040	95-0(3)	W-8X(9)	ZONE 10 476000E 7012000N	active stream channel of Hodgson Creek	sand & gravel -stratified -some silt -volumes not determined	3	1.50	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial plain deposits		
10.041	95-0(3)	W-6(9) P-32(20) 435-1(25) B.P. 59(43) B.P. 60(44)	ZONE 10 476000E 7011000N	0.4 km N of Wrigley SE of Hodgson Creek	gravel & sand -medium grained -well graded -stratified	1	7.60	A) 0.750 B) 0.375 C) 0.150 D) 0.225 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.042	95-0(3)	W-5(3,9,21,22) 0-85(16) R 53,54(20) C-54(20) 433,434-1(25) MRP4(40)	ZONE 10 477000E 7010000N	at Wrigley, E bank of Mackenzie River	gravel -coarse -well graded -sandy	1	6.00	A) 7.600 B) 1.500 C) 0.800 D) 5.300 E) 0.000 F) 0.021	alluvial alluvial terrace		
10.043	95-0(3)	95-0-B2(1) W-1,2(9) 0-85(16) R-56(20) P-31(20) V-13(20)	ZONE 10 482000E 7006000N	confluence of Smith Creek & Mackenzie River	gravel -fine to coarse grained, well to poorly graded, some sand and silt sand -well graded, coarse to fine, silty, gravelly	1-2	10.00	A) 24.600 B) 12.300 C) 7.400 D) 4.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace complex		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to poor low to moderate	-	access via proposed Mackenzie Hwy	-	5/ 7.50	0/ 0.00	A) B) C) D)	35 18 0 5	poor	poor low	10.034
fair to good low	-	access via proposed Mackenzie Hwy 1 km E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.035
good unfrozen	topsoil & silt 0-0.2	no direct access	domestic fishing resource area, must cross Hodgson Creek - may limit to winter operations only	0/ 0.00	3/ 3.40	A) B) C) D)	2 3 1 1	poor	favourable* medium	10.036
fair unfrozen	org. topsoil & silt, 0-0.3	existing winter road	must cross Hodgson Creek, other areas with similar material with better access to Wrigley	3/ 5.50	1/ 1.50	A) B) C) D)	0 1 1 0	poor	favourable to good medium to high	10.037
good unfrozen	topsoil & silt 0-0.2m	no existing access to area	difficult access, similar material available closer to Wrigley	0/ 0.00	1/ 4.30	A) B) C) D)	0 1 0 0	poor	good to excellent high	10.038
fair unfrozen	topsoil & silt 0-0.9	no existing access to area from existing winter road	difficult access, crossing of Hodgson Creek, thick overburden, deposits are adjacent to active stream channel	0/ 0.00	1/ 2.30	A) B) C) D)	0 1 1 0	poor	favourable to good* medium to high	10.039
good unfrozen	none	no existing access to area	deposits in active stream channel Hodgson Creek	0/ 0.00	0/ 0.00	A) B) C) D)	0 1 0 0	none	favourable* medium	10.040
good low	topsoil & silt 0-0.9	winter road	same material available at site 10.042 - greater amount, may be future site for town expansion	17/ 9.00	2/ 2.40	A) B) C) D)	90 44 1 14	fair	excellent* high	10.041
good low	topsoil & silt 0-0.5	adjacent to townsite & airport	buffer zone next to Mackenzie R., community pit at W edge of town depleted - major source for Wrigley, close to airstrip, 2 pits - 1) N of airpt, 2) between airpt & town	9/ 4.60	5/ 2.10	A) B) C) D)	9 4 2 0	fair-good	excellent* high	10.042
well drained low to neglig.	silt 0.2-1.2	Mackenzie Hwy	buffer zone between highway and excavations, buffer zone next to creek to prevent siltation & slope failures	12/ 12.20	4/ 3.00	A) B) C) D)	22 24 2 4	good	good to excellent high	10.043

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
10.044	95-0(3)	W-3X(9) D-85(16)	ZONE 10 484000E 7005000N	9.6 km SE of Wrigley, S of Smith Creek	gravel & silt -poorly graded -stratified	3	1.00	A) 0.750 B) 0.300 C) 0.150 D) 0.300 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.045	95-0(3)	428-1(25)	ZONE 10 484000E 7004000N	E of Mackenzie River S of Smith Creek (KP 686)	sand & gravel	2-3	0.00	A) 0.145 B) 0.000 C) 0.000 D) 0.000 E) 0.107 F) 0.000	alluvial alluvial terrace			
10.046	95-0(3)	158(2) D-92, 94, 95(16)	ZONE 10 492000E 7003000N	14.5km SE of Wrigley	sandy & silty gravel -stratified -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial/glaciofluvial alluvial fan & kame field			
10.047	95-0(3)	157(2) D-5(16)	ZONE 10 493000E 6999000N	19.3km SE of Wrigley, western toe of McConnell Range	stratified silty & sandy gravel -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial fan			
10.048	95-0(3)	427-1(25)	ZONE 10 486000E 7003000N	E of Mackenzie River	sand & gravel -volumes not determined	2-3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.049	95-0(3)	151(2) P-27(20) R-57(20) 425-1(25) 424-1(25) BP 56(28, 43)	ZONE 10 487000E 7000000N	27.3km S of Wrigley	gravel & sand -stratified -variable silt content -medium to coarse	3	4.50	A) 1.100 B) 0.600 C) 0.200 D) 0.300 E) 0.075 F) 0.000	glaciofluvial outwash deposits			
10.050	95-0(3)	154(2) D-6(16) P-26(20) R-58(20) 423-1(25) 421-1(25)	ZONE 10 486000E 6998000N	17.7km SE of Wrigley	gravel & sand -medium to coarse -variable silt content	2-3	7.60	A) 7.600 B) 3.800 C) 1.500 D) 2.300 E) 0.000 F) 0.000	glaciofluvial outwash plain			
10.051	95-0(3)	153(2)	ZONE 10 489000E 6998000N	21km SE of Wrigley	gravel -medium grained -poor to well graded	2	0.00	A) 2.300 B) 0.900 C) 0.700 D) 0.700 E) 0.000 F) 0.000	glaciofluvial outwash plain			
10.052	95-0(3)	156(2)	ZONE 10 490000E 6997000N	19.3km SE of Wrigley western toe of McConnell Range	silty sand & gravel deposits -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker ridges			
10.053	95-0(3)	D-92(16) R-59(20)	ZONE 10 487000E 6994000N	22.5 km SE of Wrigley E bank of Mackenzie River	gravel & silt	3-4	12.00	A) 0.003 B) 0.000 C) 0.000 D) 0.003 E) 0.000 F) 0.000	alluvial alluvial terrace			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testsites/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
low	topsoil 0-0.5	winter road	must cross the creek to get to Wrigley	1/ 4.60	1/ 0.90	A) 1 B) 1 C) 1 D) 0	poor	poor to favourable low to medium	10.044	
fair to good low	-	Mackenzie Hwy & Mackenzie River	buffer zone between development and Mackenzie River -existing pit	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	good to excellent high	10.045	
good in kame	-	remote location access difficult	access difficult	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	10.046	
well drained	-	existing & new cut lines	must traverse depressional & thermally sensitive terrain	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	10.047	
fair to good low	-	access via Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	10.048	
good low	peat & org top- soil, 0-0.3	CNT line Mackenzie Hwy	buffer zone between development & Mackenzie River -BP 56 (DPW) pit depleted	18/ 9.00	2/ 1.70	A) 109 B) 63 C) 0 D) 14	fair	favourable medium	10.049	
good unfrozen	topsoil & org. silt 0-0.3	CNT line Mackenzie Hwy	selective excavation	5/ 4.60	6/ 1.70	A) 3 B) 5 C) 1 D) 0	fair	good to excellent high	10.050	
fair very low	topsoil, org. silty sand 0-0.5	CNT line Mackenzie Hwy	must cross muskeg terrain	4/ 4.00	0/ 0.00	A) 3 B) 1 C) 1 D) 1	fair	good to excellent high	10.051	
good	-	new long. access road to be built	stripping large tracts relative to material extracted, access road to be built	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	10.052	
fair to good low to moderate	-	access via proposed Mackenzie Hwy 3 km E	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	10.053	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
10.054	95-0(3)	IPP-332kmp(23)	ZONE 10 491000E 699500N	W of Smith Ridge E of Mackenzie River	sand & gravel	2	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.009	glaciofluvial glaciofluvial plain		
10.055	95-0(3)	P-152(3) P-152(22) P-152(21)	ZONE 10 488000E 699300N	3.2 km E of Mackenzie River	sand, silt & gravel	2-4	3.00	A) B) C) D) E) F)	1.900 0.000 0.000 1.900 0.000 0.000	glaciofluvial outwash plain		
10.056	95-0(3)	152(2)	ZONE 10 488000E 699200N	22.5km SE of Wrigley E of Mackenzie River	a) silty gravel b) sands -fine grained -volumes not determined	a)2, b)4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciifluvial outwash plain		
10.057	95-0(3)	150(2)	ZONE 10 492000E 699200N	24km SE of Wrigley	sand & gravel deposits with silt & till pockets -volumes not determined	3	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial kame terrace		
10.058	95-0(3)	418-1,2(25) 419-1(25) 420-1(25) B.P. 53,54(43) B.P. 55(43)	ZONE 10 490000E 699000N	E of Mackenzie River	sand & silt -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
10.059	95-0(3)	IPP-340kmp(23)	ZONE 10 491000E 699000N	W of Smith Ridge E of Mackenzie River	sand & gravel -volumes not determined	3-4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.004	glaciolacustrine glaciolacustrine plain		
10.060	95-0(3)	0-91(16)	ZONE 10 488000E 698600N	32.1km SE of Wrigley, E bank of Mackenzie River	gravel & silt	3	12.00	A) B) C) D) E) F)	3.800 0.000 0.000 3.800 0.000 0.000	alluvial alluvial terrace		
10.061	95-0(3)	DPW414.4(28) B.P.52(43)	ZONE 10 490000E 698600N	adjacent to Mackenzie Hwy (KP 663)	sand & silt -fine grained -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.033 0.000	glaciolacustrine glaciolacustrine plain		
10.062	95-0(3)	149(2)	ZONE 10 493000E 698700N	4.8km E of Mackenzie R.	Devonian limestone -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock ridge		
10.063	95-0(3)	0-1,2(16)	ZONE 10 497000E 698700N	between Smith Ridge & Bell Ridge, SE of Wrigley	gravel	2-3	15.00	A) B) C) D) E) F)	47.800 0.000 0.000 47.800 0.000 0.000	glaciofluvial glaciofluvial plain		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
good low	-	access by snow road 2 km W to Mackenzie Hwy	existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good to excellent high	10.054	
fair to good low	0-1.5	access by Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	10.055	
poor(a)/fair(b) low	-	Mackenzie Hwy	better quality materials available in immediate vicinity	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good(a), poor(b) low to high	10.056	
well drained low to medium	-	access difficult rugged terrain	access difficult	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.057	
fair low to moderate	-	access via Mackenzie Hwy which crosses deposit	-	24/ 4.50	0/ 0.00	A) B) C) D)	55 49 0 1	none	poor low	10.058	
good low	-	access via Mackenzie Hwy	existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable medium	10.059	
fair to good low to moderate	-	via proposed Mackenzie Hwy 3 km E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.060	
fair low	-	access along Mackenzie Hwy which crosses deposit	existing pit	7/ 7.50	0/ 0.00	A) B) C) D)	26 15 0 6	fair	poor low	10.061	
-	discont. drift & colluvial mat	Mackenzie Hwy	blasting required to extract bedrock	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good high	10.062	
good low	-	access via proposed Mackenzie Hwy 5 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.063	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
10.064	95-J(14)	147(2) IPP-345kmp(23) 416-1(25) 415-1(25) J-69(29) B.P. 51(43)	ZONE 10 488000E 6984000N	E bank of Mackenzie opp. Old Fort Island, 4.8km N of River-Between-Two- Mountains	gravel & sand with silt -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.007	glaciofluvial glaciofluvial terrace and kames			
10.065	95-J(14)	146(2) P-146(3) P-146(6) P-146(22) P-146(21) J-65(29)	ZONE 10 493000E 6984000N	32km SE of Wrigley 4km E of Mackenzie Hwy	sand (coarse) & gravel (medium grained) -well graded -trace silt	2	3.00	A) 0.460 B) 0.276 C) 0.138 D) 0.046 E) 0.000 F) 0.000	glaciofluvial esker ridge complex			
10.066	95-J(14)	148(2)	ZONE 10 497000E 6985000N	6.4km N of River-Between- Two-Mountains, western toe of McConnell Range	sand & gravel -stratified -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial kame terraces & fields			
10.067	95-J(14)	414-1,2,3,4(25) 412-1(25) DPW412.1(28) B.P.49(43)	ZONE 10 490000E 6982000N	E of Mackenzie Hwy (KP 659), N of River-Between-Two- Mountains	sand - silt -fine grained -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.087 F) 0.000	glaciolacustrine glaciolacustrine plain			
10.068	95-J(14)	145-X(2) P-15,16,17(20) 411-1 (25) DPW 410.6(28) B.P.50 (43)	ZONE 10 490000E 6978000N	35.4km SE of Wrigley (657km on Hwy)	stratified silt, sand and clay -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.110	alluvial alluvial fan & terrace			
10.069	95-J(14)	409-1(25) DPW408.6(28) DPW409.6(28) B.P.58(43)	ZONE 10 492000E 6977000N	E of Mackenzie Hwy (KP 654)	sand - silt -fine grained -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.122	glaciolacustrine glaciolacustrine plain			
10.070	95-J(14)	144(2)	ZONE 10 494000E 6978000N	S of River-Between-Two- Mountains, E of Mackenzie Hwy	sand & gravel -minor silt & till inclusions -volumes not determined	3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker			
10.071	95-J(14)	143(2) P-143(3) P-143(22) P-143(21)	ZONE 10 497000E 6978000N	37km SE of Wrigley 5.6km E of Mackenzie Hwy	gravel-some sand, variable grading, medium grained -in pockets & layers	2	3.00	A) 0.760 B) 0.456 C) 0.228 D) 0.076 E) 0.000 F) 0.000	glaciofluvial outwash & esker ridge deposits			
10.072	95-J(14)	95-J-B1(1) 142(2) D-19,21(20) 407,408-1(25) J-58(29) 11 RED(26)	ZONE 10 495000E 6973000N	3.2km S of River-Between- Two-Mountains	gravel -medium to coarse, cobbley sand - fine to coarse, well to poorly graded, with silt and gravel	2-3	3.50	A) 27.300 B) 2.700 C) 5.400 D) 19.200 E) 0.000 F) 0.000	glaciofluvial outwash deposits, esker/kame complex			
10.073	95-J(14)	DPW407.5(28)	ZONE 10 491000E 6974000N	adjacent to Mackenzie Hwy (KP 652)	sand, silt & gravel -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.064 F) 0.000	glaciolacustrine glaciolacustrine plain			

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
-	silt & topsoil	Mackenzie Hwy CNT line	selective operations if quality general fill is required, existing pit	5/ 7.50	0/ 0.00	A) B) C) D)	20 15 0 5	poor/fair	favourable medium	10.064	
fair very low	topsoil & org. silt, 0-0.6	CNT line Mackenzie Hwy	-	6/ 5.20	7/ 0.00	A) B) C) D)	4 4 2 4	fair/good	good high	10.065	
Fair to good	-	currently inaccessible	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.066	
fair low	-	access via Mackenzie Hwy which crosses deposit	existing pit	10/ 9.00	0/ 0.00	A) B) C) D)	58 30 0 11	fair	poor low	10.067	
saturated high	topsoil & peat & peat 0-0.3	CNT line Mackenzie Highway	absence of granular type materials, existing and potential spawning areas, existing pit	10/ 9.00	5/ 0.00	A) B) C) D)	41 22 0 8	fair	poor low	10.068	
fair low	-	access via Mackenzie Hwy which crosses deposit	existing pit	13/ 7.50	0/ 0.00	A) B) C) D)	65 39 0 0	fair	poor low	10.069	
well drained	-	poor access	strip large quantities of land relative to the quantity of materials available	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	10.070	
Fair to good low to medium	peat & silt soil 0-0.6	CNT line on Mackenzie Hwy River-Between-Two-Mountains	contains several areas of existing & potential spawning gravels	9/ 6.70	1/ 1.40	A) B) C) D)	0 0 0 0	poor	good* high	10.071	
good/wet depr. unfrozen	peat 0-1.2	snow roads	buffer zones around the numerous lakes	3/ 6.70	5/ 1.80	A) B) C) D)	8 8 1 1	good	good high	10.072	
Fair to good low	-	access along Mackenzie Hwy which crosses deposit	existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	10.073	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM		
10.074	95-J(15)	143-A(2) J-59(29)	ZONE 10 502000E 6977000N	Eastern toe of McCongell Range, south of River-Between-Two-Mountains	sand & gravel deposits -volumes not determined	2	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial outwash plain		
10.075	95-J(14)	402,403-1(25) 404,405-1(25) 406-1,403-2(25) DPW 401.0(28) DPW 402.2(28) DPW 101-407(43)	ZONE 10 492000E 6968000N	adjacent to Mackenzie Hwy (KP 642)	silty sand -trace clay -trace gravel -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.117 F) 0.000	glaciolacustrine glaciolacustrine plain		
10.076	95-J(14)	400-1,2(25) 399-1,2(25) 398-1(25) DPW399,5MP(28) DPW399-400(43)	ZONE 10 494000E 6960000N	adjacent to Mackenzie Hwy (KP 639)	clay-sand mixtures -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.070 F) 0.000	morainal moraine plain		
10.077	95J(10)	140(2) 396-1,2,3(25)	ZONE 10 495000E 6955000N	2 km N of Willowlake River E of Mackenzie Hwy	sand -coarse grained -silty -some gravel	3-4	6.00	A) 2.300 B) 1.400 C) 0.700 D) 0.200 E) 0.000 F) 0.000	glaciofluvial outwash deposits		
10.078	95-J(15)	95-J-B2(1) 141(2) 13 RED(26) J-60,61,68(29)	ZONE 10 453000E 6961000N	SW of Peckaya Lake	sand -poorly graded, fine to coarse gravel - medium to coarse with cobbles, carbonate coating	2-3	8.00	A) 49.500 B) 19.800 C) 14.900 D) 14.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial complex		
10.079	95-J(15)	GM-172(6) GM-172(21) J-63(29)	ZONE 10 510000E 6959000N	8 km N of Willowlake River	gravel, sand & silt	2-3	3.00	A) 1.900 B) 0.000 C) 0.000 D) 1.900 E) 0.000 F) 0.000	glaciofluvial eskers & outwash plain		
10.080	95-J(10)	95-J-B3(1) R-82(20) J-63,64(29)	ZONE 10 508000E 6956000N	6.4km N of Willow Lake R.	sand -well to poorly graded -trace gravel, fines	4	2.50	A) 2.300 B) 1.300 C) 0.500 D) 0.500 E) 0.000 F) 0.000	glaciofluvial esker/kame complex		
10.081	95J(10)	95J-B4(1) J-64(29)	ZONE 10 516000E 6955000N	4.8 km N of Willowlake River	gravel-well to poorly graded -fine to coarse grained sand-layers within gravel -fine to coarse grained -some silt	2	3.50	A) 5.000 B) 0.000 C) 5.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial esker/kame complex		
10.082	95J(11)	139(2) P-139(3) P-139(22) TPP-377kmp(23) 15RED(26) J-62(29)	ZONE 10 500000E 6954000N	4.0 km N of Willowlake River, 4.8km E of Mackenzie Hwy	sands & gravels -well graded -medium to coarse grained -trace silt	2	4.50	A) 0.380 B) 0.000 C) 0.380 D) 0.000 E) 0.000 F) 0.002	glaciofluvial esker ridges		
10.083	95J(11)	138X(2) J-184(29)	ZONE 10 502000E 6950000N	N of Willowlake River 4.8 km E of Mackenzie Hwy	glacial till -gravel pockets	NG	18.00	A) 9.900 B) 0.000 C) 9.900 D) 0.000 E) 0.000 F) 0.000	morainal drumlinoid moraine		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
well drained	top soil	remote poor access	access requires crossing river	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	10.074		
fair low	-	access via Mackenzie Hwy which crosses deposit	existing pit	5/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	10.075		
fair low	-	Mackenzie Hwy crosses deposit	existing pit	2/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	10.076		
good unfrozen	organic topsoil thin	CNT line Mackenzie Hwy	buffer zone between development & Hwy	4/ 11.90	0/ 0.00	A) 0 B) 3 C) 0 D) 0	poor	favourable to good medium to high	10.077		
well drained unfrozen	org., thin to nonexistent	snow roads	care in crossing stream channels	2/ 8.50	3/ 1.80	A) 0 B) 2 C) 0 D) 0	fair	good high	10.078		
good low to unfrozen	0.3-1.0	access by snow roads to Mackenzie Hwy 15 km W	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	10.079		
well drained low to neglig.	organic thin	snow roads	-	1/ 6.10	3/ 1.10	A) 2 B) 3 C) 0 D) 0	fair	favourable medium	10.080		
lakes in low areas -low/none	silty thin	snow roads	-	3/ 8.50	2/ 1.80	A) 0 B) 2 C) 0 D) 0	poor	good high	10.081		
fair	topsoil 0-0.3	CNT line Mackenzie Hwy	access requires crossing Willowlake River -existing pit	4/ 7.60	0/ 0.00	A) 3 B) 1 C) 1 D) 1	fair	good high	10.082		
poorly drained low to moderate	peat & topsoil 0-1.5	CNT line	not recommended as granular quality materials not established	4/ 4.90	0/ 0.00	A) 2 B) 2 C) 1 D) 2	fair	poor to unsuitable low	10.083		

SITE IDENTIFICATION						SOURCE DESCRIPTION						
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10.084	95J(11)	137X(2) C-59(20) V-6(20) J-184(29)	ZONE 10 502000E 6947000N	N bank of Willowlake River, 4.8km E of Mackenzie Hwy	glacial till with pockets of sand & gravel	NG	18.00	A) 9.900 B) 0.000 C) 9.900 D) 0.000 E) 0.000 F) 0.000	morainal drumlinoid moraine			
10.085	95-J(10)	J-159, 160(29) J-161(29)	ZONE 10 517000E 6950000N	N of Willowlake River	gravel -sandy -some organics	2-3	13.00	A) 11.000 B) 0.000 C) 0.000 D) 11.000 E) 0.000 F) 0.000	alluvial alluvial plain			
10.086	95J(10)	133(2) J-183(29)	ZONE 10 492000E 6958000N	on island N of McGern Island	gravel, sand -silt & clay mixtures	4 to NG	1.00	A) 0.023 B) 0.000 C) 0.000 D) 0.023 E) 0.000 F) 0.000	alluvial alluvial floodplain deposits			
10.087	95J(10)	132X(2) J-55(29)	ZONE 10 491000E 6952000N	on McGern Island opposite mouth of Willowlake River	sand -fine grained -poorly graded -varying silt content	4 to NG	4.00	A) 31.000 B) 0.000 C) 31.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial floodplain deposits			
10.088	95-O(15)	O-45(16)	ZONE 10 501000E 7090000N	3.2 km E of Blackwater Lake	gravel -some sand	2-3	15.00	A) 6.900 B) 0.000 C) 0.000 D) 6.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
10.089	95-O(15)	O-144(16)	ZONE 10 500000E 7088000N	E of Blackwater Lake	gravel & sand	2-3	0.00	A) 0.550 B) 0.000 C) 0.000 D) 0.550 E) 0.000 F) 0.000	glaciofluvial eskers			
10.090	95-O(15)	O-44(16)	ZONE 10 505000E 7094000N	9.7 km E of Blackwater Lake	gravel -some sand	2-3	15.00	A) 76.200 B) 0.000 C) 0.000 D) 76.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain & ridges			
10.091	95-O(15)	O-142(16)	ZONE 10 510000E 7092000N	12.8 km E of Blackwater Lake	gravel -some sand	2-3	0.00	A) 4.500 B) 0.000 C) 0.000 D) 4.500 E) 0.000 F) 0.000	glaciofluvial eskers			
10.092	95-O(15)	O-42(16) R-91(20)	ZONE 10 503000E 7083000N	E of Blackwater Lake	gravel & sand	2-3	15.00	A) 43.600 B) 0.000 C) 0.000 D) 43.600 E) 0.000 F) 0.000	glaciofluvial esker & glaciofluvial plain			
10.093	95-O(15)	O-41, 141(16)	ZONE 10 510000E 7084000N	8 km E of Blackwater Lake	gravel & sand	2-3	15.00	A) 47.200 B) 0.000 C) 0.000 D) 47.200 E) 0.000 F) 0.000	glaciofluvial hummocks & eskers			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
poor low to moderate	peat, muskeg & topsoil 0-1.0	CNT line	extensive damage may occur in exploiting the sand & gravel pockets, may be used for very marginal fill	9/ 4.60	0/ 0.00	A) B) C) D)	3 0 0 0	poor	poor to unsuitable* low	10.084
fair to good low	-	access by snow roads 20 km E to Mackenzie Hwy	near active channel of Willowlake River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable* medium	10.085
-	stratified silt difficult access thick layer	-	difficult access, excessive siltation from excavation, deposits on island in channel	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	10.086
fair unfrozen	organic topsoil 0-0.3	access very difficult	access very difficult, deposits on island in channel	0/ 0.00	2/ 1.10	A) B) C) D)	0 2 0 0	poor	poor low	10.087
good low	-	50 km E of Mackenzie River, also E of Blackwater Lake, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.088
good low	-	50 km E of Mackenzie River, also E of Blackwater Lake, access by snow roads	shoreline of Blackwater Lake	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	10.089
good low	-	55 km E of Mackenzie River, also E of Blackwater Lake, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.090
good low	-	60 km E of Mackenzie River, also E of Blackwater Lake, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.091
good low to moderate	-	50 km E of Mackenzie River, also E of Blackwater Lake, access by snow roads	shoreline of Blackwater Lake	0/ 1.00	0/ 0.00	A) B) C) D)	0 1 0 0	poor	good* high	10.092
good low to moderate	-	60 km E of Mackenzie River, also E of Blackwater Lake, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.093

SITE IDENTIFICATION						SOURCE DESCRIPTION					
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
10.094	95-0(13)	0-50(16)	ZONE 10 467000E 708300N	3.2 km S of Blackwater River	gravel -some sand	2-3	8.00	A) 3.700 B) 0.000 C) 0.000 D) 3.700 E) 0.000 F) 0.000	alluvial alluvial fan		
10.095	95-0(15)	0-40(16)	ZONE 10 514000E 707500N	8 km SE of Blackwater Lake	gravel & sand	2-3	0.00	A) 77.000 B) 0.000 C) 0.000 D) 77.000 E) 0.000 F) 0.000	glaciofluvial terrace & eskers		
10.096	95-0(15)	0-51(16)	ZONE 10 505000E 707000N	4.8 km SE of Blackwater Lake	gravel & sand	2-3	2.50	A) 1.700 B) 0.000 C) 0.000 D) 1.700 E) 0.000 F) 0.000	alluvial alluvial plain		
10.097	95-0(10)	0-33(16)	ZONE 10 514000E 706700N	11.3 km SE of Blackwater Lake, S of Blackwater River	gravel -some sand	2-3	15.00	A) 143.900 B) 0.000 C) 0.000 D) 143.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge		
10.098	95-0(10)	0-33(16)	ZONE 10 518000E 706400N	1.6 km E of Tanaeenlee Lake	sand -coarse grained	2-3	15.00	A) 21.800 B) 0.000 C) 0.000 D) 21.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain		
10.099	95-0(10)	0-19(16)	ZONE 10 521000E 705500N	6.4 km E of Nathaykay Lake	gravel & sand	2-3	15.00	A) 171.900 B) 0.000 C) 0.000 D) 171.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain		
10.100	95-0(10)	0-15, 130(16) 0-131, 132(16) R-89(20)	ZONE 10 510000E 705000N	6.4 km E of Ochre River	gravel & sand	2	15.00	A) 45.000 B) 0.000 C) 0.000 D) 45.000 E) 0.000 F) 0.000	glaciofluvial hummocks & eskers		
10.101	95-0(2)	0-4(16)	ZONE 10 501000E 699800N	W of Fish Lake by Dahakaycho Lake	gravel & sand	2-3	15.00	A) 57.900 B) 0.000 C) 0.000 D) 57.900 E) 0.000 F) 0.000	alluvial & glaciofluvial glaciofluvial ridges & alluvial plain		
10.102	95-0(2)	0-125(16) R-86(20)	ZONE 10 513000E 700100N	S of Fish Lake	sand	3	0.00	A) 19.300 B) 0.000 C) 0.000 D) 19.300 E) 0.000 F) 0.000	glaciofluvial eskers		
10.103	95-0(2)	0-157(16)	ZONE 10 520000E 700300N	S of Fish Lake	gravel & silt & till	3-4 & NG	30.00	A) 81.600 B) 0.000 C) 0.000 D) 81.600 E) 0.000 F) 0.000	glaciofluvial & morainal morainal plain & glaciofluvial ridge		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
fair to good low to moderate	-	20 km E of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.094	
good low	-	60 km E of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.095	
fair to good low	-	45 km E of Mackenzie River, access by snow roads	active channel of creek feeding Blackwater Lake	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	10.096	
good low	-	60 km E of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.097	
good low	-	60 km E of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.098	
good low to moderate	-	60 km E of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.099	
good low to moderate	-	45 km E of Mackenzie River, access by snow roads	-	0/ 1.00	0/ 0.00	A) B) C) D)	0 1 0 0	poor	good high	10.100	
good low	-	access via snow roads to Mackenzie Hwy 8 km W	shoreline of Dahakaycho Lake and creek feeding Fish Lake	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	10.101	
good low	-	access by snow road to proposed Mackenzie Hwy 25 km W	-	0/ 0.00	1/ 0.00	A) B) C) D)	0 1 0 0	poor	favourable medium	10.102	
fair to good low to moderate	-	access by snow road to proposed Mackenzie Hwy 25 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to poor medium to low	10.103	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
10.104	95-O(1)	O-156(16)	ZONE 10 528000E 7004000N	S of Fish Lake	gravel some sand	2-3	0.00	A) 0.850 B) 0.000 C) 0.000 D) 0.850 E) 0.000 F) 0.000	glaciofluvial eskers			
10.105	95-O(1)	O-126(16)	ZONE 10 526000E 7001000N	S of Fish Lake	gravel	2-3	0.00	A) 5.100 B) 0.000 C) 0.000 D) 5.100 E) 0.000 F) 0.000	glaciofluvial eskers			
10.106	95-O(2)	O-3(16)	ZONE 10 510000E 6994000N	E of River-Between-Two-Mountains	gravel	2-3	15.00	A) 16.400 B) 0.000 C) 0.000 D) 16.400 E) 0.000 F) 0.000	glaciofluvial glaciofluvial complex			
10.107	95-J(15)	J-66(29)	ZONE 10 522000E 6973000N	NW of Highland Lake	sand & gravel	2-3	0.00	A) 0.113 B) 0.000 C) 0.000 D) 0.113 E) 0.000 F) 0.000	glaciofluvial esker ridge			
10.108	95-N(16)	N-51(13)	ZONE 10 447000E 7084000N	W bank of Mackenzie River S of Blackwater River	gravel & silt	2-3	24.40	A) 20.000 B) 0.000 C) 0.000 D) 20.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.109	95-N(16)	BM-119(3) GM-119(22)	ZONE 10 444000E 7072000N	W of Mackenzie River	gravel, sand & Upper Devonian siltstone	2-3 & 5	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	bedrock bedrock plateau			
10.110	95-O(12)	180(4) O-69(16)	ZONE 10 453000E 7067000N	North of Johnson River	gravel -stratified with sand & silt -volumes not determined	2-3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
10.111	95-O(12)	179(4) O-71(16) R-95(20)	ZONE 10 453000E 7066000N	Johnson River flood plain	sand -fine grained -silty -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial flood plain			
10.112	95-O(12)	O-72(16) O-52(20)	ZONE 10 457000E 7061000N	56.3 km NW of Wrigley W bank of Mackenzie River	gravel & sand	2-3	24.00	A) 67.300 B) 0.000 C) 0.000 D) 67.300 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.113	95-O(12)	O-73(16)	ZONE 10 460000E 7053000N	41.8 km NW of Wrigley W bank of Mackenzie River	gravel & sand	2-3	24.00	A) 59.300 B) 0.000 C) 0.000 D) 59.300 E) 0.000 F) 0.000	alluvial alluvial terrace			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Oversurden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low	-	access by snow road to proposed Mackenzie Hwy 45 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.104
good low	-	access by snow road to Mackenzie Hwy 45 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.105
good low	-	access by snow road to proposed Mackenzie Hwy 20 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.106
good unfrozen	-	access by snow road 30 km E to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	10.107
fair to good low to moderate	-	must cross Mackenzie River to reach proposed Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	10.108
fair to good low to unfrozen 0-3.0	-	access by snow road to Mackenzie River 10 km E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to favourable low to medium	10.109
well	org. topsoil & silt	no direct access, cross Mackenzie river	must cross Mackenzie River & its steep valley walls	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.110
well to poor	-	must cross Mackenzie River	doubtful quality of deposits, deposits in active stream channel, crossing Mackenzie River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to unsuitable low	10.111
fair to good low	-	W bank of Mackenzie River, access via Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.112
fair to good low	-	W bank of Mackenzie River, access via Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.113

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/ LANDFORM			
10.114	95-0(12)	171(4) 0-75(16)	ZONE 10 461000E 7047000N	opposite mouth of Whitesand Creek	gravel & sand -stratified -some silt -volumes not determined	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.115	95-0(12)	0-75(16)	ZONE 10 462000E 7043000N	35.4 km NW of Wrigley W bank of Mackenzie River	gravel & sand	2-3	24.00	A) 96.900 B) 0.000 C) 0.000 D) 96.900 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.116	95-0(5)	0-76, 77(16) C-50(20) R-48(20)	ZONE 10 464000E 7036000N	29 km NW of Wrigley W bank of Mackenzie River	gravel & sand	2-3	24.00	A) 25.800 B) 0.000 C) 0.000 D) 25.800 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.117	95-0(5)	163(4) C-49(290)	ZONE 10 464000E 7032000N	W. bank of Mckenzie River 27.4km N of Wrigley	gravel -well graded -with some sand -volumes not determined	2	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.118	95-0(5)	0-80(16)	ZONE 10 465000E 7027000N	19.3 km NW of Wrigley W bank of Mackenzie River	gravel & sand -some silt	2-3	2.50	A) 0.325 B) 0.000 C) 0.000 D) 0.325 E) 0.000 F) 0.000	alluvial alluvial plain			
10.119	95-0(5)	0-81(16)	ZONE 10 468000E 7016000N	6.4 km NW of Wrigley W bank of Mackenzie River	gravel & sand -some silt	2-3	2.50	A) 3.200 B) 0.000 C) 0.000 D) 3.200 E) 0.000 F) 0.000	alluvial alluvial plain			
10.120	95-0(4)	0-11(16)	ZONE 10 465000E 7011000N	9.7 km W of Wrigley W of active channel of Wrigley River	gravel & sand	2-3	15.00	A) 114.600 B) 0.000 C) 0.000 D) 114.600 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
10.121	95-0(4)	0-10(16)	ZONE 10 463000E 7006000N	12.8 km W of Wrigley W of active channel of Wrigley River	gravel & sand	2-3	15.00	A) 44.200 B) 0.000 C) 0.000 D) 44.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
10.122	95-0(4)	0-82(16) R-52, 99(20) C-48(20)	ZONE 10 465000E 7006000N	6.4 km NW of Wrigley active stream channel S of Wrigley River	gravel & sand -some silt	2-3	2.50	A) 8.600 B) 0.000 C) 0.000 D) 8.600 E) 0.000 F) 0.000	alluvial alluvial plain			
10.123	95-0(4)	0-86(16)	ZONE 10 457000E 6993000N	32.2 km SW of Wrigley on Wrigley River	gravel -some sand	2-3	15.00	A) 21.200 B) 0.000 C) 0.000 D) 21.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
well	org. topsoil & silt	no direct access to site	crossing Mackenzie River for new access, aggregate of equal quality on east side of river	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to favourable low to medium	10.114	
fair to good low	-	W bank of Mackenzie River, access via Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.115	
fair to good low	-	W bank of Mackenzie River, access via Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.116	
well	org. topsoil & silt, thin	no existing access	new access would mean crossing Mackenzie River, operations limited to winter seasons	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.117	
fair to good low	-	W bank of Mackenzie River, access via Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.118	
fair to good low	-	W bank of Mackenzie River, access via Mackenzie River to Mackenzie Hwy	near active channel of Wrigley and Mackenzie Rivers	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	10.119	
good low	-	15 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.120	
good low	-	10 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.121	
fair to good low	-	-	active channel of Wrigley River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	10.122	
fair to good low	-	20 km W of Mackenzie River, access by snow roads	near active channel of Wrigley River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	10.123	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
10.124	95-0(3)	W-17X(9)	ZONE 10 469000E 7014000N	8 km NW of Wrigley W bank of Mackenzie River	sandstone & shale fragments with silt and sand -volumes unlimited	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock s.s & shale ridge		
10.125	95-0(4)	W-18X(9)	ZONE 10 470000E 7013000N	3.2 km W of Wrigley W bank of Mackenzie River at mouth of Olson Creek	sand, silty -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial plain		
10.126	95-0(4)	W-11(9)	ZONE 10 473000E 7014000N	2.4 km N of Wrigley E bank of Mackenzie River	gravel -sandy -well graded -coarse grained -clean	2	1.30	A) B) C) D) E) F)	0.110 0.045 0.020 0.045 0.000 0.000	alluvial alluvial terrace		
10.127	95-0(3)	W-19X(9) 0-83(16)	ZONE 10 475000E 7010000N	3.2 km SW of Wrigley W bank of Mackenzie River	sand & silt -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace		
10.128	95-0(3)	W-20X(9) 0-83(16)	ZONE 10 480000E 7005000N	8 km SW of Wrigley W bank of Mackenzie River	gravel -sandy -silty	4	3.00	A) B) C) D) E) F)	0.150 0.000 0.030 0.120 0.000 0.000	alluvial alluvial terrace		
10.129	95-0(3)	0-88(16) R-60(20)	ZONE 10 478000E 6997000N	active stream channel W of Mackenzie River	gravel & sand	2-3	2.50	A) B) C) D) E) F)	1.800 0.000 0.000 1.800 0.000 0.000	alluvial alluvial plain		
10.130	95-0(3)	155(2)	ZONE 10 483000E 6997000N	17.7km S of Wrigley, W bank of Mackenzie River	a)sandy gravels b)finer grained soils -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terraces		
10.131	95-0(3)	0-89(16) C-33,34(20)	ZONE 10 484000E 6996000N	20.9 km SE of Wrigley W bank of Mackenzie River	gravel & silt	3-4	12.00	A) B) C) D) E) F)	9.800 0.000 0.000 9.800 0.000 0.000	alluvial alluvial terrace		
10.132	95-0(3)	0-90(16)	ZONE 10 486000E 6991000N	29km SE of Wrigley, W bank of Mackenzie River	gravel & silt	3	12.00	A) B) C) D) E) F)	2.900 0.000 0.000 2.900 0.000 0.000	alluvial alluvial terrace		
10.133	95-N(11)	N-58(13)	ZONE 10 399000E 7039000N	active channel of Dahadinni River 6.4 km SW of Mount Dahadinni	sand & gravel	1-3	7.60	A) B) C) D) E) F)	2.800 0.000 0.000 2.800 0.000 0.000	alluvial alluvial terrace		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden, Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
good	colluvium 0-0.3	difficult access	critical wintering range for Woodland Caribou, very difficult access, poor quality material	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0	none	poor low	10.124	
poor	topsoil 0-0.2 m	Mackenzie River	critical wintering range for Woodland Caribou, granular quality of material not established	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0	none	unsuitable low	10.125	
good unfrozen	topsoil 0-0.2	poor access -barge	must cross Hodgson Creek, winter operation to minimize damage - equal quality of material with better access to Wrigley - domestic fishing resources opposite to site	0/ 0.00	3/ 1.40	A) 0 B) 2 C) 1 D) 1	0	poor	favourable to good* medium to high	10.126	
good unfrozen	topsoil 0-0.3 m	existing seismic cutline, very poor quality material Mackenzie River		0/ 0.00	3/ 1.40	A) 0 B) 2 C) 0 D) 0	0	poor	poor low	10.127	
good	topsoil 0-0.3	no existing land access, no land access to site Mackenzie River		0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0	none	poor low	10.128	
fair to good low	-	cross Mackenzie River to proposed Mackenzie Hwy	active channel of Fish Trap Creek	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0	none	favourable* medium	10.129	
a)well, b)good	-	-	Area b) of marginal quality	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0	none	poor to favourable low to medium	10.130	
fair to good low to moderate	-	cross Mackenzie River to proposed Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0	none	favourable medium	10.131	
fair to good low to moderate	-	cross Mackenzie River to proposed Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0	none	favourable medium	10.132	
fair to good low	-	45 km W of Mackenzie River, no access except for snow roads	active channel of Dashed Inni River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	0	none	good to excellent* high	10.133	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
10.134	95-N(6)	N-59(13)	ZONE 10 399000E 7039000N	active channel of Dahadinni River 17.7 km S of Mount Dahadinni	sand & gravel	1-3	7.60	R) 1.500 B) 0.000 C) 0.000 D) 1.500 E) 0.000 F) 0.000	alluvial alluvial terrace			
10.135	95-N(6)	N-60(13)	ZONE 10 397000E 7035000N	active channel of Dahadinni River	gravel & sand	1-3	2.50	R) 2.300 B) 0.000 C) 0.000 D) 2.300 E) 0.000 F) 0.000	alluvial alluvial plain			
10.136	95-N(7)	N-17, 18, 19(13) N-80(13)	ZONE 10 408000E 7022000N	12.8 km W of Johnson River	gravel & sand	1-3	15.00	R) 11.000 B) 0.000 C) 0.000 D) 11.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge & esker			
10.137	95-N(7)	N-16(13)	ZONE 10 414000E 7019000N	6.4 km W of Johnson River	gravel & sand	1-3	15.00	R) 4.300 B) 0.000 C) 0.000 D) 4.300 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge			
10.138	95-N(9)	N-52(13)	ZONE 10 448000E 7060000N	active stream channel of Johnson River	gravel & sand	1-3	10.00	R) 4.900 B) 0.000 C) 0.000 D) 4.900 E) 0.000 F) 0.000	alluvial alluvial plains & terraces			
10.139	95-N(9)	N-53(13)	ZONE 10 446000E 7056000N	active channel of Johnson River	gravel & sand	1-3	10.00	R) 3.700 B) 0.000 C) 0.000 D) 3.700 E) 0.000 F) 0.000	alluvial alluvial plain			
10.140	95-N(8)	N-7(13)	ZONE 10 443000E 7029000N	E of Johnson River	gravel & sand	1-3	15.00	R) 13.100 B) 0.000 C) 0.000 D) 13.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge			
10.141	95-N(8)	N-54, 55(13) R-69(20)	ZONE 10 435000E 7040000N	active channel of Johnson River	gravel & sand	2-3	10.00	R) 82.800 B) 0.000 C) 0.000 D) 82.800 E) 0.000 F) 0.000	alluvial alluvial plain			
10.142	95-N(2)	N-75(13)	ZONE 10 352000E 7020000N	along bedrock ridge E of Dahadinni River	gravel & sand	2-3	7.00	R) 28.900 B) 0.000 C) 0.000 D) 28.900 E) 0.000 F) 0.000	alluvial alluvial fan complex			
10.143	95-J(11)	GM-120(3)	ZONE 10 480000E 6948000N	8 km W of Mackenzie River	limestone, siltsone & shale	5	6.00	R) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	bedrock plateau			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	45 km W of Mackenzie River, no access except for snow roads	active channel of Dahadinni River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	10.134
fair to good low	-	70 km W of Mackenzie River, access via snow roads	active channel of Dahadinni River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	10.135
good low	-	60 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.136
good low	-	55 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.137
fair to good low	-	10 km W of Mackenzie River, access by snow roads	active channel of Johnson River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	10.138
fair to good low	-	10-15 km W of Mackenzie River, access by snow roads	active channel of Johnson River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	10.139
good low	-	25 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	10.140
fair to good low	-	10-60 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.141
good low to moderate	-	60 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.142
good low to unfrozen	-0-2.5	access by snow road to Mackenzie River 10 km E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	10.143

SITE IDENTIFICATION					SOURCE DESCRIPTION					
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM	
10.144	95-J(13)	J-106,107(29) J-149,150(29) J-151,152(29) J-153,154(29) J-155,157(29)	ZONE 10 475000E 695000N	active channel of Root River	gravel & sand -trace to some silt	2-3	15.00	A) 106.700 B) 0.000 C) 0.000 D) 106.700 E) 0.000 F) 0.000	alluvial alluvial plains & fans	
10.145	95-J(13)	J-74R(29)	ZONE 10 467000E 696300N	W bank of Root River	sand, gravel & silt	3	8.00	A) 32.100 B) 0.000 C) 0.000 D) 32.100 E) 0.000 F) 0.000	alluvial alluvial fan	
10.146	95-J(13)	J-56,57(29)	ZONE 10 462000E 696700N	S of Root River	sand & gravel	2-3	24.00	A) 216.600 B) 0.000 C) 0.000 D) 216.600 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain deposits	
10.147	95-J(13)	J-110,111(29) J-112(29) J-109,113(29) J-114(29)	ZONE 10 462000E 696100N	active channel S of Root River	gravel, sand & silt	2-3	8.00	A) 136.200 B) 0.000 C) 0.000 D) 136.200 E) 0.000 F) 0.000	alluvial alluvial fans & terraces	
10.148	95-J(12)	J-115,116(29)	ZONE 10 450000E 695200N	west of active channel S of Root River	gravel & sand -some silt	2-3	11.00	A) 20.700 B) 0.000 C) 0.000 D) 20.700 E) 0.000 F) 0.000	alluvial alluvial fan & terrace	
10.149	95-J(12)	J-117,118(29) J-119(29)	ZONE 10 455000E 694400N	W of Camseil Range	gravel -some sand & silt	2-3	8.00	A) 17.600 B) 0.000 C) 0.000 D) 17.600 E) 0.000 F) 0.000	alluvial alluvial fans	
10.150	95-J(11)	634kmp(28)	ZONE 10 494000E 695700N	E of Mackenzie River on Mackenzie Hwy	limestone -volumes unlimited	5	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	bedrock bedrock	
10.151	95-K(15)	K-249(15)	ZONE 10 409000E 698200N	1.6 km N of Root River	gravel	2-3	8.00	A) 14.700 B) 0.000 C) 0.000 D) 14.700 E) 0.000 F) 0.000	alluvial alluvial fan	
10.152	95-K(15)	K-245,248(15)	ZONE 10 421000E 697800N	active channel of Root River	gravel & sand	2-3	8.00	A) 233.200 B) 0.000 C) 0.000 D) 233.200 E) 0.000 F) 0.000	alluvial alluvial plain	
10.153	95-K(16)	K-43(15)	ZONE 10 449000E 696300N	S bank of Root River	gravel	2-3	15.00	A) 14.200 B) 0.000 C) 0.000 D) 14.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low	-	access by snow road 1 - 45 km to W bank of Mackenzie River	active channel of Root River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	10.144
fair to good low	-	access by snow road 22 km E to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	10.145
fair to good low	-	access by snow road 37 km E to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.146
fair to good low	-	access by snow road 35 km E to W bank of Mackenzie River	active channel of S Root River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	10.147
fair to good low	-	access by snow road 40 km E to W bank of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.148
good low	-	remote location W of Camsell River, access by snow road 35 km to W side of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.149
-	-	Mackenzie Hwy	quarry operation Interprovincial Pipeline only 350 m from blasting site	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	10.150
fair to good low to moderate	-	70 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.151
fair to good low	-	35-70 km W of Mackenzie River, access via snow roads	active channel of Root River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	10.152
good low	-	35 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.153

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
10.154	95-K(16)	K-39, 40, 41(15) K-42(15)	ZONE 10 435000E 6955000N	E of stream channel S of English Chief River	gravel & sand	2-3	15.00	A) 42.900 B) 0.000 C) 0.000 D) 42.900 E) 0.000 F) 0.000	glaciofluvial plain deposits			
10.155	95-K(16)	K-233(15)	ZONE 10 431000E 6950000N	19.3 km S of Root River W of active channel	gravel & sand	2-3	3.00	A) 1.100 B) 0.000 C) 0.000 D) 1.100 E) 0.000 F) 0.000	alluvial plain			
10.156	95-K(15)	K-246(15)	ZONE 10 403000E 6977000N	4.8 km S of Root River W of active channel	gravel & sand	2-3	3.00	A) 0.550 B) 0.000 C) 0.000 D) 0.550 E) 0.000 F) 0.000	alluvial plain			
10.157	95-K(15)	K-44(15)	ZONE 10 404000E 6971000N	9.7 km S of Root River E of active channel	gravel & sand	2-3	15.00	A) 11.800 B) 0.000 C) 0.000 D) 11.800 E) 0.000 F) 0.000	glaciofluvial plain			
10.158	95-K(15)	K-45, 247(15)	ZONE 10 402000E 6968000N	9.7 km S of Root River W of active channel	gravel & sand	2-3	15.00	A) 19.500 B) 0.000 C) 0.000 D) 19.500 E) 0.000 F) 0.000	glaciofluvial terrace			
10.159	95-K(15)	K-46(15)	ZONE 10 405000E 6967000N	12.9 km S of Root River E of active channel	gravel & sand	2-3	15.00	A) 46.000 B) 0.000 C) 0.000 D) 46.000 E) 0.000 F) 0.000	glaciofluvial plain			
10.160	95-K(15)	K-47(15)	ZONE 10 406000E 6963000N	17.7 km S of Root River E of active channel	sand -some gravel	2-3	15.00	A) 9.500 B) 0.000 C) 0.000 D) 9.500 E) 0.000 F) 0.000	glaciofluvial plain			
10.161	95-K(15)	K-48(15)	ZONE 10 405000E 6962000N	19.3 km S of Root River in E of active channel	gravel & sand	2-3	15.00	A) 12.500 B) 0.000 C) 0.000 D) 12.500 E) 0.000 F) 0.000	glaciofluvial plain			
10.162	95-K(10)	K-50(15)	ZONE 10 404000E 6959000N	W bank of stream channel W of Iverson Range	gravel & sand	2-3	15.00	A) 16.100 B) 0.000 C) 0.000 D) 16.100 E) 0.000 F) 0.000	glaciofluvial plain			
10.163	95-K(10)	K-51, 52(15)	ZONE 10 408000E 6957000N	E bank of stream channel W of Iverson Range	gravel & sand	2-3	15.00	A) 18.600 B) 0.000 C) 0.000 D) 18.600 E) 0.000 F) 0.000	glaciofluvial terrace			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low	-	58 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.154
good low	-	55 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.155
good low	-	80 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	10.156
good low	-	80 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.157
good low	-	85 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.158
good low	-	80 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.159
good low	-	80 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.160
good low	-	80 km W of Mackenzie River, access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.161
good low	-	80 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.162
good low	-	80 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	10.163

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
10.164	95-K(10)	K-53,54(15)	ZONE 10 408000E 6952000N	W of Iverson Range	gravel & sand	2-3	15.00	A) 13.000 B) 0.000 C) 0.000 D) 13.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain		
10.165	95-O(13)	B.P. 92(44)	ZONE 10 453000E 7074000N	W of Mackenzie Highway (KP 770)	sand and gravel	3	15.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace		
10.166	95-O(13)	B.P. 91,91A(44)	ZONE 10 455000E 7071000N	W of Mackenzie Highway (KP 767)	sand and silt -volumes not determined	NG & 2-4	25.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.167	95-O(12)	B.P. 90(44)	ZONE 10 456000E 7069000N	W of Mackenzie Highway (KP 765)	sand and silt -volumes not determined	NG	25.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.168	95-O(12)	B.P. 87,88(44) B.P. 89(44)	ZONE 10 457000E 7067000N	E of Mackenzie Highway (KP 758)	sand and silt -volumes not determined	NG	25.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace		
10.169	95-O(5)	B.P. 72,73(44) B.P. 74(44)	ZONE 10 468000E 7036000N	W of Mackenzie Highway (KP 723)	sand and silt -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain		
10.170	95-O(5)	B.P. 71(44)	ZONE 10 470000E 7030000N	W of Mackenzie Highway (KP 718)	sand and silt -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain		
10.171	95-O(5)	B.P. 67,68(44)	ZONE 10 471000E 7022000N	Near Mackenzie Highway (KP 711)	sand and silt -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain		
10.172	95-O(5)	B.P. 66(44)	ZONE 10 471000E 7019000N	E of Mackenzie Highway (KP 708)	sand and silt -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain		
10.173	95-O(5)	B.P. 64(44)	ZONE 10 473000E 7016000N	E of Mackenzie River, along Mackenzie Highway (KP 704)	sand and silt -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low	-	80 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D) 0	0	none	good to excellent high	10.164
good low	-	proposed Mackenzie Highway crosses deposit	-	4/ 9.00	0/ 0.00	A) B) C) D) 23 12 0 3	23	fair	good high	10.165
fair low to moderate	-	proposed Mackenzie Highway near deposit	-	10/ 9.00	0/ 0.00	A) B) C) D) 54 27 0 4	54	fair	poor low	10.166
fair low to moderate	-	proposed Mackenzie Highway near deposit	-	7/ 4.50	0/ 0.00	A) B) C) D) 35 14 0 5	35	fair	poor low	10.167
fair low to moderate	-	proposed Mackenzie Highway near deposit	-	14/ 9.00	0/ 0.00	A) B) C) D) 69 35 0 8	69	fair-good	poor low	10.168
fair low to high	-	proposed Mackenzie Highway acrosses deposit at E side	-	21/ 9.00	0/ 0.00	A) B) C) D) 135 70 0 17	135	good	poor low	10.169
fair low to high	-	proposed Mackenzie Highway crosses deposit	-	5/ 7.50	0/ 0.00	A) B) C) D) 27 13 0 4	27	fair	poor low	10.170
fair low to high	-	proposed Mackenzie Highway crosses deposit	-	12/ 9.00	0/ 0.00	A) B) C) D) 72 35 0 12	72	good	poor low	10.171
fair low to high	-	proposed Mackenzie Highway	-	6/ 9.00	0/ 0.00	A) B) C) D) 22 11 0 3	22	fair	poor low	10.172
fair low to high	-	proposed Mackenzie Highway	-	6/ 7.50	0/ 0.00	A) B) C) D) 42 20 0 3	42	fair	poor low	10.173

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM		
10.174	95-O(5)	B.P. 62,63(44)	ZONE 10 474000E 701300N	N of Wrigley E of Mackenzie River W of Mackenzie Highway (KP 702)	sand and silt -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain	
10.175	95-O(5)	B.P. 61(44)	ZONE 10 467000E 701300N	N of Wrigley E of Mackenzie River W of Mackenzie Highway (KP 701)	sand and silt -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain	
11.001	95J(10)	134X(2) 393-1(25)	ZONE 10 496000E 695200N	S bank of Willowlake River, includes Mackenzie Hwy	sand -fine to medium grained -poorly graded -some silt -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial delta deposits	
11.002	95J(10)	136X(2) 392-1(25)	ZONE 10 498000E 695100N	active stream channel of Willowlake River	silt & sand with exposed gravel bars -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terraces & gravel bars	
11.003	95J(10)	135X(2) BP43(43)	ZONE 10 497000E 694900N	1.6 km S of Willowlake River, 1.6km E of Mackenzie Hwy	sand -fine grained -poorly graded -some silt -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial delta deposits	
11.004	95-J(11)	7RED(26)	ZONE 10 493000E 694900N	E bank of Mackenzie River E of McGern Island	gravel & silt -some sand -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace	
11.005	95-J(11)	14RED(26)	ZONE 10 499000E 694900N	E of Mackenzie Hwy S of Willowlake River	sand -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace	
11.006	95-J(11)	390-1(25) 391-1(25) 740(27) BP 42(43)	ZONE 10 496000E 694700N	W of Mackenzie Hwy (KP 624)	clay-sand mixture -very close to optimum moisture -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.110 0.000	morainal moraine plain	
11.007	95-J(11)	J-55(29)	ZONE 10 490000E 694500N	on McGern Island	sand & gravel	2-3	4.00	A) B) C) D) E) F)	15.500 0.000 0.000 15.500 0.000 0.000	glaciofluvial glaciofluvial terrace remnant	
11.008	95-J(11)	5,6RED(26)	ZONE 10 493000E 694300N	E bank of Mackenzie River E of McGern Island	gravel & sand -volumes not determined	3-4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair low to high	-	Proposed Mackenzie Highway	-	15/ 7.50	0/ 0.00	A) B) C) D)	89 43 0 11	fair-good poor low	10.174	
fair low to high	-	Proposed Mackenzie Highway	-	5/ 7.30	0/ 0.00	A) B) C) D)	28 14 0 4	fair-good poor low	10.175	
well drained unfrozen	topsoil & org- anic silt 0-0.3	Mackenzie Hwy	low quality fill for construction of road subgrades	3/ 4.60	2/ 2.10	A) B) C) D)	1 5 0 0	poor poor low	11.001	
poor	peat 0-0.2	CNT line Mackenzie Hwy	deposits are in active stream channel	0/ 0.00	1/ 2.10	A) B) C) D)	0 1 0 0	poor poor low	11.002	
well drained low	topsoil 0-0.2	CNT line	may be used as low quality fill in construction of road subgrades	10/ 7.50	0/ 0.00	A) B) C) D)	46 22 0 1	fair-good poor low	11.003	
fair to good low	-	access by snow road 3 km E to Mackenzie Hwy	buffer zone next to river	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none poor to favourable low to medium	11.004	
fair low	-	access by snow road to Mackenzie Hwy 3 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none favourable to poor medium to low	11.005	
fair low to moderate	-	Mackenzie Hwy crosses deposit	existing pit	6/ 7.50	0/ 0.00	A) B) C) D)	29 15 0 0	fair poor low	11.006	
good low to unfrozen	-	Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none favourable to good medium to high	11.007	
fair low	-	access by snow road to Mackenzie Hwy 3 km E	buffer zone next to river	0/ 0.00	10/ 1.60	A) B) C) D)	0 0 0 0	poor favourable medium	11.008	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM		
11.009	95-J(11)	388-1,2(25) 387-1(25) 386-1(25) 605(27) B.P.41(43)	ZONE 10 496000E 6942000N	along Mackenzie Hwy. (KP 619)	clay-sand mixture -very close to optimum moisture -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.145 0.007	morainal moraine plain	
11.010	95J(11)	131X(2)	ZONE 10 501000E 6940000N	12.9 km S of Willowlake River E of Mackenzie Hwy	glacial till -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal till ridges	
11.011	95J(10)	130X(2)	ZONE 10 494000E 6937000N	14.4 km S of Willowlake River	glacial till -sand, silt & clay with pebbles -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal morainal till sheet (remnant)	
11.012	95J(10)	129(2) J-54(29)	ZONE 10 489000E 6937000N	16 km S of Willowlake River on McGern Island	gravel, sand & silt -sand & gravel pockets	4	4.00	A) B) C) D) E) F)	14.400 0.000 0.000 14.400 0.000 0.000	alluvial alluvial plain deposits	
11.013	95-J(11)	384-1,2(25) 385-1,2(25) 482(27) B.P.40,44(43)	ZONE 10 498000E 6937000N	along Mackenzie Hwy (KP 612)	silty sand -very dry -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.107 0.000	morainal moraine plain	
11.014	95J(11)	127(2)	ZONE 10 492000E 6931000N	2.4 km E of Mackenzie River between Camsell Bend & Willowlake River	Upper Devonian limestone, some siltstone & shale -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock ridge	
11.015	95J(11)	128X(2) 294(27) 334(27) BP38,39(43)	ZONE 10 498000E 6932000N	22.5 km S of Willowlake River	glacial till -material is very close to optimum moisture -volumes not determined	NG	3.70	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.201 0.000	morainal till plain remnant	
11.016	95-J(6)	380-1,2(25) 381-1(25) B.P.36,37(43)	ZONE 10 499000E 6931000N	along Mackenzie Hwy (KP 607)	till -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal moraine plain	
11.017	95-J(6)	376-1(25) 378-1(25) 30(27) 110(27) B.P.34,35(43)	ZONE 10 499000E 6925000N	along Mackenzie Hwy (KP 604)	clay-sand mixture -close to optimum moisture silty sand -very dry -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.280 0.000	morainal moraine plain	
11.018	95J(6)	126(2) 12RED(26)	ZONE 10 494000E 6925000N	12.9 km S of Willowlake River, 6.4km E of Mackenzie River	Upper Devonian limestone, some siltstone & shale -volumes unlimited	5	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock ridge	

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
fair to poor low to moderate	-	winter road 25 km W to Mackenzie Hwy	-	5/ 3.50	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.079		
good unfrozen	-	40 km E of Mackenzie River and Hwy, access via snow roads	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	11.080		
fair to good unfrozen	-	40 km E of Mackenzie River and Hwy, access via snow roads	active channel of Willowlake River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good* high	11.081		
good low to moderate	-	access via snow roads some distance from Mackenzie River	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	low low	11.082		
fair to good unfrozen	-	45 km E of Mackenzie River and Hwy, access via snow roads	active channel of Willowlake River	0/ 0.00	1/ 0.00	A) 0 B) 1 C) 0 D) 0	poor	good* high	11.083		
fair low to moderate	-	access by snow road 10 km to N bank of Mackenzie River	-	5/ 3.50	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.084		
fair low to moderate	-	access by snow road 10 km to N bank of Mackenzie River	-	3/ 3.50	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.085		
fair low to moderate	-	access by snow road 5 km to N bank of Mackenzie River	3 drill holes attempted refusal at 0.2 m due to cobbles & boulders	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.086		
fair to good low to moderate	-	30 km N of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	low low	11.087		
fair low to none	-	no highway access 10 km E of Mackenzie River	active channel of RabbitSkin River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable* medium	11.088		

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.089	85-E(9)	E-31(18)	ZONE 11 349000E 6838000N	N of Mackenzie River S of RabbitSkin River	sandy beach veneer over till	3-4	3.00	A) 1.500 B) 0.000 C) 0.000 D) 1.500 E) 0.000 F) 0.000	glaciolacustrine beaches			
11.090	95-J(6)	J-30, 31(29) J-46, 47, 48(29)	ZONE 10 474000E 6908000N	W of Mackenzie River E of the Camsell Range	sand & gravel -some sandy, silty glaciolacustrine material	3-4	23.00	A) 338.200 B) 0.000 C) 0.000 D) 338.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
11.091	95-J(5)	J-44, 45(29) J-120, 121(29) J-122, 123(29) J-124(29)	ZONE 10 460000E 6931000N	W of Camsell Range	sand & gravel -some silt	2-3	15.00	A) 56.100 B) 0.000 C) 0.000 D) 56.100 E) 0.000 F) 0.000	glaciofluvial & alluvial glaciofluvial terraces & alluvial fans			
11.092	95-J(5)	J-43(29)	ZONE 10 463000E 6926000N	NE of Carlson Lake W of Camsell Range	sand & gravel	2-3	24.00	A) 41.100 B) 0.000 C) 0.000 D) 41.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
11.093	95-J(5)	J-125, 126(29)	ZONE 10 465000E 6923000N	E of Carlson Lake W of Camsell Range	gravel -some sand & silt	2-3	8.00	A) 24.000 B) 0.000 C) 0.000 D) 24.000 E) 0.000 F) 0.000	alluvial alluvial fans			
11.094	95-J(5)	J-41, 42(29) J-127, 128(29) J-130(29)	ZONE 10 453000E 6920000N	N of North Nahanni River SW of Carlson Lake	sand & gravel -some silt	3	15.00	A) 80.600 B) 0.000 C) 0.000 D) 80.600 E) 0.000 F) 0.000	glaciofluvial & alluvial glaciofluvial terraces & alluvial fans			
11.095	95-J(5)	J-129, 131(29) J-132, 133(29) J-133R, 134(29) J-135, 135A(29) J-136, 137(29) J-138, 139(29)	ZONE 10 463000E 6904000N	active channel of North Nahanni River N of Ram River	sand & gravel	2-3	8.00	A) 145.600 B) 0.000 C) 0.000 D) 145.600 E) 0.000 F) 0.000	alluvial alluvial fan & plain deposits			
11.096	95-J(5)	J-40(29)	ZONE 10 454000E 6914000N	S of North Nahanni River	sand & gravel	2-3	53.00	A) 195.100 B) 0.000 C) 0.000 D) 195.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
11.097	95-J(5)	J-39(29)	ZONE 10 454000E 6910000N	S of North Nahanni River	sand & gravel	2-3	53.00	A) 149.700 B) 0.000 C) 0.000 D) 149.700 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
11.098	95-J(6)	J-52(29)	ZONE 10 481000E 6921000N	W bank of Mackenzie River S of Root River	sand -some gravel -some glaciolacustrine sands & silts	3-4	23.00	A) 4.200 B) 0.000 C) 0.000 D) 4.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair low to moderate	-	Mackenzie Hwy crosses deposit	existing pit	13/ 7.50	0/ 0.00	A) B) C) D)	76 38 0 12	fair-good poor low		11.009
well drained low to medium	topsoil 0-0.3	CNT line	materials of granular quality not established	2/ 3.70	0/ 0.00	A) B) C) D)	0 0 0 0	poor poor low		11.010
good low	organic topsoil 0-0.5	CNT line	materials of granular quality not established	2/ 3.70	0/ 0.00	A) B) C) D)	0 0 0 0	poor poor low		11.011
good	stratified silt difficult access thick layer		deposit is on island in channel	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none poor low		11.012
fair low to moderate	-	Mackenzie Hwy crosses deposit	dry silty material would not be suitable for maintenance purposes	18/ 9.00	0/ 0.00	A) B) C) D)	124 62 0 17	fair-good poor low		11.013
well drained thick	glaciolacustrine access difficult due to thermally sensitive terrain		thick overburden access difficult	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none poor low		11.014
well drained low to unfrozen	peat & topsoil 0-0.3	CNT line	materials of granular quality not established -existing pit	18/ 9.00	0/ 0.00	A) B) C) D)	95 47 0 19	fair-good poor low		11.015
fair low to moderate	-	Mackenzie Hwy crosses deposit	-	13/ 7.50	0/ 0.00	A) B) C) D)	88 45 0 13	fair-good poor low		11.016
fair low to moderate	-	Mackenzie Hwy crosses deposit	dry silty material would not be suitable for maintenance purposes -existing pit	14/ 9.00	0/ 0.00	A) B) C) D)	88 42 0 15	fair-good poor low		11.017
well drained	thick	poor access, construction of road across thermally sensitive terrain	thick overburden of glaciolacustrine sediments poor access	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none poor low		11.018

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/LANDFORM			
11.019	95J(7)	124(2) 1414(27) 1507(27) J-186(29) R-81(20) P-118, 124(3) &	ZONE 10 502000E 6925000N	30.5 km S of Willowlake River	sand & gravel -stratified -variable gradation -sand - fine grained	2	4.50	R) B) C) D) E) F)	3.000 1.500 0.800 0.700 0.103 0.000	glaciofluvial esker field		
11.020	95J(7)	123X(2)	ZONE 10 505000E 6927000N	27.3 km S of Willowlake River	glacial till -silt, sand & clay matrix with some pebbles -volumes not determined	NG	0.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal moraine plain		
11.021	95J(7)	118(2) 373-1,2,3(25) 4RED(26) 1414(27) BP30(43)	ZONE 10 502000E 6921000N	34 km S of Willowlake River	stratified sands & gravels -trace silt -poor to well graded	2	4.50	R) B) C) D) E) F)	1.500 0.000 1.500 0.000 0.103 0.000	glaciofluvial esker ridges		
11.022	95-J(7)	IPP-412kmp(23)	ZONE 10 506000E 6920000N	E of Mackenzie Hwy	sand & gravel -volumes not determined	2	0.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial glaciofluvial ridge		
11.023	95J(7)	119X(2) 370-1,2,3(25) 371-1(25) 1055,1114(27)	ZONE 10 505000E 6918000N	35.4 km SE of Willowlake River	sand, some silt -variable gradation -volumes not determined	4 to NG	6.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.196 0.000	morainal till ridges		
11.024	95J(6)	125(2)	ZONE 10 496000E 6918000N	19.3 km NE of Camsell Bend on E bank of Mackenzie River	Upper Devonian limestone, some siltstone & shale -volumes unlimited	5	0.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	bedrock bedrock ridge		
11.025	95-J(7)	592.3kmp(28)	ZONE 10 503000E 6917000N	W of Mackenzie Hwy	sand & gravel	2	0.00	R) B) C) D) E) F)	0.069 0.069 0.000 0.000 0.000 0.069	morainal or glaciofluvial moraine or glaciofluvial ridge		
11.026	95J(7)	120(2) 3RED(26)	ZONE 10 503000E - 6916000N	35.4 km S of Willowlake River, 32km W of Ebbutt Hills	gravel to sandy gravel -volumes not determined	2-3	0.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal till ridges		
11.027	95J(7)	116X(2)	ZONE 10 512000E 6919000N	40.2 km SE of Willowlake River, 6.4km NE of Mackenzie Hwy	glacial till -silty, some sand & gravel pockets -volumes not determined	NG	3.50	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal moraine ridges		
11.028	95-J(7)	366-1(25) 368-1,2(25) 369-1,2(25)	ZONE 10 510000E 6914000N	along Mackenzie Hwy (Km 588)	till -volumes not determined	NG	0.00	R) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal moraine plain		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
well drained low to unfrozen	topsoil & peat & silt 0.3-2.0	CNT line	DPW pit is depleted, material from haul road may be used for maintenance purposes	31/ 9.00	3/ 4.60	A) B) C) D)	90 47 1 3	fair-good	favourable to good medium to high	11.019
well drained low to unfrozen	topsoil 0-0.3	CNT line	granular quality materials not established	6/ 6.10	0/ 0.00	A) B) C) D)	3 1 0 1	fair	poor low	11.020
well drained	topsI & organic silt 0.3-2.0	CNT line seismic cutlines & access trails	buffer zone between development & Hwy for aesthetic reasons -existing pit	12/ 9.00	1/ 0.00	A) B) C) D)	56 30 1 2	fair-good	good high	11.021
good low	-	access via snow road to Mackenzie Hwy 2 km W	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.022
well drained	peat 0-0.3	Mackenzie Hwy	may be used as very marginal fill in construction of road subgrades -DPW Pit #1114 has been depleted	4/ 9.00	0/ 0.00	A) B) C) D)	2 2 0 0	poor	poor low	11.023
well drained	thick	across depressional poorly drained & thermally sensitive terrain	thick overburden of glaciolacustrine sediments	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.024
good low	silt-clay to clay till 0-0.6	seismic line off Mackenzie Hwy	gravel in source depleted stockpiled on abandoned construction campsite at 592.1 kmp	9/ 4.60	11/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	11.025
well drained	topsoil & peat 0-0.3	seismic cutline	may be used for marginal fills	0/ 0.00	10/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable medium	11.026
good medium	organic topsoil 0-0.5	CNT line seismic lines	granular quality of material not established	7/ 6.10	0/ 0.00	A) B) C) D)	0 2 1 2	fair	poor low	11.027
fair low to moderate	-	Mackenzie Hwy crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.028

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
11.029	95J(6)	121(2)	ZONE 10 495000E 6910000N	14.5 km NE of Camstell Bend	sandy -some silt -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial hummocks & ridges	
11.030	95J(7)	115X(2) 363-1(25) 364-1(25) 365-1(25) 917, 925(27) 935, 971(27)	ZONE 10 512000E 6913000N	41.8 km SE of Willowlake River	sand -fine grained -some silt -some gravel -trace clay -volumes not determined	4 to NG	6.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.358 0.000	glaciofluvial esker/kame ridge	
11.031	95-J(7)	2RED(26) Green36(26)	ZONE 10 511000E 6912000N	W of Mackenzie Hwy (KP 583)	clay -silty -some pebbles -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal moraine plain	
11.032	95-J(7)	9RED(26)	ZONE 10 510000E 6910000N	W of Mackenzie Hwy (KP 582)	sand -silty -some gravel -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine & morainal-glaciolacustrine veneer over moraine plain	
11.033	95-J(7)	1RED(26)	ZONE 10 513000E 6914000N	E of Mackenzie Hwy (KP 582)	very sandy gravel to sand -volumes not determined	3-4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial glaciofluvial ridge	
11.034	95-J(7)	GM-181(6)	ZONE 10 515000E 6917000N	8 km NE of Mackenzie Hwy	till	NG	3.00	A) B) C) D) E) F)	1.900 0.000 0.000 1.900 0.000 0.000	morainal moraine plain	
11.035	95-J(7)	866(27)	ZONE 10 513000E 6912000N	along Mackenzie Hwy (KP 582)	silty sand -very dry -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.105 0.000		
11.036	95-J(7)	360-1,2,3(25) 361-1(25) 362-1,2,3(25)	ZONE 10 516000E 6909000N	along Mackenzie Hwy (KP 577)	clay-sand -close to optimum moisture -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.143 0.000	morainal plain	
11.037	95J(7)	114(2)	ZONE 10 519000E 6909000N	W of Ebbutt Hills	glacial till -silt, sand & clay with trace pebbles & cobbles -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal hummocky moraine	
11.038	95-J(7)	Green-28, 29(26) Green-30(26)	ZONE 10 523000E 6907000N	E of Mackenzie Hwy at (KP 570)	clay-silt-sand -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal & glaciolacustrine -moraine & glaciolacustrine plain	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
well drained	-	poor access	doubtful quality of materials, long access through thermally sensitive terrain	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.029
fair	organic topsoil Mackenzie Hwy 0-0.3		may be used for very marginal fill of road subgrades, some pits in the deposit are depleted	4/ 6.10	0/ 0.00	A) B) C) D)	1 2 0 0	poor	poor low	11.030
fair to good low	-	from Mackenzie Hwy which is near deposit	-	0/ 0.00	2/ 1.00	A) B) C) D)	0 0 0 0	poor	poor low	11.031
fair to good low	-	access from Mackenzie Hwy which is 2 km E of deposit	-	0/ 0.00	3/ 1.00	A) B) C) D)	0 0 0 0	poor	poor low	11.032
fair to good low	-	access from Mackenzie Hwy which is 2 km W of deposit	-	0/ 0.00	3/ 1.70	A) B) C) D)	0 0 0 0	poor	poor low	11.033
fair low	0-0.6	access by snow roads to Mackenzie Hwy 8 km SW	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.034
fair low	-	access from Mackenzie Hwy	material not suitable for maintenance purposes -existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	11.035
fair low to moderate	-	Mackenzie Hwy crosses deposit	pit is in a low area & has filled with water, may be some material	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	11.036
fairly well drained	-	seismic line	not of granular quality	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.037
fair low to moderate	-	access by Mackenzie Hwy 1 km W	-	3/ 3.50	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	11.038

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
11.039	95-J(7)	565(27)	ZONE 10 521000E 6906000N	along Mackenzie Hwy. (KP 572)	clay-sand mixture -very close to optimum moisture -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.119 0.000	morainal moraine plain		
11.040	95-J(7)	355-1,2(25) 356-1,2(25) 10RED(26) 443,449(27) Green31,32(26) Green33A(26)	ZONE 10 522000E 6903000N	along Mackenzie Hwy (KP 568)	gravel -very sandy clay-sand -close to optimum moisture -volumes not determined	62-3,CSM/G	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.136 0.006	morainal & glaciofluvial plain		
11.041	95-J(7)	Green-33(26)	ZONE 10 524000E 6903000N	E of Mackenzie Hwy at (KP 567)	sand-silt-clay till -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal plain		
11.042	95-J(3)	Blue-2,3,4(26) Blue-5(26)	ZONE 10 497000E 6898000N	N of the Mackenzie River E of Camstell Bend	sand -volumes not determined	3 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
11.043	95-J(2)	Green-46,47(26)	ZONE 10 512000E 6902000N	N of Mackenzie River W of Mackenzie Hwy	clay till -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal plain		
11.044	95-J(2)	Green-42,43(26) Green-44,45(26)	ZONE 10 515000E 6900000N	N of Mackenzie River W of Mackenzie Hwy	sand-silt-clay till -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	morainal plain		
11.045	95-J(2)	353-1(25)	ZONE 10 523000E 6900000N	along Mackenzie Hwy (KP 565)	clay-sand -close to optimum moisture -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.088 0.000	morainal moraine plain		
11.046	95-J(2)	280(27)	ZONE 10 523000E 6899000N	along Mackenzie Hwy (KP 564)	clay-sand mixture -very close to optimum moisture -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.069 0.000	morainal moraine plain		
11.047	95-J(2)	213(27)	ZONE 10 524000E 6898000N	along Mackenzie Hwy (KP 562)	clay-sand mixture -very close to optimum moisture -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.070 0.007	morainal moraine plain		
11.048	95-J(2)	Blue-8(26)	ZONE 10 507000E 6895000N	N of Mackenzie River E of Camstell Bend	silt -sandy -some clay -gravel lenses -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		

Source Description				Tests and Assessments						
DRAINAGE/ ICE CONTENT	OVERBURDEN TYPE AND THICKNESS (m)	ACCESS	DEVELOPMENT CONSTRAINTS	NO. OF BOREHOLES/ MAX DEPTH (m)	NO. OF TESTPITS/ MAX DEPTH (m)	LABORATORY TESTING	DATA RELIABILITY	OVERALL ASSESSMENT/ STUDY PRIORITY	BORROW SOURCE NUMBER	
fair low to moderate	-	access from Mackenzie Hwy which crosses deposit	existing pit	0/ 0.00	0/ 0.00	A) B) C) D) 0 0 0 0	poor	poor low	11.039	
fair low	-	Mackenzie Hwy crosses deposit	existing pit	24/ 13.50	2/ 0.00	A) B) C) D) 132 66 0 9	fair-good	favourable to poor medium to low	11.040	
fair low to moderate	-	access by Mackenzie Hwy 2 km W	-	2/ 2.80	0/ 0.00	A) B) C) D) 0 0 0 0	poor	poor low	11.041	
fair to poor low to moderate	-	access by snow road 24 km NE to Mackenzie Hwy	-	0/ 0.00	5/ 2.00	A) B) C) D) 0 0 0 0	poor	favourable to poor medium to low	11.042	
fair low to moderate	-	access by snow road to Mackenzie Hwy 10 km E	-	2/ 3.50	0/ 0.00	A) B) C) D) 0 0 0 0	poor	poor low	11.043	
fair low to moderate	-	access by snow road to Mackenzie Hwy 5 km E	-	4/ 3.50	0/ 0.00	A) B) C) D) 0 0 0 0	poor	poor low	11.044	
fair low to moderate	-	Mackenzie Hwy crosses deposit	existing pit	0/ 0.00	0/ 0.00	A) B) C) D) 0 0 0 0	poor	poor low	11.045	
fair low to moderate	-	access from Mackenzie Hwy which crosses deposit	existing pit	0/ 0.00	0/ 0.00	A) B) C) D) 0 0 0 0	poor	poor low	11.046	
fair low to moderate	-	access from Mackenzie Hwy which crosses deposit	existing pit	0/ 0.00	0/ 0.00	A) B) C) D) 0 0 0 0	poor	poor low	11.047	
fair to good low to moderate	-	access by snow road 17 km NE to Mackenzie Hwy	-	0/ 0.00	2/ 1.50	A) B) C) D) 0 0 0 0	poor	poor low	11.048	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
11.049	95-J(2)	J-164(29) Blue-1(26)	ZONE 10 502000E 6893000N	N of Mackenzie River-	sand -fine to medium grained	4	11.00	A) 6.600 B) 0.000 C) 0.000 D) 6.600 E) 0.000 F) 0.000	aeolian sand ridges		
11.050	95-J(2)	Blue-6,10(26)	ZONE 10 511000E 6892000N	N of Mackenzie River E of Camstell Bend	sand -silty -fine grained -some gravel -volumes not determined	3 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain		
11.051	95-J(2)	J-165(29) Blue-9(26)	ZONE 10 508000E 6890000N	N bank of Mackenzie River	sand -fine to medium grained	4	11.00	A) 2.800 B) 0.000 C) 0.000 D) 2.800 E) 0.000 F) 0.000	aeolian dunes		
11.052	95J(2)	111(2) R-19(20)	ZONE 10 517000E 6892000N	9.7 km W of Hwy Crossing	sand & silt -fine grained	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace		
11.053	95J(2)	110X(2) Blue-12(26)	ZONE 10 520000E 6893000N	N bank of Mackenzie River	sand -fine grained -poorly graded -some silt -some gravel -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace		
11.054	95-J(2)	Green-41(26)	ZONE 10 522000E 6896000N	W of Mackenzie Hwy at (KP 563)	sand-silt-clay (till) -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	morainal & glaciolacustrine -moraine & glaciolacustrine plain		
11.055	95-J(2)	350-1(25) 8RED(26) 100(27) 155(27)	ZONE 10 525000E 6895000N	along Mackenzie Hwy (KP 559) N of Mackenzie River	sand & silt -some gravel clay-sand -at optimum moisture -volumes not determined	3 and NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.190 F) 0.007	glaciolacustrine glaciolacustrine plain		
11.056	95-J(1)	Blue-38(26)	ZONE 10 526000E 6896000N	N of Mackenzie River E of Mackenzie Hwy	silt -sandy -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain		
11.057	95J(8)	113X(2) C-5(20)	ZONE 10 534000E 6904000N	17.7 km N of Trail River 16 km E of Mackenzie Hwy	sand, some silt, trace gravel, medium to coarse grained -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial outwash deposits		
11.058	95J(1)	112(2) R-36(20) J-162(29) Blue-37(26)	ZONE 10 534000E 6900000N	16 km NW of Trail River	sands & silts -well graded -some pebbles	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciofluvial outwash deposit		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	Mackenzie River	near active channel of Mackenzie River	0/ 0.00	5/ 2.30	A) 0 B) 0 C) 0 D) 0	none	favourable medium	11.049	
fair to good low to moderate	-	access by snow road 15 km NE to Mackenzie Hwy	-	0/ 0.00	2/ 1.50	A) 0 B) 0 C) 0 D) 0	poor	favourable to poor medium to low	11.050	
fair to good low	-	Mackenzie River	near active channel of Mackenzie River	0/ 0.00	1/ 2.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	11.051	
-	thickness vari- able & substan-	existing seismic cutlines	materials of granular quality not anticipated	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	11.052	
good unfrozen	organic topsoil 0-0.3	no existing land access routes	sands not of granular quality	0/ 0.00	4/ 1.80	A) 0 B) 1 C) 0 D) 0	poor	poor low	11.053	
fair low to moderate	-	access by Mackenzie Hwy 3 km E	-	1/ 3.50	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.054	
fair low to moderate	-	Mackenzie Hwy crosses deposit	existing pit	0/ 0.00	4/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.055	
fair to good low	-	access via Mackenzie Hwy 1 km W	-	0/ 0.00	1/ 1.50	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.056	
good low	organic topsoil 0-0.5	CNT line	materials of granular quality not established	4/ 6.10	0/ 0.00	A) 0 B) 1 C) 1 D) 1	fair	poor low	11.057	
fair to good	-	remote	poor prospect for granular materials	0/ 0.00	1/ 1.50	A) 0 B) 0 C) 0 D) 0	none	poor low	11.058	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.059	95-J(1)	Blue-36(26)	ZONE 10 533000E 6897000N	N of Mackenzie River. E of Mackenzie Hwy	silt -sandy -trace gravel -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
11.060	95J(1)	109X(2) R-22,23,24(20) R-25(20) P-109(3) 25(27) Green-48(26)	ZONE 10 536000E 6891000N	N bank of Mackenzie River E of Mackenzie Hwy	sand -fine grained -poorly graded -some silt -very dry -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.120 0.007	alluvial alluvial terrace		
11.061	95-J(1)	Blue-15,16(26)	ZONE 10 530000E 6891000N	N & S shores of Mackenzie River E of Mackenzie Hwy	sand -silty -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
11.062	95J(1)	106(2)	ZONE 10 539000E 6891000N	3.2 km NW of Trail River, 4.8 km N of Mackenzie River channel	sand -fine grained -poorly graded -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	aeolian sand dunes		
11.063	95J(1)	107X(2) Blue-18(26)	ZONE 10 539000E 6887000N	N bank of Mackenzie River, W of Trail River	sand -trace silt -fine grained -poorly graded -volumes not determined	4	2.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace		
11.064	95J(1)	105(2) J-163(29)	ZONE 10 550000E 6886000N	E of Trail River 48.2 km NW of Fort Simpson	sand -fine grained -poorly graded	4	10.50	A) B) C) D) E) F)	69.600 0.000 0.000 0.000 0.000 0.000	aeolian sand dunes		
11.065	95-I(4)	P-109(6) P-109(3) P-109(22) Blue-31(26)	ZONE 10 558000E 6877000N	1.6 km E of Mackenzie River	sand & silt	4	4.50	A) B) C) D) E) F)	1.900 0.000 0.000 1.900 0.000 0.000	alluvial alluvial terrace		
11.066	95I(4)	104X(2) I-20(14)	ZONE 10 558000E 6882000N	N bank of Mackenzie River, 6.4km N of Mackenzie Hwy (KP 520)	sand -fine grained -poorly graded -volumes not determined	4	6.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.001	aeolian sand dunes		
11.067	95I(4)	102(2) I-33(14) IPP-488kmp(23) Blue-24(26)	ZONE 10 563000E 6876000N	22.5 km NW of Fort Simpson on Mackenzie River	gravel, sand & washed till -volumes not determined	2-3	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.007	glaciofluvial terrace		
11.068	95H(13)	101-(2) H-8(11)	ZONE 10 568000E 6873000N	19.3 km NW of Fort Simpson on Mackenzie River	gravel -coarse grained -some sand -trace silt & clay -volumes not determined	3	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciofluvial terrace		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
fair to good low	-	access by snow road to Mackenzie Hwy 6 km W	-	0/ 0.00	2/ 1.40	A) B) C) D)	0 0 0 0	poor	poor to favourable low to medium	11.059	
good unfrozen	organic topsoil 0-0.3	Mackenzie Hwy	sands not of granular quality -existing pit	3/ 12.20	1/ 1.70	A) B) C) D)	0 3 0 0	poor	poor low	11.060	
fair low to high	organics 0-0.3	Mackenzie Hwy 2 - 5 km W & S of deposit	-	0/ 0.00	2/ 2.70	A) B) C) D)	0 0 0 0	poor	poor low	11.061	
fair	-	must cross poorly drained & thermally sensitive areas, remote	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.062	
good unfrozen	organic topsoil 0-0.2	no existing land access to the site -barge	access poor	0/ 0.00	5/ 1.80	A) B) C) D)	0 2 0 0	poor	poor low	11.063	
well drained unfrozen	-	access poor	poorly drained & thermally sensitive terrain to the south	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.064	
good low to medium	0-0.3	must cross Mackenzie River and access by snow road 2 km S to Mackenzie Hwy	-	0/ 0.00	2/ 1.50	A) B) C) D)	0 0 0 0	none	favourable to poor medium to low	11.065	
good low to unfrozen	peat & topsoil 0-0.3	no existing land access route	access difficult, existing pit	4/ 7.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	11.066	
fair -	- variable	barge	buffer zone next to Mackenzie River, difficult access, existing pit	0/ 0.00	2/ 0.45	A) B) C) D)	0 0 0 0	poor	favourable medium	11.067	
fair -	sand & silt 2.0-3.0	barge CNT line	buffer zone next to Mackenzie River	5/ 6.10	2/ 0.00	A) B) C) D)	0 4 1 2	good	good high	11.068	

SITE IDENTIFICATION						SOURCE DESCRIPTION							
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM				
11.069	95-H(13)	Green-10(26)	ZONE 10 578000E 687000N	N of Mackenzie River- NW of Fort Simpson	glacial till -cobbles & boulders -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	morainal moraine plain				
11.070	95H(14)	95H-B1(1) (FS-12)(5) H-8(11) R-6, 99, 100(20) P-101(6) IPP-512kmp(23)&	ZONE 10 581000E 686500N	N bank of Mackenzie River, 3.2km NW of Fort Simpson	gravel -fine to coarse grained -cobbley -sandy - coarse grained -shaly	2-3	3.50	A) 5.100 B) 3.100 C) 1.500 D) 0.000 E) 0.000 F) 0.000	glaciofluvial outwash terrace				
11.071	95H(14)	95H-B2(1) FS-13(6) FS-13(5) H-139(11) C-1(20) IPP-512kmp(23)&	ZONE 10 581000E 686500N	1.6 km N of Fort Simpson	gravel -poorly graded -fine to medium grained -silty sand - fine to coarse grained -some gravel	2-3	3.00	A) 1.000 B) 0.500 C) 0.300 D) 0.200 E) 0.000 F) 0.009	glaciofluvial outwash terrace				
11.072	95-H(10)	Map 3(40)	ZONE 10 624000E 682800N	E bank of Mackenzie River S of Spence River	sand to gravelly sand -clean -volumes not determined	2-3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace				
11.073	95-H(9)	Map 3(40)	ZONE 10 635000E 682900N	N bank of Spence River	prospective source (Mollard)	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial terrace				
11.074	95J(10)	95J-B5(1)	ZONE 10 517000E 693500N	S of Willowlake River	stratified sand & gravel 60:40% sand - poorly graded -medium to coarse grained gravel - fine to coarse grained	2	2.00	A) 0.380 B) 0.190 C) 0.760 D) 0.114 E) 0.000 F) 0.000	glaciofluvial esker ridge				
11.075	95-J(10)	GM-161(6) GM-161(21)	ZONE 10 522000E 693600N	8 km S of Willowlake River	sand & gravel	2-3	6.00	A) 0.115 B) 0.000 C) 0.000 D) 0.115 E) 0.000 F) 0.000	glaciofluvial eskers				
11.076	95-J(9)	GM-162(6) GM-162(21)	ZONE 10 535000E 693100N	14.4 km S of Willowlake River	sand & gravel	3-4	3.00	A) 1.900 B) 0.000 C) 0.000 D) 1.900 E) 0.000 F) 0.000	alluvial alluvial meander plain				
11.077	95-J(7)	GM-180(6)	ZONE 10 521000E 692300N	19.3 km NE of Mackenzie Hwy	till	NG	3.00	A) 1.900 B) 0.000 C) 0.000 D) 1.900 E) 0.000 F) 0.000	morainal moraine plain				
11.078	95-J(1)	Green-25(26)	ZONE 10 548000E 690200N	N of Mackenzie River SE of Ebbutt Hills	clay, silt, sand -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	morainal & glaciolacustrine -moraine & glaciolacustrine plain				

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low to unfrozen	-	snow road 5 km to N bank of Mackenzie River	3 drill holes attempted refusal at 0.2 m due to cobbles & boulders	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor to favourable low to medium	11.069	
fair to poor unfrozen	silt - 1.8-4.5m peat - 0-1.6m	no direct access, CNT line at E side of site	protect banks of Mackenzie River from disturbance	12/ 8.50	7/ 1.50	A) 3 B) 6 C) 2 D) 0	good	favourable to good medium to high	11.070	
fair to poor low to unfrozen	silt & peat 1.2-3.0	must cross Mackenzie R. existing seismic cutlines from CNT pole line and winter road	more favorable than (#11.070) as is further from Mackenzie River, access poor -existing pit	23/ 12.20	4/ 1.50	A) 9 B) 10 C) 3 D) 0	good	favourable to good medium to high	11.071	
fair to good low to unfrozen	-	-	no granular source accessible from the community by road during the summer	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	11.072	
fair to good low	-	-	no granular source accessible from the community by road during the summer	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	11.073	
well drained unfrozen	-	snow road	-	0/ 0.00	2/ 0.00	A) 2 B) 3 C) 1 D) 3	fair	favourable to good medium to high	11.074	
poor low to unfrozen	0-0.3	access by snow roads to Mackenzie Hwy 23 km W	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	11.075	
good low to medium	0.3-1.5	access by snow roads to Mackenzie Hwy 35 km W	near active channel of creek	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable* medium	11.076	
fair low	0-0.6	access by snow roads to Mackenzie Hwy 21 km W	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	11.077	
fair low to moderate	-	access by snow road 25 km W to Mackenzie Hwy	-	2/ 3.50	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.078	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
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11.079	95-J(1)	Green-21, 22(26) Green-23, 24(26)	ZONE 10 550000E 6895000N	N of Mackenzie River, SE of Ebbott Hills	clay-silt-sand -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	morainal & glaciolacustrine-moraine & glaciolacustrine plain		
11.080	95-I(12)	I-34	ZONE 10 554000E 6945000N	4.8 km N of Willowlake River	sand & gravel	2-3	0.00	A) 0.076 B) 0.000 C) 0.000 D) 0.076 E) 0.000 F) 0.000	glaciofluvial eskers		
11.081	95-I(12)	I-23, 24(14)	ZONE 10 556000E 6936000N	active channel of Willowlake River	gravel & sand -trace silt	2-3	10.00	A) 12.900 B) 0.000 C) 0.000 D) 12.900 E) 0.000 F) 0.000	alluvial alluvial terraces & plains		
11.082	95-I(5)	I-6(14)	ZONE 10 556000E 6927000N	8 km W of Willowlake River	gravelly till	NG	6.00	A) 3.700 B) 0.000 C) 0.000 D) 3.700 E) 0.000 F) 0.000	morainal morainal ridge		
11.083	95-I(5)	I-25, 32(14) R-29(20)	ZONE 10 562000E 6941000N	active channel of Willowlake River	gravel & sand -some silt	2-3	10.00	A) 98.700 B) 0.000 C) 0.000 D) 98.700 E) 0.000 F) 0.000	alluvial alluvial terraces & plains		
11.084	95-I(4)	Green-16, 17(26) Green-19, 20(26)	ZONE 10 561000E 6889000N	N of Mackenzie River	clay -silty -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	morainal moraine plain		
11.085	95-I(4)	Green-12, 13(26) Green-15(26)	ZONE 10 566000E 6882000N	N of Mackenzie River	clay till -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	morainal moraine plain		
11.086	95-I(4)	Green-11(26)	ZONE 10 573000E 6876000N	N of Mackenzie River	glacial till -cobbles & boulders -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	morainal moraine plain		
11.087	95-I(2)	I-4, 5(14)	ZONE 10 605000E 6879000N	E of Harris River	till & gravel	NG	18.00	A) 48.300 B) 0.000 C) 0.000 D) 48.300 E) 0.000 F) 0.000	morainal moraine plain		
11.088	95-H(9)	H-159(11) R-40(20)	ZONE 10 633000E 6848000N	11.3 km E of Mackenzie River on RabbitSkin River	sand & gravel	2-3	12.00	A) 5.700 B) 0.000 C) 0.000 D) 5.700 E) 0.000 F) 0.000	alluvial alluvial plains & terraces		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good unfrozen	-	access by snow road 35 km N and 15 km S of Mackenzie River to Mackenzie Hwy	-	0/ 0.00	1/ 0.00	A) B) C) D)	0 1 0 0	poor	favourable medium	11.089
fair to good low to moderate	-	access by snow road 8 km E and 15 km N of Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.090
fair to good low	-	remote location W of Camsell River, access by snow road 41 km to W side of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.091
fair to good low	-	remote location W of Camsell River, access by snow road 50 km to W side of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.092
fair to good low to moderate	-	remote location W of Camsell River, access by snow road 40 km to W side of Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.093
good low	-	remote location W of Camsell River, access by snow road 55 km to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.094
fair to good low	-	remote location W of Camsell River, access by snow road 40 km to Mackenzie River	active channel of North Nahanni River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	11.095
good low	-	remote location W of Camsell River, access by snow road 55 km to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.096
good low	-	remote location W of Camsell River, access by snow road to Mackenzie River 53 km to S & E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.097
fair to good low	-	cross Mackenzie River and snow road 18 km E to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	11.098

SITE IDENTIFICATION					SOURCE DESCRIPTION					
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11.109	95-J(6)	J-49(29)	ZONE 10 477000E 6915000N	W of Mackenzie River N of Camsell Bend	sand -some gravel -some glaciolacustrine sand & silt	3-4	23.00	A) 169.400 B) 0.000 C) 0.000 D) 169.400 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.100	95-J(6)	J-50,51(29)	ZONE 10 480000E 6914000N	W bank of Mackenzie River N of Camsell Bend	sand -some gravel -some glaciolacustrine sand & silt	3-4	23.00	A) 49.800 B) 0.000 C) 0.000 D) 49.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.101	95-J(6)	J-148(29)	ZONE 10 473000E 6897000N	SW of Camsell Mountain	silt, sand & gravel	3	8.00	A) 7.700 B) 0.000 C) 0.000 D) 7.700 E) 0.000 F) 0.000	alluvial alluvial fan	
11.102	95-J(4)	J-37(29)	ZONE 10 466000E 6895000N	E of North Nahanni River	sand & gravel	2-3	13.00	A) 37.400 B) 0.000 C) 0.000 D) 37.400 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.103	95-J(3)	J-24(29)	ZONE 10 483000E 6897000N	E of North Nahanni River S of Mackenzie River	sand & gravel	2-3	4.00	A) 11.200 B) 0.000 C) 0.000 D) 11.200 E) 0.000 F) 0.000	alluvial alluvial terrace	
11.104	95-J(3)	J-25(29)	ZONE 10 482000E 6892000N	E of North Nahanni River N of Nahanni Mountain	sand & gravel	2-3	10.00	A) 11.100 B) 0.000 C) 0.000 D) 11.100 E) 0.000 F) 0.000	alluvial alluvial terrace	
11.105	95-J(3)	J-146(29)	ZONE 10 479000E 6887000N	E of the North Nahanni River NW of Nahanni Mountain	sand, gravel & silt	3-4	7.50	A) 8.500 B) 0.000 C) 0.000 D) 8.500 E) 0.000 F) 0.000	alluvial alluvial fan complex	
11.106	95-J(4)	J-35,36(29) J-171(29)	ZONE 10 469000E 6885000N	N of North Nahanni River	sand & gravel	2-3	12.00	A) 93.000 B) 0.000 C) 0.000 D) 93.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace & plain deposits	
11.107	95-J(3)	J-140,141(29) J-145(29)	ZONE 10 477000E 6888000N	active channel of North Nahanni River	sand & gravel	2	10.00	A) 85.200 B) 0.000 C) 0.000 D) 85.200 E) 0.000 F) 0.000	alluvial alluvial floodplain & braided stream deposits	
11.108	95-J(3)	J-26(29)	ZONE 10 478000E 6882000N	W flank of Nahanni Mountains E of North Nahanni River	gravel & sand -some glaciolacustrine sands	3-4	10.00	A) 64.600 B) 0.000 C) 0.000 D) 64.600 E) 0.000 F) 0.000	alluvial alluvial terrace	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good low	-	cross Mackenzie River and access by snow road to Mackenzie Hwy 24 km E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.109
fair to good low to moderate	-	cross Mackenzie River and access by snow road to Mackenzie Hwy 22 km E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.100
fair to good low	-	access by snow road 15 km N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.101
good low	-	remote location W of Camsell River, access by snow road 23 km E & N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.102
fair to good low	-	access by snow road 2 km N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.103
fair to good low	-	access by snow road 8 km N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.104
fair to good low to moderate	-	access by snow road 15 km N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.105
good low	-	access by snow road 22 km N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.106
fair to good low	-	access by snow road N to Mackenzie River which passes N end of deposit	active channel of North Mahanni River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent* high	11.107
fair to good low to moderate	-	access by snow road 15 to 23 km N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	11.108

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.109	95-J(3)	J-27(29)	ZONE 10 474000E 6875000N	SW flank of Nahanni Mountain E of North Nahanni River	gravel & sand -some glaciolacustrine sands	3-4	10.00	A) 45.300 B) 0.000 C) 0.000 D) 45.300 E) 0.000 F) 0.000	alluvial alluvial terrace			
11.110	95-J(4)	J-28,29(29)	ZONE 10 472000E 6876000N	S bank of North Nahanni River	gravel & sand -with some glaciolacustrine sands	3	10.00	A) 119.800 B) 0.000 C) 0.000 D) 119.800 E) 0.000 F) 0.000	alluvial alluvial terrace			
11.111	95-J(4)	J-38(29)	ZONE 10 463000E 6875000N	active channel of Ram River S of North Nahanni River	sand & gravel	2-3	13.00	A) 16.700 B) 0.000 C) 0.000 D) 16.700 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace & plain deposits			
11.112	95-G(13)	G-100(17)	ZONE 10 463000E 6874000N	W of Ram River	gravel	1-3	15.00	A) 16.800 B) 0.000 C) 0.000 D) 16.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
11.113	95-G(13)	G-26,27(17)	ZONE 10 472000E 6873000N	W bank of Tetcela River	gravel	1-3	15.00	A) 31.000 B) 0.000 C) 0.000 D) 31.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
11.114	95-G(13)	G-97(17)	ZONE 10 466000E 6865000N	active channel of Ram River	gravel & sand	2-3	10.00	A) 168.800 B) 0.000 C) 0.000 D) 168.800 E) 0.000 F) 0.000	alluvial alluvial plain			
11.115	95-G(13)	G-98(17)	ZONE 10 464000E 6863000N	W of Ram River	gravel & sand	2-3	12.00	A) 11.900 B) 0.000 C) 0.000 D) 11.900 E) 0.000 F) 0.000	alluvial alluvial terrace			
11.116	95-G(13)	G-99(17)	ZONE 10 468000E 6862000N	E of Ram River	gravel & sand	2-3	12.00	A) 143.800 B) 0.000 C) 0.000 D) 143.800 E) 0.000 F) 0.000	alluvial alluvial terrace			
11.117	95-G(14)	G-101(17)	ZONE 10 479000E 6872000N	NW shore of Cli Lake	gravel	2-3	8.00	A) 3.600 B) 0.000 C) 0.000 D) 3.600 E) 0.000 F) 0.000	alluvial alluvial fans			
11.118	95-G(14)	G-28,29(17)	ZONE 10 475000E 6870000N	W of Cli Lake E of Tetcela River	gravel	1-3	15.00	A) 75.900 B) 0.000 C) 0.000 D) 75.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plains & terraces			

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
fair to good low to moderate	-	access by snow road 24 km N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	11.109	
fair to good low	-	access by snow road 26 km N to Mackenzie River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	11.110	
fair to good low	-	access by snow road 34 km N to Mackenzie River	active channel of Ram River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	11.111	
good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 30 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.112	
good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 25 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.113	
good low	-	remote location W of Nahanni River, access by snow road to Mackenzie River 45 km N	active channel of Ram River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	11.114	
fair to good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 45 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.115	
fair to good low	-	remote location W of Nahanni River, access by snow road to Mackenzie River 45 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.116	
fair to good low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 28 km N	shoreline of Cli Lake	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good* medium to high	11.117	
good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 30 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.118	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.119	95-G(14)	G-102(17)	ZONE 10 481000E 6868000N	S shore of Cli Lake	gravel	2-3	8.00	A) 3.600 B) 0.000 C) 0.000 D) 3.600 E) 0.000 F) 0.000	alluvial alluvial fans			
11.120	95-G(14)	G-105(17) R-43(20)	ZONE 10 474000E 6855000N	active channel of Tetcela River	gravel & sand	3	10.00	A) 124.600 B) 0.000 C) 0.000 D) 124.600 E) 0.000 F) 0.000	alluvial alluvial plain			
11.121	95-G(14)	G-103,104(17)	ZONE 10 478000E 6864000N	E of Tetcela River W slopes of Nahanni Range	gravel & sand	2-3	10.00	A) 12.200 B) 0.000 C) 0.000 D) 12.100 E) 0.000 F) 0.000	alluvial alluvial fans			
11.122	95-G(13)	G-106(17)	ZONE 10 473000E 6855000N	W bank of Tetcela River	gravel & silt	2-3	12.00	A) 57.600 B) 0.000 C) 0.000 D) 57.600 E) 0.000 F) 0.000	alluvial alluvial terrace			
11.123	95-G(11)	G-114(17) R-87(20)	ZONE 10 478000E 6850000N	active channel E of Tetcela River W of Nahanni Range	gravel & sand	2-3	10.00	A) 88.200 B) 0.000 C) 0.000 D) 88.200 E) 0.000 F) 0.000	alluvial alluvial plain			
11.124	95-G(11)	G-108,109(17)	ZONE 10 480000E 6854000N	W slopes of Nahanni Range S of Little Doctor Lake	gravel	2-3	8.00	A) 9.800 B) 0.000 C) 0.000 D) 9.800 E) 0.000 F) 0.000	alluvial alluvial fans			
11.125	95-G(11)	G-111,112(17)	ZONE 10 480000E 6846000N	W slopes of Nahanni Range 9.7 km S of Little Doctor Lake	gravel	2-3	8.00	A) 27.800 B) 0.000 C) 0.000 D) 27.800 E) 0.000 F) 0.000	alluvial alluvial fans			
11.126	95-G(14)	G-110(17)	ZONE 10 475000E 6847000N	E bank of Tetcela River	gravel & sand	2-3	12.00	A) 33.300 B) 0.000 C) 0.000 D) 33.300 E) 0.000 F) 0.000	alluvial alluvial plain			
11.127	95-G(12)	G-107(17)	ZONE 10 472000E 6840000N	E of Tetcela River	gravel & silt	2-3	10.00	A) 39.900 B) 0.000 C) 0.000 D) 39.900 E) 0.000 F) 0.000	alluvial alluvial plain			
11.128	95-G(11)	G-113(17)	ZONE 10 477000E 6836000N	W slopes of Nahanni Range	gravel	2-3	8.00	A) 26.000 B) 0.000 C) 0.000 D) 26.000 E) 0.000 F) 0.000	alluvial alluvial fans			

Source Description				Tests and Assessments						
DRAINAGE/ ICE CONTENT	OVERBURDEN TYPE AND THICKNESS (m)	ACCESS	DEVELOPMENT CONSTRAINTS	NO. OF BOREHOLES/ MAX DEPTH (m)	NO. OF TESTPITS/ MAX DEPTH (m)	LABORATORY TESTING	DATA RELIABILITY	OVERALL ASSESSMENT/ STUDY PRIORITY	BORROW SOURCE NUMBER	
fair to good low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 30 km N	shoreline of Cli Lake	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good* medium to high	11.119	
fair to good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 50-30 km N	active channel of Tetcela River	0/ 0.00	- 1/ 0.00	A) 0 B) 1 C) 0 D) 0	poor	favourable* medium	11.120	
fair to good low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 35 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good* medium to high	11.121	
fair low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 45 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	11.122	
fair to good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 45-55 km N	active channel of Tetcela River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good* medium to high	11.123	
good low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 45 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	11.124	
good low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 50 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	11.125	
fair low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 45 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	11.126	
fair low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 55 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good* medium to high	11.127	
good low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 62 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	11.128	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.129	95-G(11)	G-47(17)	ZONE 10 486000E 684000N	E of Nahanni Range	gravel	2-3	15.00	A) 19.800 B) 0.000 C) 0.000 D) 19.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge			
11.130	95-G(13)	G-96(17)	ZONE 10 466000E 685500N	4.8 km E of Ram River	gravel & sand	3-4	12.00	A) 34.700 B) 0.000 C) 0.000 D) 34.700 E) 0.000 F) 0.000	alluvial alluvial terrace			
11.131	95-G(13)	G-30, 31, 32(17) G-33(17)	ZONE 10 463000E 685500N	E of Ram River	gravel & sand	2-3	15.00	A) 156.700 B) 0.000 C) 0.000 D) 156.700 E) 0.000 F) 0.000	glaciofluvial glaciofluvial hummocks			
11.132	95-G(12)	G-95(17)	ZONE 10 463000E 684600N	N of Tetcoela River S of Ram River	gravel	2-3	8.00	A) 8.600 B) 0.000 C) 0.000 D) 8.600 E) 0.000 F) 0.000	alluvial alluvial fan			
11.133	95-G(13)	G-34(17)	ZONE 10 453000E 685600N	N of Ram River E of Ram Plateau	gravel	1-3	15.00	A) 12.900 B) 0.000 C) 0.000 D) 12.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge			
11.134	95-J(2)	Blue-11(26)	ZONE 10 513000E 688700N	S of Mackenzie River W of Mackenzie Hwy	sand -volumes not determined	3 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			
11.135	95-J(2)	Blue-13(26)	ZONE 10 520000E 688900N	S of Mackenzie River W of Mackenzie Hwy	clay -silty -volumes not determined	NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			
11.136	95-J(1)	548kmp(28)	ZONE 10 528000E 688800N	S of Mackenzie River on the Mackenzie Hwy	gravel -high shale content	3-4	0.00	A) 0.212 B) 0.212 C) 0.000 D) 0.000 E) 0.000 F) 0.162	glaciofluvial glaciofluvial terrace			
11.137	95-J(1)	J-75(29) Blue-14, 17(26) DPW537-543(28)	ZONE 10 534000E 688600N	along Mackenzie Hwy (KP 540) S of Mackenzie River	sand & gravel	3-4	13.00	A) 47.900 B) 0.000 C) 0.000 D) 47.900 E) 0.000 F) 0.005	alluvial alluvial terrace			
11.138	95-J(1)	J-76(29)	ZONE 10 535000E 688700N	S bank of Mackenzie River N of Mackenzie Hwy (KP 540)	sand & gravel	3-4	13.00	A) 12.400 B) 0.000 C) 0.000 D) 12.400 E) 0.000 F) 0.000	alluvial alluvial terrace			

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
good low to unfrozen	-	access by snow roads to Mackenzie Hwy 64 km NE	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.129	
good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 45.4 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	11.130	
good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 45.4 km to N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good high	11.131	
good low to moderate	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 55 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.132	
fair to good low	-	remote location W of Nahanni Range, access by snow road to Mackenzie River 50 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.133	
fair low to high	-	access by snow road 13 km E to Mackenzie Hwy	-	0/ 0.00	1/ 1.70	A) B) C) D)	0 0 0 0	poor	poor low	11.134	
fair low to high	moss 0-0.09	access by snow road 5 km E to Mackenzie Hwy	-	0/ 0.00	1/ 1.00	A) B) C) D)	0 0 0 0	poor	poor low	11.135	
fair low	-	Mackenzie Hwy which crosses deposit	high shale content	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable medium	11.136	
fair low to moderate	moss 0-0.5	access along Mackenzie Hwy which crosses deposit	5 depleted pits within the deposit	0/ 0.00	3/ 1.80	A) B) C) D)	0 0 0 0	none	favourable to poor medium to low	11.137	
fair to good low	-	access via Mackenzie Hwy 2 km S and/or Mackenzie River	near active channel of Mackenzie River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	11.138	

SITE IDENTIFICATION						SOURCE DESCRIPTION							
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM				
11.139	95J(1)	108X(2) Blue-19(26)	ZONE 10 540000E 6882000N	S bank of Mackenzie River N of Mackenzie Hwy	silt, some clay, some sand, trace gravel -volumes not determined	NG	1.00	R: B: C: D: E: F:	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace			
11.140	95-J(1)	GM-121(3) GM-121(22)	ZONE 10 539000E 6875000N	9.7 km S of Mackenzie River	silt, sand & gravel	3-4	1.50	R: B: C: D: E: F:	0.950 0.000 0.000 0.950 0.000 0.000	alluvial alluvial meander plain			
11.141	95-J(1)	J-174(29) Blue-21,22(26) Blue-39(26)	ZONE 10 540000E 6878000N	S of Mackenzie River in active channel S of Mackenzie Hwy (KP 532)	gravel	2-3	2.50	R: B: C: D: E: F:	11.100 0.000 0.000 11.100 0.000 0.000	alluvial alluvial plain			
11.142	95-J(1)	J-166(29) J-167(29) Blue-20(26) DPW520-534(28)	ZONE 10 545000E 6880000N	S bank of Mackenzie River N of Mackenzie Hwy (KP 527)	sand, gravel & silt	4	13.00	R: B: C: D: E: F:	37.300 0.000 0.000 37.300 0.000 0.005	alluvial alluvial terrace			
11.143	95-J(1)	Blue-23,42(26) 521.2kmp(28)	ZONE 10 552000E 6880000N	S of Mackenzie River N of Mackenzie Hwy	sand & gravel	2	0.00	R: B: C: D: E: F:	0.350 0.350 0.000 0.000 0.000 0.200	alluvial alluvial terrace			
11.144	95-G(16)	G-57(17) Blue-40,41(26)	ZONE 10 538000E 6873000N	29 km NE of Sibbeston Lake	gravel & silt	3-4	3.00	R: B: C: D: E: F:	1.400 0.000 0.000 1.400 0.000 0.000	alluvial alluvial plain			
11.145	95-G(16)	G-54(17)	ZONE 10 541000E 6861000N	22.5 km NE of Sibbeston Lake	sand, gravel & till	4 - NG	15.00	R: B: C: D: E: F:	9.300 0.000 0.000 9.300 0.000 0.000	morainal moraine plain -hummocky			
11.146	95-G(15)	G-53(17) R-96(20)	ZONE 10 523000E 6862000N	12.9 km NE of Sibbeston Lake	sand, gravel & till	2-3 someNG	15.00	R: B: C: D: E: F:	50.700 0.000 0.000 50.700 0.000 0.000	morainal hummocky moraine			
11.147	95-G(15)	G-52(17)	ZONE 10 526000E 6852000N	9.7 km E of Sibbeston Lake	sand & gravel	2-3	0.00	R: B: C: D: E: F:	0.450 0.000 0.000 0.450 0.000 0.000	glaciofluvial eskers			
11.148	95-G(16)	GM-19(3) GM-19(22)	ZONE 10 552000E 6856000N	W of Martin River	shale (Lower Cretaceous)	5	6.00	R: B: C: D: E: F:	3.800 0.000 0.000 3.800 0.000 0.000	bedrock plateau			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReholes/ Max Depth (m)	No. of Testsites/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good unfrozen	organic topsoil 0-0.2	access difficult by land -barge	materials of granular quality not established in outlined area	0/ 0.00	2/ 2.00	A) B) C) D)	0 1 0 0	poor	poor low	11.139
good low	-0-0.6	-	active channel of creek	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	11.140
fair to good low to unfrozen	-	access via Mackenzie Hwy which crosses deposit	active channel of creek	0/ 0.00	6/ 1.50	A) B) C) D)	0 0 0 0	none	favourable medium	11.141
fair high	-	access along Mackenzie Hwy which crosses deposit	high ground ice and organic content -existing pit -8 depleted pits within the deposit	0/ 0.00	2/ 1.50	A) B) C) D)	0 0 0 0	poor	poor to unsuitable low	11.142
fair low	silty sand 0-0.4	Mackenzie Hwy 2 km S of deposit	existing pit remaining gravel below water table	0/ 0.00	5/ 1.20	A) B) C) D)	0 0 0 0	poor	favourable to poor medium to low	11.143
fair to good low	-	access by snow roads to Mackenzie Hwy 12.9 km to the N	-	0/ 0.00	2/ 1.40	A) B) C) D)	0 0 0 0	none	favourable medium	11.144
fair low to moderate	-	access by snow roads to Mackenzie Hwy 22.9 km to the N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to poor medium to low	11.145
fair to good low	-	access by snow roads to Mackenzie Hwy 27 km to the N	-	0/ 0.00	2/ 0.00	A) B) C) D)	0 2 0 0	poor	favourable medium	11.146
good unfrozen	-	access by snow roads to Mackenzie Hwy 30 km to the N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.147
good low to unfrozen	-0-2.5	access by snow road to Mackenzie Hwy 23 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	11.148

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.149	95-G(9)	G-58(17) R-90(20)	ZONE 10 545000E 6825000N	active channel of Martin River	gravel, sand & silt	2-3	3.00	A) 7.000 B) 0.000 C) 0.000 D) 7.000 E) 0.000 F) 0.000	alluvial alluvial plain			
11.150	95-G(7)	G-59(17)	ZONE 10 520000E 6811000N	active channel of Matou River	gravel & sand	3	3.00	A) 10.600 B) 0.000 C) 0.000 D) 10.600 E) 0.000 F) 0.000	alluvial alluvial plain			
11.151	95-G(7)	G-51(17)	ZONE 10 518000E 6807000N	S of Matou River	sand & gravel some till	3 to NG	0.00	A) 5.300 B) 0.000 C) 0.000 D) 5.300 E) 0.000 F) 0.000	glaciofluvial eskers			
11.152	95-G(8)	G-63(17)	ZONE 10 535000E 6799000N	N bank of Liard River	sand & silt	4	12.00	A) 9.900 B) 0.000 C) 0.000 D) 9.900 E) 0.000 F) 0.000	alluvial alluvial terraces & plains			
11.153	95-G(8)	G-64(17)	ZONE 10 535000E 6797000N	S bank of Liard River opposite Matou River	sand & silt	4	12.00	A) 56.400 B) 0.000 C) 0.000 D) 56.400 E) 0.000 F) 0.000	alluvial alluvial terrace complex			
11.154	95-G(8)	G-62(17)	ZONE 10 547000E 6801000N	S bank of Liard River W of Birch River	sand & silt	4	12.00	A) 9.500 B) 0.000 C) 0.000 D) 9.500 E) 0.000 F) 0.000	alluvial alluvial terrace complex			
11.155	95-G(8)	G-61(17)	ZONE 10 551000E 6803000N	S bank of Liard River E of Birch River	sand & silt	4	12.00	A) 1.000 B) 0.000 C) 0.000 D) 1.000 E) 0.000 F) 0.000	alluvial alluvial terrace complex			
11.156	95-G(1)	G-48(17)	ZONE 10 552000E 6782000N	N of Blackstone River S of Liard River	gravel	2-3	15.00	A) 80.200 B) 0.000 C) 0.000 D) 80.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
11.157	95-I(4)	I-21(14) Blue-29, 30(26)	ZONE 10 555000E 6888000N	S bank of Mackenzie River	gravel & sand	2-3	3.00	A) 0.500 B) 0.000 C) 0.000 D) 0.500 E) 0.000 F) 0.000	alluvial alluvial plain			
11.158	95-H(13)	921kmp(28)	ZONE 10 555000E 6875000N	S of Mackenzie River W of Martin River	sand -silty -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
Fair to good low	-	access by snow roads to Mackenzie Hwy - 48 km to the N	active channel of Martin River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good* high	11.149	
Fair to good unfrozen	-	access by snow roads to Mackenzie Hwy - 75 km to N - also access via Liard Hwy - 5-15 km to S across Liard River	active channel of Matou River	0/ 0.00	1/ 0.00	A) B) C) D)	0 1 0 0	Poor	favourable* medium	11.150	
Good unfrozen	-	access by snow roads to Mackenzie Hwy - 75 km to the N - also access via Liard Hwy - 15 km to S across Liard River	-	0/ 0.00	1/ 0.00	A) B) C) D)	1 0 0 1	Poor	favourable medium	11.151	
Fair to good low	-	access via Liard Hwy 4 km S across Liard River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	Poor to favourable low to medium	11.152	
Fair to good low	-	access via Liard Hwy which borders deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	Poor to favourable low to medium	11.153	
Fair to good low	-	access via Liard Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	Poor to favourable low to medium	11.154	
Fair to good low	-	access via Liard Hwy 2 km S	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	Poor to favourable low to medium	11.155	
Good unfrozen	-	access by snow roads to Liard Hwy 18 km to the N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	Good to excellent high	11.156	
Good low	-	access via Mackenzie Hwy 3 km to W	active channel of Mackenzie River	0/ 0.00	3/ 1.50	A) B) C) D)	0 0 0 0	none	Low to favourable* low to medium	11.157	
Fair to poor unfrozen	-	Mackenzie Hwy which crosses deposit	-	0/ 0.00	3/ 1.30	A) B) C) D)	0 0 0 0	Poor	Poor low	11.158	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM		
11.159	95-H(13)	FS-7X(5) Blue-32(26)	ZONE 10 557000E 687100N	17.7 km W of Fort Simpson S bank of Mackenzie River	sand -fine grained -trace silt	4	10.00	A) 1.500 B) 0.200 C) 0.200 D) 1.100 E) 0.000 F) 0.006	aeolian sand dunes		
11.160	95-H(13)	510kmp(28)	ZONE 10 561000E 686900N	haul road to depleted pit SW of Mackenzie Hwy at (KP 510.2)	sand -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.001	glaciolacustrine glaciolacustrine plain		
11.161	95-H(13)	502kmp(28)	ZONE 10 568000E 686700N	N of Mackenzie Hwy S of Mackenzie River	sand -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.006	glaciolacustrine glaciolacustrine plain		
11.162	95-H(13)	H-93, 94, 95(11) H-131(11) R-98(20) Blue-33, 34(26)	ZONE 10 557000E 686400N	32.2 km W of Fort Simpson S of Mackenzie River North of Martin River	sand	4	10.00	A) 11.000 B) 0.000 C) 0.000 D) 11.000 E) 0.000 F) 0.000	aeolian dunes		
11.163	95-H(13)	H-72(11)	ZONE 10 569000E 686500N	N of Martin River S of Mackenzie River	sand	4	10.00	A) 17.500 B) 0.000 C) 0.000 D) 17.500 E) 0.000 F) 0.004	aeolian dunes		
11.164	95H(13)	103-X(2) H-64(11) R-70(20)	ZONE 10 572000E 686200N	in active stream channel of Martin River	gravel - medium grained -well graded - trace silt sand - trace silt - fine grained - poorly graded -volumes not determined	2-3	2.50	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial floodplain & terraces		
11.165	95-H(13)	FS-8(5) H-73, 74(11)	ZONE 10 575000E 685600N	12.9 km W of Fort Simpson SE of Martin River	sand -fine grained	4	12.20	A) 11.000 B) 1.000 C) 1.000 D) 9.000 E) 0.000 F) 0.000	aeolian sand dunes		
11.166	95-H(13)	H-62(11) R-66, 68, 69(20) GM-87(3) GM-87(22)	ZONE 10 566000E 685000N	active channel of Martin River, NW of Antoine Lake	sand & gravel	2-3	6.00	A) 15.000 B) 0.000 C) 0.000 D) 15.000 E) 0.000 F) 0.000	alluvial alluvial plains & terraces		
11.167	95-H(13)	GM-20(3) GM-20(22)	ZONE 10 553000E 685700N	W of Martin River	sand & till	4 to NG	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	morainal moraine plain		
11.168	95-H(14)	FS-3(5) H-75(11) R-9(20)	ZONE 10 581000E 686100N	2.4 km SW of Fort Simpson W of Mackenzie River used as Fort Simpson garbage dump	sand -very fine grained -some silt -volumes not determined	4	1.50	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.004	glaciolacustrine glaciolacustrine plain		

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
well drained unfrozen	topsoil 0-0.3	right of way of Mackenzie Hwy	sensitive terrain, very poor quality material, remote site	0/ 0.00	2/ 1.50	A) B) C) D)	0 2 0 0	poor	poor low	11.159
fair low to unfrozen	-	haul road off Mackenzie Hwy	pit depleted use haul road for material	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	11.160
fair low	-	Mackenzie Hwy 2 km S of deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.161
good to poor low in dunes	-	access by snow road and then via Mackenzie Hwy 5-18 km to the N	-	0/ 0.00	3/ 1.50	A) B) C) D)	0 1 0 0	poor	poor low	11.162
good to poor low in dunes	-	access via Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.163
fair unfrozen	alluvial silt 0.5-0.7	Mackenzie Hwy KP 515	not recommended as deposits are within the active stream channel, if used certain criteria would be needed for development	0/ 0.00	1/ 2.10	A) B) C) D)	0 0 0 0	poor	favourable medium	11.164
well drained	topsoil 0-0.5	Mackenzie Hwy	sensitive terrain, very low quality material, Martin River has potential spawning areas near N end of site	0/ 0.00	1/ 1.80	A) B) C) D)	0 1 0 1	poor	poor* low	11.165
good to poor low to none	-	access by snow roads 0-30 km to Mackenzie Hwy	active channel of Martin River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good* medium to high	11.166
fair to good low to moderate	0-1.7	access by snow road to Mackenzie Hwy 15 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.167
well drained unfrozen	topsoil 0-0.3	Mackenzie Hwy	sensitive terrain, deposit specified for community use	0/ 0.00	2/ 2.00	A) B) C) D)	0 1 0 0	poor	poor* low	11.168

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.169	95-H(14)	FS-4X(5) H-65(11)	ZONE 10 588000E 6857000N	0.8 km SE of Fort Simpson W bank of Liard River	sand -very fine grained -silty -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
11.170	95-H(14)	FS-1(5) H-65(11) T-10(20)	ZONE 10 590000E 6854000N	4.8 km SE of Fort Simpson W bank of Liard River	gravel & sand -medium grained -stratified	2	4.60	A) B) C) D) E) F)	0.380 0.075 0.035 0.270 0.000 0.000	alluvial alluvial terraces		
11.171	95-H(14)	FS-11(5)	ZONE 10 594000E 6854000N	8 km SE of Fort Simpson N bank of Liard River	sand & silt -fine grained -some pockets of gravel -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace		
11.172	95-H(14)	FS-5X(5) H-13(11)	ZONE 10 589000E 6853000N	3.2 km S of Fort Simpson W bank of Liard River	sand -fine grained -silty -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
11.173	95-H(14)	FS-6X(5) H-13(11) R-61,62(20) GM-195(21)	ZONE 10 592000E 6850000N	10.4 km SE of Fort Simpson, W bank of Liard River adjacent to airport	sand -very fine grained -silty -some clay lenses -volumes not determined	4	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	glaciolacustrine glaciolacustrine plain		
11.174	95-H(14)	FS-10(5) H-66(11) R-103(20) Blue-26,27(26)	ZONE 10 596000E 6847000N	16 km SE of Fort Simpson E bank of Liard River	sand & silt -volumes not determined gravels -at depth -fair to good quality -volumes not determined	4, 2-3	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace		
11.175	95H(11)	95H-B3(1) H-84(11) GM-178(6) GM-178(21)	ZONE 10 600000E 6848000N	4.8 km E of Fort Simpson	sand -fine grained -trace fines -poorly graded -trace organic material in upper few feet	4	10.00	A) B) C) D) E) F)	5.900 2.300 1.800 1.800 0.000 0.000	aeolian & glaciolacustrine - sand dune on glaciolacustrine plain		
11.176	95-H(14)	FS-2X(5) H-68(11)	ZONE 10 594000E 6846000N	14.5 km SE of Fort Simpson, W bank of Liard River	silt -clayey -overlies glacial till -volumes not determined	NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.000	alluvial alluvial terrace		
11.177	95-H(11)	H-76,148(11)	ZONE 10 580000E 6840000N	between Antonine Lake and Mackenzie River, 12.9 km to 25.7 km S of Fort Simpson	sand	4	10.00	A) B) C) D) E) F)	42.000 0.000 0.000 42.000 0.000 0.000	aeolian dunes		
11.178	95-H(11)	H-68,69(11)	ZONE 10 589000E 6841000N	N & W bank of Liard River 17.7 km S of Fort Simpson	sand & gravel	2-4	7.50	A) B) C) D) E) F)	7.400 0.000 0.000 7.400 0.000 0.000	alluvial alluvial terrace		

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
well drained unfrozen	topsoil 0-0.2	Mackenzie Hwy	adjacent to river, area of new town development, 3 abandoned pits on site	0/ 0.00	2/ 6.10	A) B) C) D)	0 1 0 0	poor	poor* low	11.169	
good low	topsoil & silt 0-10.0	existing haul road to operating borrow pit	adjacent to river, thick overburden, fish area in mouth of Liard River, existing borrow pit for Fort Simpson	4/ 8.80	2/ 1.20	A) B) C) D)	3 3 1 0	fair-good	good* high	11.170	
fair -	topsoil 0-0.6	access difficult	marginal quality material very difficult access	0/ 0.00	2/ 4.60	A) B) C) D)	0 3 0 2	poor	poor to favourable low to medium	11.171	
well drained unfrozen	topsoil 0-0.3	all-weather highway	very poor quality material, material susceptible to frost action, 4 abandoned pits in deposit	0/ 0.00	3/ 2.40	A) B) C) D)	1 1 0 0	poor	poor low	11.172	
fair unfrozen	topsoil 0-0.8	all-weather highway	very poor quality material, susceptible to frost action, 5 abandoned pits in deposit	0/ 0.00	2/ 1.50	A) B) C) D)	0 0 0 0	poor	poor low	11.173	
fair -	topsoil 0-0.3	crossing Liard River by ferry, all-weather highway	adjacent to river very marginal general fill material	7/ 9.40	4/ 1.80	A) B) C) D)	2 2 0 2	poor	favourable medium	11.174	
well drained unfrozen	-	-	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.175	
good	topsoil 0-0.3	all-weather highway	materials of granular quality not established, may be used for road embankment, abandoned pit N end of site	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	11.176	
good to poor low in dunes	-	access by snow road and then via Mackenzie Hwy 10-15 km to the N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.177	
good low to none	-	access by snow road and then via Mackenzie Hwy 5 km to the N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to favourable low to medium	11.178	

SITE IDENTIFICATION					SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM		
11.179	95-H	H-67(11)	ZONE 10 592000E 6843000N	Island in Liard River 19.3 km SE of Fort Simpson	sand & gravel	2-4	12.00	A) B) C) D) E) F)	11.700 0.000 0.000 11.700 0.000 0.000	alluvial alluvial plain	
11.180	95-H(11)	H-70, 66(11) GM-122(3) GM-122(22) GM-122(21) Blue-25(26)	ZONE 10 592000E 6841000N	S bank of Liard River 19.3 km SE of Fort Simpson	sand & gravel	2-4	7.50	A) B) C) D) E) F)	10.000 0.000 0.000 10.000 0.000 0.000	alluvial alluvial terrace	
11.181	95H(11)	95H-B4(1) R-60(20) C-4(20)	ZONE 10 593000E 6842000N	Liard River, 19.3 km S of Fort Simpson	sand -poorly graded -fine to medium grained -fine gravel lenses	4	6.00	A) B) C) D) E) F)	13.600 1.400 2.800 9.400 0.000 0.000	alluvial alluvial terrace	
11.182	95-H(10)	H-84, 85, 86(11) H-87(11) C-8, 9, 10(20)	ZONE 10 599000E 6840000N	E of Liard River SW of Mackenzie River	sand -fine grained	4	10.00	A) B) C) D) E) F)	238.000 0.000 0.000 238.000 0.000 0.000	aeolian dunes	
11.183	95-H(11)	FS-9(5)	ZONE 10 587000E 6842000N	17.7 km S of Fort Simpson W bank of Liard River	sand -medium to fine grained -large gravel pockets	2	1.50	A) B) C) D) E) F)	0.380 0.190 0.075 0.115 0.000 0.000	glaciolacustrine beach ridge	
11.184	95-H(11)	Pit #1-(47)	ZONE 10 582000E 6833000N	E of Mackenzie River W of Mackenzie Highway (KP 438)	sand and silt and clay -volumes not determined	4 to NG	0.00	A) B) C) D) E) F)	0.000 0.000 0.000 0.000 0.000 0.036	glaciolacustrine glaciolacustrine plain	
11.185	95-H(12)	H-77, 78, 79(11) H-80(11) R-71, 72, 73(20)	ZONE 10 585000E 6824000N	N of Liard River 40.2 km SW of Fort Simpson	sand -fine to medium grained	4	10.00	A) B) C) D) E) F)	111.000 0.000 0.000 111.000 0.000 0.000	aeolian dunes	
11.186	95-H(5)	H-81, 82, 83(11)	ZONE 10 583000E 6812000N	N of Liard River 51.5 km SW of Fort Simpson	sand -fine to medium grained	4	10.00	A) B) C) D) E) F)	11.000 0.000 0.000 11.000 0.000 0.000	aeolian dunes	
11.187	95-H(5)	GM-97(3) GM-97(22)	ZONE 10 578000E 6818000N	1.6 km N of Liard River	sand, silt & till	4 to NG	1.50	A) B) C) D) E) F)	0.950 0.000 0.000 0.950 0.000 0.000	morainal moraine plain	
11.188	95H(6)	95H-85(1) H-43(11) R-110(20)	ZONE 10 590000E 6817000N	41.8 km S of Fort Simpson	gravel - well graded -fine to coarse grained -sandy, trace fines sand - medium to fine grained -trace silt gravel	2	3.00	A) B) C) D) E) F)	105.400 10.500 21.000 73.900 0.000 0.001	glaciofluvial outwash plain	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
Fair low to none	-	access via Liard River	active channel of Liard River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to favourable* low to medium	11.179
good low to none	moss 0-0.4	access by snow road and then via Mackenzie Hwy 1 km to the E	-	0/ 0.00	1/ 1.20	A) B) C) D)	0 0 0 0	none	poor to favourable low to medium	11.180
fairly well drained	unfrozen	Mackenzie Hwy	-	2/ 6.40	0/ 0.00	A) B) C) D)	0 1 0 0	poor	poor low	11.181
good low in dunes	-	access via Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.182
fair unfrozen	topsoil & silt 0-0.8	existing access road	long haul existing pit on site	0/ 0.00	8/ 2.10	A) B) C) D)	0 0 0 0	poor	good high	11.183
fair to poor low to moderate	-	Mackenzie Highway 1 km E of deposit	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.184
fair to good low in dunes	-	no highway access, 10 km to Liard River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.185
fair to good low in dunes	-	no highway access 5 km from Liard River	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.186
fair low to moderate	0.3-1.5	cross Liard River access by snow road to Mackenzie Hwy 10 km E	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.187
well drained low	silt 0-0.3m	Mackenzie Hwy	existing pit	1/ 5.50	5/ 0.90	A) B) C) D)	0 5 0 0	poor	good to excellent high	11.188

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.189	95-H(6)	H-88,89(11) R-55(20) Pit 2(47)	ZONE 10 595000E 6817000N	N of Jean Marie Creek & E of Mackenzie Hwy 41.8 km SE of Fort Simpson	sand -fine grained	4	14.00	A) 49.000 B) 0.000 C) 0.000 D) 49.000 E) 0.000 F) 0.009	aeolian dunes			
11.190	95-H(6)	H-134(11)	ZONE 10 599000E 6816000N	on Jean Marie Creek 45 km SE of Fort Simpson	sand & gravel	2-3	2.50	A) 1.200 B) 0.000 C) 0.000 D) 1.200 E) 0.000 F) 0.000	alluvial alluvial plains & terraces			
11.191	95-H(7)	H-90,91(11)	ZONE 10 604000E 6813000N	S of Jean Marie Creek 48.2 km SE of Fort Simpson	sand -fine grained	4	10.00	A) 3.500 B) 0.000 C) 0.000 D) 3.500 E) 0.000 F) 0.000	aeolian dunes			
11.192	95-H(6)	GM-22(3) GM-22(22)	ZONE 10 594000E 6812000N	1.6 km W of Mackenzie Hwy	sand & gravel	2-4	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	glaciofluvial outwash plain			
11.193	95-H(6)	GM-98(3) GM-98(22)	ZONE 10 584000E 6810000N	9.7 km SE of Liard River	gravel, sand & till	3-4 to NG	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	morainal moraine plain			
11.194	95-H(6)	GM-99(3) GM-99(22)	ZONE 10 584000E 6807000N	4.8 km S of Liard Hwy	sand, silt & till	4 to NG	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	morainal moraine plain			
11.195	95-H(6)	GM-100(3) GM-100(22)	ZONE 10 587000E 6803000N	11.3 km NW of Goose Lake S of Mackenzie Hwy	till	NG	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	morainal moraine plain			
11.196	95-H(6)	GM-101(3) GM-101(22) GM-101(21)	ZONE 10 589000E 6799000N	3.2 km NW of Goose Lake	till	NG	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	morainal drumlins			
11.197	95-H(3)	GM-27(3) GM-27(22)	ZONE 10 591000E 6793000N	4.8 km S of Goose Lake 4.8 km E of Poplar River	till	NG	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	morainal moraine plain			
11.198	95-H(4)	H-50,51,52(11) H-53(11)	ZONE 10 560000E 6784000N	W of Birch Rivier S of Liard River 80 km SW of Fort Simpson	sand & gravel	2-3	15.00	A) 28.700 B) 0.000 C) 0.000 D) 28.700 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain & ridges			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low in dunes	-	Mackenzie Hwy passes deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	11.189	
fair low to none	-	Mackenzie Hwy passes deposit	active channel of Jean Marie Creek	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good* medium to high	11.190	
good low in dunes	-	access by snow roads and then via Mackenzie Hwy 5 km to the S	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	11.191	
good low	0-0.3	access via Liard Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	11.192	
fair low to moderate	0.3-1.0	access via Liard Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	11.193	
fair low to moderate	0.3-1.0	access by snow road 3 km N to Liard Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	11.194	
fair moderate	0.3-1.0	access by snow road 6 km N to Liard Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor to unsuitable low	11.195	
fair low	0.3-1.0	access by snow road 17 km N to Liard Hwy or 12 km NE to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor low	11.196	
fair moderate	0.3-1.0	access by snow road 18 km N to Liard Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	poor to unsuitable low	11.197	
good low to none	-	access by snow road 15 km to Liard Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	11.198	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
11.199	95-H(4)	H-54,55,56(11) H-57(11)	ZONE 10 568000E 6785000N	S of Liard River E of Birch River 75.6 km SW of Fort Simpson	sand & gravel	2-3	15.00	A) 6.900 B) 0.000 C) 0.000 D) 6.900 E) 0.000 F) 0.000	glaciofluvial esker			
11.200	95-H(4)	H-58,59,60(11)	ZONE 10 576000E 6780000N	S of Poplar River 72.4 S of Fort Simpson	sand & gravel	2-3	15.00	A) 18.100 B) 0.000 C) 0.000 D) 18.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain & ridges			
11.201	95-H(3)	H-61(11) GM-25(3) GM-25(22)	ZONE 10 589000E 6790000N	E of Poplar River 67.6 km S of Fort Simpson	sand & gravel	2-3	15.00	A) 34.500 B) 0.000 C) 0.000 D) 34.500 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plains & ridges			
11.202	95-H(10)	Map 3(40)	ZONE 10 625000E 6823000N	S of Mackenzie River E of Jean Marie Creek	clayey silt with sand & gravel -depleted borrow source -option for exp., stockpile of 25mm mat'1 from pits along Hwy #1 -volumes not determined	4 to NG	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			
11.203	95-H(7)	H-135(11)	ZONE 10 617000E 6813000N	on Jean Marie Creek 16 km W of Mackenzie River	sand & gravel	2-3	2.50	A) 1.200 B) 0.000 C) 0.000 D) 1.200 E) 0.000 F) 0.000	alluvial alluvial plains & terraces			
11.204	95H(7)	95H-B6(1) H-127(11) IPP-580kmp(23)	ZONE 10 613000E 6807000N	4.8 km NE of pipeline route (KP 722) Hwy (KP 392) is between two segments of deposit	sand - fine gravel - fine to coarse grained -fossiliferous -limestone & shale -well graded	2-3	3.00	A) 6.600 B) 1.100 C) 2.200 D) 3.300 E) 0.000 F) 0.003	glaciolacustrine Beach			
11.205	95H(7)	95H-B7(1) H-44,137(11) R-25(20) IPP-587kmp(23)	ZONE 10 618000E 6804000N	K.P. 386 Mackenzie Hwy	gravel -well graded -trace fines (fossiliferous limestone) sand - as matrix and separate lenses	2	3.00	A) 1.100 B) 0.600 C) 0.300 D) 0.000 E) 0.000 F) 0.000	glaciofluvial outwash terraces			
11.206	95H(7)	95H-B8(1) GM-165,166(21) GM-167(21) H-45,46(11) H-157(11) & R-23,24,112(20)	ZONE 10 633000E 6795000N	Mackenzie Hwy between K.P. 357 & 383	gravel -well graded -fine to coarse grained sand -fine to medium grained -some silt	2-3	3.00	A) 161.300 B) 80.700 C) 40.300 D) 40.300 E) 0.000 F) 0.020	glaciofluvial outwash plain			
11.207	95-H(2)	H-162 H-163(11) R-18,44(20) R-2,9(20)	ZONE 10 610000E 6790000N	S of Mackenzie Hwy from McGill Lake to 11.2 km S of Deep Lake	sand & gravel	2-3	7.00	A) 74.300 B) 0.000 C) 0.000 D) 74.300 E) 0.000 F) 0.003	glaciofluvial glaciofluvial plain deposits			
11.208	95H(2)	95H-B9(1) GM196-(21)	ZONE 10 629000E 6781000N	SE of Deep Lake near Jean Marie Creek	limestone -argillaceous & sandy	5	7.50	A) 30.000 B) 3.000 C) 6.000 D) 21.000 E) 0.000 F) 0.008	bedrock bedrock exposure			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low to none	-	access by snow road 15 km to Liard Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	11.199	
good low to none	-	access by snow road 15 km to Liard Hwy	-	0/ 0.00	1/ 0.00	A) 0 B) 1 C) 0 D) 0	poor	good high	11.200	
good low to none	-	access by snow road 20 km to Liard Hwy	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	11.201	
fair low	-	-	no granular source accessible from the community by road during the summer	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	poor low	11.202	
fair low to none	-	access by snow roads and then via Mackenzie Hwy 10 km to the S	active channel of Jean Marie Creek	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good* medium to high	11.203	
good low	thin	Mackenzie Hwy, snow road to pipeline	buffer zone between developmental areas & hwy for aesthetic reasons -existing pit	0/ 0.00	1/ 1.00	A) 0 B) 1 C) 0 D) 0	poor, none	good high	11.204	
well drained unfrozen	0.3	Mackenzie Hwy	buffer zone between developmental areas & hwy for aesthetic reasons	1/ 8.50	6/ 1.80	A) 0 B) 6 C) 1 D) 3	good	good high	11.205	
well drained gravel & sand	ridges-unfrozen sandy silt:3-.6	Mackenzie Hwy	buffer zone between development areas & lakes & streams -existing pit	4/ 8.50	6/ 1.80	A) 0 B) 6 C) 1 D) 3	good	good high	11.206	
good low to none	none	access by snow road 5 km to Mackenzie Hwy	deposit along active creek channels between McGill & Deep lakes -existing pit	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	good* high	11.207	
well drained	A&B) till -un- known thickness right of way	snow road or pipeline	buffer zone between development & Jean Marie Creek, creek sensitive from May to November	1/ 5.30	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	good high	11.208	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
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11.209	95-H(3)	GM-90(3) GM-90(22)	ZONE 10 603000E 6774000N	12.9 km E of Poplar River on tributary	sand & gravel	2-4	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	glaciofluvial outwash plain			
11.210	95-H(2)	GM-123(3)	ZONE 10 613000E 6776000N	9.7 km W of Jean Marie Creek	till & gravel	3-4 to NG	6.00	A) 3.800 B) 0.000 C) 0.000 D) 3.800 E) 0.000 F) 0.000	morainal crevasse fillings			
11.211	95-A(15)	R-17(12) R-36(20)	ZONE 10 614000E 6753000N	on Trout River 19.3 km NE of Trout Lake	gravel & sand	2-3	0.00	A) 0.350 B) 0.000 C) 0.000 D) 0.350 E) 0.000 F) 0.000	alluvial alluvial terraces & plains			
11.212	95-A(15)	R-14,15,16(12) R-19,38,39(20)	ZONE 10 629000E 6761000N	on Trout River	gravel & sand	2-3	10.00	A) 25.000 B) 0.000 C) 0.000 D) 25.000 E) 0.000 F) 0.000	alluvial alluvial plains & terraces			
11.213	95-A(16)	R-42(12) GM-168(6) GM-168(21)	ZONE 10 640000E 6762000N	E of Trout River	gravel & sand	2-3	3.00	A) 0.083 B) 0.000 C) 0.000 D) 0.083 E) 0.000 F) 0.004	glaciofluvial eskers			
11.214	95-A(11)	R-50(12)	ZONE 10 613000E 6729000N	E of Trout Lake	gravel & sand	2-3	3.00	A) 0.065 B) 0.000 C) 0.000 D) 0.065 E) 0.000 F) 0.000	glaciofluvial esker			
11.215	95-A(15)	GM-30a(3)	ZONE 10 622000E 6745000N	NE of Trout Lake	till	NG	10.00	A) 5.700 B) 0.000 C) 0.000 D) 5.700 E) 0.000 F) 0.000	morainal moraine ridge			
11.216	95-A(15)	R-21,31(12) GM-30(3)	ZONE 10 624000E 6742000N	19.3 km NE of Trout Lake	gravel & sand	2-3	15.20	A) 6.900 B) 0.000 C) 0.000 D) 6.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
11.217	95-A(16)	GM-179(6) GM-179(21)	ZONE 10 643000E 6752000N	NE of Trout Lake	till	NG	3.00	A) 1.900 B) 0.000 C) 0.000 D) 1.900 E) 0.000 F) 0.000	morainal moraine plain & ridges			
11.218	85-E(5)	E-53(18) R-11,12(20)	ZONE 11 346000E 6795000N	active channel of Trout River from Mackenzie River to Table Rock Rapids	gravel & sand	2-3	7.00	A) 46.000 B) 0.000 C) 0.000 D) 46.000 E) 0.000 F) 0.000	alluvial alluvial plain			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good low to unfrozen	0-0.3	access by snow road 38 km NE to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	11.209
good low to moderate	0-0.2	access by snow road 28 km NE to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to favourable low to medium	11.210
fair to good low to none	-	no highway access access by snow roads	active channel of Trout River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	11.211
fair low to none	-	no highway access access by snow roads	active river channel of Trout River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good* medium to high	11.212
good low to none	-	no highway access access by snow roads	existing pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	good high	11.213
good low to none	-	no highway access access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.214
fair low to unfrozen	0-0.3	access by snow road to N or S	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.215
good low to none	-	no highway access access by snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.216
good low to unfrozen	0-0.6	access by snow roads N or S, no hwy access	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor low	11.217
fair to good unfrozen	-	access by snow road to Mackenzie Hwy 10 km S	active channel of Trout River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	11.218

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
11.219	95-K(9)	K-231(15)	ZONE 10 449000E 6953000N	N bank of English Chief River	gravel & sand	2-3	12.00	A) 4.300 B) 0.000 C) 0.000 D) 4.300 E) 0.000 F) 0.000	alluvial alluvial terrace			
11.220	95-K(9)	K-230(15)	ZONE 10 438000E 6951000N	active stream channel W of English Chief River	gravel & sand	2-3	3.00	A) 0.330 B) 0.000 C) 0.000 D) 0.330 E) 0.000 F) 0.000	alluvial alluvial plain			
11.221	95-K(9)	K-36,37,38(15)	ZONE 10 447000E 6945000N	SE of English Chief River	gravel & sand	2-3	15.00	A) 35.900 B) 0.000 C) 0.000 D) 35.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
11.222	95-K(9)	K-228(15)	ZONE 10 443000E 6942000N	active channel of English Chief River	gravel & sand	2-3	10.00	A) 75.700 B) 0.000 C) 0.000 D) 75.700 E) 0.000 F) 0.000	alluvial alluvial plain			
11.223	95-K(10)	K-55,56,234(15) K-235(15)	ZONE 10 419000E 6945000N	N of English Chief River	gravel & sand	2-3	15.00	A) 31.000 B) 0.000 C) 0.000 D) 31.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
11.224	95-K(10)	K-57(15)	ZONE 10 408000E 6941000N	W bank of Trench Creek	gravel & sand	2-3	15.00	A) 26.700 B) 0.000 C) 0.000 D) 26.700 E) 0.000 F) 0.000	glaciofluvial glaciofluvial plain			
11.225	95-K(10)	K-224,225(15) K-226(15)	ZONE 10 409000E 6939000N	1.6 km N of Trench Lake	gravel & sand	2-3	6.00	A) 9.100 B) 0.000 C) 0.000 D) 8.100 E) 0.000 F) 0.000	alluvial alluvial fan & plain complex			
11.226	95-K(9)	K-31,32,34(15) K-35(15)	ZONE 10 439000E 6932000N	S of English Chief River	gravel & sand	2-3	15.00	A) 61.400 B) 0.000 C) 0.000 D) 61.400 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace			
11.227	95-K(7)	K-221,222(15) K-223(15)	ZONE 10 420000E 6930000N	1.6 km W of Iverson Lake active stream channel	gravel & sand	2-3	6.00	A) 18.300 B) 0.000 C) 0.000 D) 18.300 E) 0.000 F) 0.000	alluvial alluvial plains & fans			
11.228	95-K(8)	K-26,27(15)	ZONE 10 443000E 6917000N	N bank of the Nahanni River, E of Iverson Range	gravel & sand	2-3	15.00	A) 31.000 B) 0.000 C) 0.000 D) 31.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace & plain			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair low to moderate	-	32 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable medium	11.219	
fair to good low	-	42 km W of Mackenzie River, access via snow roads	active channel of Chief River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good* medium to high	11.220	
good low	-	35 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	11.221	
fair to good low	-	35-70 km W of Mackenzie River, access via snow roads	active channel of Chief River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good* high	11.222	
good low	-	80 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	11.223	
good low	-	70 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	11.224	
fair to good low	-	70 km W of Mackenzie River, access via snow roads	partly active stream channel	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good* high	11.225	
good low	-	45 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	11.226	
fair to good low	-	65 km W of Mackenzie River, access via snow roads	active stream channel	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good* high	11.227	
good low	-	40 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	11.228	

SITE IDENTIFICATION					SOURCE DESCRIPTION					
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM	
11.229	95-K(8)	K-28(15)	ZONE 10 440000E 6916000N	N bank of the Nahanni River	gravel & sand	2-3	15.00	A) 8.600 B) 0.000 C) 0.000 D) 8.600 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.230	95-K(8)	K-29(15)	ZONE 10 435000E 6915000N	N bank of the Nahanni River	gravel & sand	2-3	15.00	A) 11.800 B) 0.000 C) 0.000 D) 11.800 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.231	95-K(8)	K-30(15)	ZONE 10 434000E 6913000N	N bank of the Nahanni River	gravel & sand	2-3	15.00	A) 26.000 B) 0.000 C) 0.000 D) 26.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.232	95-K(8)	K-24(15)	ZONE 10 443000E 6914000N	S bank of the Nahanni River	gravel & sand	2-3	15.00	A) 31.200 B) 0.000 C) 0.000 D) 31.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.233	95-K(8)	K-25(15)	ZONE 10 448000E 6914000N	S bank of N Nahanni River	gravel & sand	2-3	15.00	A) 14.900 B) 0.000 C) 0.000 D) 14.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.234	95-K(8)	K-22(15)	ZONE 10 442000E 6910000N	S of the Nahanni River	gravel & sand	2-3	15.00	A) 6.900 B) 0.000 C) 0.000 D) 6.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.235	95-K(8)	K-23(15)	ZONE 10 437000E 6911000N	S bank of the Nahanni River	gravel & sand	2-3	15.00	A) 41.100 B) 0.000 C) 0.000 D) 41.100 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
11.236	95-K(8)	K-211(15)	ZONE 10 439000E 6915000N	active channel of Nahanni River	gravel & sand	1-3	15.00	A) 9.200 B) 0.000 C) 0.000 D) 9.200 E) 0.000 F) 0.000	alluvial alluvial terrace	
11.237	95-K(8)	K-208(15)	ZONE 10 428000E 6902000N	active channel of N Nahanni River	gravel & sand	1-3	9.00	A) 4.200 B) 0.000 C) 0.000 D) 4.200 E) 0.000 F) 0.000	alluvial alluvial plain	
11.238	95-K(1)	K-201,202(15) K-204(15)	ZONE 10 435000E 6885000N	4.8 km S of Nahanni River	gravel & sand	2-3	10.00	A) 13.000 B) 0.000 C) 0.000 D) 13.000 E) 0.000 F) 0.000	alluvial alluvial plain & terrace	

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
good low	-	40 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.229	
good low	-	45 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.230	
good low	-	48 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.231	
good low	-	40 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.232	
good low	-	40 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.233	
good low	-	40 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.234	
good low	-	48 km W of Mackenzie River, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good to excellent high	11.235	
fair to good low	-	48 km W of Mackenzie River, access via snow roads	active channel of Nahanni River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	11.236	
fair to good low	-	50 km W of Mackenzie River, access via snow roads	active channel of N Nahanni River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good* high	11.237	
fair to good low	-	50 km W of Mackenzie River and Camsell Bend, access via snow roads	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	good high	11.238	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
12.001	85-E(6)	E-25,26(18)	ZONE 11 395000E 6808000N	N of Mackenzie River	gravel & sand	3-4	4.50	A) 50.000 B) 0.000 C) 0.000 D) 50.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine beaches			
12.002	85-E(7)	E-24,23(18)	ZONE 11 415000E 6802000N	N of Mackenzie River SW of Mills Lake	gravel & sand	3-4	4.50	A) 50.000 B) 0.000 C) 0.000 D) 50.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine beaches			
12.003	85-E(16)	E-35,37,36(18) E-34,39,33(18)	ZONE 11 415000E 6844000N	NW of Mills Lake	gravelly beach ridges with gravel & sand between ridges	3-4	4.50	A) 433.500 B) 0.000 C) 0.000 D) 433.500 E) 0.000 F) 0.000	glaciolacustrine beach ridges			
12.004	85-E(10)	E-30(18)	ZONE 11 428000E 6828000N	8 km NW of Mills Lake	gravelly beach ridges with gravel & sand between ridges	3-4	4.50	A) 85.300 B) 0.000 C) 0.000 D) 85.300 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine beaches			
12.005	85-E(7)	E-29(18)	ZONE 11 429000E 6820000N	6.4 km N of Mills Lake	gravelly beach ridges sand & gravel between ridges	3-4	4.50	A) 56.400 B) 0.000 C) 0.000 D) 56.400 E) 0.000 F) 0.000	glaciolacustrine beach ridges			
12.006	85-E(12)	E-32(18)	ZONE 11 435000E 6835000N	8 km N of Mills Lake	gravel & sand over till	3-4	2.50	A) 14.000 B) 0.000 C) 0.000 D) 14.000 E) 0.000 F) 0.000	glaciolacustrine beaches			
12.007	85-F(5)	Map 2(40)	ZONE 11 466000E 6808000N	S of Bluefish River N of Fort Providence	gravel -clayey	4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000				
12.008	85-F(5)	Map 2(40)	ZONE 11 461000E 6801000N	on Meridian Island	unchecked prospective source (Thurber) -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	alluvial alluvial plain			
12.009	85-F(5)	Map 2(40)	ZONE 11 467000E 6802000N	E of Fort Providence	depleted pit -stores crushed gravel		0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000				
12.010	85-F(6)	Map 1(40)	ZONE 11 473000E 6805000N	Bluefish Creek Pits S of Bluefish River W of Yellowknife Hwy	gravelly sand to silty -volumes not determined	3-4	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000				

Source Description				Tests and Assessments							
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number		
fair to good unfrozen	-	access by snow road 15 km N and 10 km S of Mackenzie River to Mackenzie Hwy	-	0/ 0.00	1/ 0.00	A) B) C) D)	0 1 0 0	poor	favourable medium	12.001	
fair to good unfrozen	-	access by snow road 5 km N and 25 km S of Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	12.002	
good unfrozen	-	access by snow road 35 km to Mackenzie River & 25 km S to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	12.003	
fair to good unfrozen	-	access by snow road 25 km N and 25 km S of Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	12.004	
good unfrozen	-	access by snow road 10 km N and 25 km S of Mackenzie River to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	12.005	
good unfrozen	-	access by snow road 25 km to S side of Mills Lake, snow road another 35 km S to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable medium	12.006	
fair low to unfrozen	-	-	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to poor medium to low	12.007	
fair low	-	-	Highways Pit	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable medium	12.008	
fair low to unfrozen	-	-	depleted pit, used to store crushed gravel from pit at kp 86.2	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	poor low	12.009	
good unfrozen	-	Yellowknife Hwy	open pit nearing depletion	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	favourable medium	12.010	

SITE IDENTIFICATION					SOURCE DESCRIPTION					
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/ LANDFORM	
12.011	85-F(6)	Map 1(40)	ZONE 11 478000E 6807000N	Bluefish Creek Pits SE of Yellowknife Hwy S of Bluefish River	a)gravel -clean -poorly graded b)silty sand -some gravel	4	0.00	A) 0.056 B) 0.000 C) 0.000 D) 0.056 E) 0.000 F) 0.000		
12.012	85-F(11)	Map 1(40)	ZONE 11 495000E 6837000N	along Yellowknife Hwy at (KP 86.2)	sand & gravel -volumes not determined	2-3	0.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.005		
12.013	85-E(4)	E-55(18) R-16,17,83(20)	ZONE 11 348000E 6781000N	active channel of Trout River around Whittaker Falls	gravel, sand & silt	2-3	15.50	A) 44.200 B) 0.000 C) 0.000 D) 44.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial terrace	
12.014	85-E(4)	E-47(18)	ZONE 11 354000E 6786000N	S of Mackenzie River W of Morrisey Creek	gravel & sand over limestone	2-3	2.00	A) 2.700 B) 0.000 C) 0.000 D) 2.700 E) 0.000 F) 0.000	glaciofluvial glaciofluvial deposit	
12.015	85-E(4)	E-1,9,10(18) R-6,7,10(20)	ZONE 11 362000E 6788000N	S of Mackenzie River N of Mackenzie Hwy	gravelly beach ridge with gravel, sand & silt between ridges	2-4	6.50	A) 220.800 B) 0.000 C) 0.000 D) 220.800 E) 0.000 F) 0.000	glaciolacustrine beach ridges	
12.016	85-E(4)	E-2,3,4(18)	ZONE 11 360000E 6784000N	N of Mackenzie Hwy E of Morrisey Creek	thin cover of gravel, sand & silt beach deposits over till and limestone	3	2.50	A) 25.300 B) 0.000 C) 0.000 D) 25.300 E) 0.000 F) 0.000	glaciolacustrine beach deposits	
12.017	85-E(4)	E-5(18) R-14(20)	ZONE 11 363000E 6782000N	along Mackenzie Hwy E of Morrisey Creek	50% limestone & 50% gravel, sand & silt beach deposits over limestone	2-4	2.50	A) 9.900 B) 0.000 C) 0.000 D) 9.900 E) 0.000 F) 0.000	glaciolacustrine beach deposits	
12.018	85-E(4)	E-6(18)	ZONE 11 361000E 6779000N	S of Mackenzie Hwy E of Morrisey Creek	thin cover beach deposits of gravel, sand & silt over limestone	2-4	2.50	A) 9.900 B) 0.000 C) 0.000 D) 9.900 E) 0.000 F) 0.000	glaciolacustrine beach deposits	
12.019	85-E(4)	E-45,46(18)	ZONE 11 346000E 6768000N	S of Trout River W of Redknife River	gravel, sand & silt	2-3	15.50	A) 46.900 B) 0.000 C) 0.000 D) 46.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridge	
12.020	85-E(9)	E-7(18)	ZONE 11 367000E 6782000N	along Mackenzie Hwy N of Redknife River	beach deposits of gravel sand & silt over till	2-4	2.50	A) 7.700 B) 0.000 C) 0.000 D) 7.700 E) 0.000 F) 0.000	glaciolacustrine beach deposits	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good unfrozen	-	Yellowknife Hwy	existing Department of Highways pits	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	favourable to good medium to high	12.011	
good low	-	Yellowknife Hwy	used to supply community with crushed gravel	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	poor	good high	12.012	
fair to good unfrozen	-	access via Mackenzie Hwy which crosses deposit	active channel of Trout River near Whittaker Falls	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good* medium to high	12.013	
good unfrozen	-	access via Mackenzie Hwy, 3km S	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	12.014	
good unfrozen	-	access by Mackenzie Hwy 3 km S	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	12.015	
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	active pit - may be partly depleted	0/ 0.00	1/ 0.00	A) 0 B) 1 C) 0 D) 0	poor	good to excellent high	12.016	
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	12.017	
fair to good unfrozen	-	access by Mackenzie Hwy which is 1 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	12.018	
good unfrozen	-	access by snow roads to Hwy 10 km N	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good medium to high	12.019	
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	12.020	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/LANDFORM			
12.021	85-E(3)	E-8(18) R-15(20)	ZONE 11 370000E 6782000N	along Mackenzie Hwy W of Redknife River	>50% limestone <50% beach, gravel, sand & silt over limestone	2-4	2.50	A) 3.300 B) 0.000 C) 0.000 D) 3.300 E) 0.000 F) 0.000	glaciolacustrine beach deposits			
12.022	85-E(3)	E-52(18) R-9(20)	ZONE 11 394000E 6785000N	active channel of Redknife River S of Mackenzie River	gravel, sand & silt	2-3	3.00	A) 5.200 B) 0.000 C) 0.000 D) 5.200 E) 0.000 F) 0.000	alluvial alluvial plain			
12.023	85-E(3)	E-13(18)	ZONE 11 383000E 6783000N	S of Mackenzie River N of Mackenzie Hwy E of Redknife River	gravelly, silty beach ridges with gravel & sand between ridges	3-4	8.50	A) 105.900 B) 0.000 C) 0.000 D) 105.900 E) 0.000 F) 0.000	glaciolacustrine beach ridges			
12.024	85-E(3)	E-11(18)	ZONE 11 375000E 6780000N	S of Mackenzie Hwy E of Redknife River	gravel & sand	2-4	9.00	A) 32.900 B) 0.000 C) 0.000 D) 32.900 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine plain			
12.025	85-E(3)	E-12(18)	ZONE 11 382000E 6781000N	along Mackenzie Hwy between Bouvier River & Redknife River	gravelly beach ridge with gravel & sand between ridges	2-4	9.00	A) 48.500 B) 0.000 C) 0.000 D) 48.500 E) 0.000 F) 0.000	glaciolacustrine beach ridges			
12.026	85-E(3)	E-51(18)	ZONE 11 392000E 6785000N	active channel of Bouvier River S of Mackenzie River	gravel, sand & silt	2-3	12.00	A) 16.900 B) 0.000 C) 0.000 D) 16.900 E) 0.000 F) 0.000	alluvial alluvial terrace			
12.027	85-E	E-14,15(18)	ZONE 11 388000E 6778000N	S of Mackenzie Hwy W of Bouvier River	gravel, sand & silt beach deposits over till & limestone	2-4	2.50	A) 27.800 B) 0.000 C) 0.000 D) 27.800 E) 0.000 F) 0.000	glaciolacustrine beach deposits			
12.028	85-E(2)	E-18(18)	ZONE 11 400000E 6780000N	S of Mackenzie River N of Mackenzie Hwy E of Bouvier River	gravelly, silty beach ridge with gravel & sand between ridges	3	8.50	A) 193.600 B) 0.000 C) 0.000 D) 193.600 E) 0.000 F) 0.000	glaciolacustrine beach ridges			
12.029	85-E(2)	E-17(18)	ZONE 11 395000E 6778000N	along Mackenzie Hwy E of Bouvier River	gravelly beach ridge with gravel & sand between ridges	2-4	9.00	A) 12.100 B) 0.000 C) 0.000 D) 12.100 E) 0.000 F) 0.000	glaciolacustrine beach ridge			
12.030	85-E(2)	E-16(18)	ZONE 11 394000E 6776000N	S of Mackenzie Hwy E of Bouvier River	50% gravelly beach veneer over limestone	2-4	2.50	A) 9.500 B) 0.000 C) 0.000 D) 9.500 E) 0.000 F) 0.000	glaciolacustrine beach deposits			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max. Depth (m)	No. of Testpits/ Max. Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good to excellent high	12.021	
fair to good unfrozen	-	access via Mackenzie Hwy 3 km S	active channel of Redknife River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good* high	12.022	
good unfrozen	-	access by Mackenzie Hwy which runs S of deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good medium to high	12.023	
good unfrozen	-	access by Mackenzie Hwy which borders N side of deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	12.024	
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	highway crosses most of deposit	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good* high	12.025	
fair to good unfrozen	-	access via Mackenzie Hwy which crosses S end of deposit	active channel of Bouvier River	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good* high	12.026	
fair to good unfrozen	-	access by Mackenzie Hwy which borders N side of deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good high	12.027	
good unfrozen	-	access by Mackenzie Hwy which runs S of deposit	-	0/ 0.00	1/ 0.00	A) 0 B) 1 C) 0 D) 0	poor	favourable to good medium to high	12.028	
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	highway crosses most of deposit	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	good* high	12.029	
fair to good unfrozen to low	-	access by Mackenzie Hwy which crosses N end of deposit	-	0/ 0.00	0/ 0.00	A) 0 B) 0 C) 0 D) 0	none	favourable to good medium to high	12.030	

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6 \text{ m}^3$)	GENERIC ORIGIN/ LANDFORM			
12.031	85-E(2)	E-19,20(18)	ZONE 11 398000E 6775000N	along Mackenzie Hwy E of Bouvier River	beach deposits of gravel, sand & silt over limestone	2-4	2.50	A) 16.300 B) 0.000 C) 0.000 D) 16.300 E) 0.000 F) 0.000	glaciolacustrine beach deposits			
12.032	85-E(2)	E-21(18)	ZONE 11 403000E 6775000N	along Mackenzie Hwy E of Bouvier River	gravel & sand	2-4	9.00	A) 44.000 B) 0.000 C) 0.000 D) 44.000 E) 0.000 F) 0.000	glaciolacustrine glaciolacustrine beach			
12.033	85-E(2)	E-50(18)	ZONE 11 408000E 6784000N	active channel S of Grassy Island S of Mackenzie River	gravel, sand & silt	3	12.00	A) 34.300 B) 0.000 C) 0.000 D) 34.300 E) 0.000 F) 0.000	alluvial alluvial terrace			
12.034	85-E(1)	E-22(18)	ZONE 11 420000E 6770000N	S of Mackenzie River along Mackenzie Hwy	gravelly beach ridges with gravel & sand between ridges	3-4	8.50	A) 210.400 B) 0.000 C) 0.000 D) 210.400 E) 0.000 F) 0.000	glaciolacustrine beach ridges			
12.035	85-F(3)	DPW-185.3km(48)	ZONE 11 475000E 6770000N	N of Mackenzie Highway (KP 185)	-volumes not determined		2.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-			
12.036	85-F(3)	DPW-183.5km(48) DPW-182.1km(48)	ZONE 11 477000E 6769000N	N of Mackenzie Highway (KP 183)	-volumes not determined		2.20	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-			
12.037	85-F(3)	DPW-179.9km(48) DPW-178.6km(48)	ZONE 11 481000E 6767000N	along the Mackenzie Highway (KP 179.5)	-volumes not determined		2.40	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-			
12.038	85-F(3)	DPW-176.2km(48) DPW-175.7km(48) DPW-174.9km(48)	ZONE 11 484000E 6765000N	along Mackenzie Highway (KP 175)	-volumes not determined		2.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-			
12.039	85-D(13)	D-35(19)	ZONE 11 341000E 6765000N	W of Redknife Lakes	sand & silt	4	2.50	A) 1.800 B) 0.000 C) 0.000 D) 1.800 E) 0.000 F) 0.000	alluvial alluvial plain			
12.040	85-D(13)	D-15,16,17(19)	ZONE 11 340000E 6754000N	W of Redknife River	gravel	2-3	15.00	A) 142.900 B) 0.000 C) 0.000 D) 142.900 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridges			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	none	good high	12.031
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	none	good high	12.032
fair to good unfrozen	-	access via Mackenzie Hwy which cross S end of deposit	active channel of creek	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	none	favourable medium	12.033
good unfrozen	-	access by Mackenzie Hwy which crosses deposit	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	none	favourable to good medium to high	12.034
-	-	-	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	poor	not possible	12.035
-	-	-	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	poor	not possible	12.036
-	-	-	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	poor	not possible	12.037
-	-	via Mackenzie Highway	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	poor	not possible	12.038
fair to good unfrozen	-	access by snow road 16 km N to Mackenzie Hwy	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	none	poor low	12.039
fair to good unfrozen	-	access by snow road to Mackenzie Hwy 28 km N	-	0/ 0.00	0/ 0.00	A3 B3 C3 D3	0 0 0 0	none	favourable to good medium to high	12.040

SITE IDENTIFICATION						SOURCE DESCRIPTION						
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES (>10^6 m^3)	GENERIC ORIGIN/LANDFORM			
12.041	85-D(13)	D-18(19)	ZONE 11 340000E 6747000N	W of Redknife River	gravel	2-3	15.00	A) 32.200 B) 0.000 C) 0.000 D) 32.200 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridges			
12.042	85-D(13)	D-19,20(19) R-61(20)	ZONE 11 342000E 6741000N	W of Redknife River	gravel & sand	2-3	15.00	A) 229.000 B) 0.000 C) 0.000 D) 229.000 E) 0.000 F) 0.000	glaciofluvial glaciofluvial ridges & outwash plain			
12.043	85-D(11)	D-38(19)	ZONE 11 390000E 6722000N	active channel of Kakisa River	gravel & sand	2-4	12.00	A) 10.700 B) 0.000 C) 0.000 D) 10.700 E) 0.000 F) 0.000	alluvial alluvial terrace			
12.044	85-D(10)	D-73(19)	ZONE 11 396000E 6726000N	NW of Kakisa River	till with gravel & sand lenses	4 to NG	18.00	A) 77.500 B) 0.000 C) 0.000 D) 77.500 E) 0.000 F) 0.000	morainal moraine plain			
12.045	85-D(11)	D-51,52,53(19) D-54,55,56(19)	ZONE 11 415000E 6737000N	W of Gull Creek E of Bouvier River	gravel, sand & till	3-4 to NG	0.00	A) 16.300 B) 0.000 C) 0.000 D) 16.300 E) 0.000 F) 0.000	morainal moraine ridges			
12.046	85-D(16)	D-41(19)	ZONE 11 440000E 6761000N	between Kakisa Lake & Two Island Lake	gravel, sand & silt	2-4	9.00	A) 157.300 B) 0.000 C) 0.000 D) 157.300 E) 0.000 F) 0.000	glaciolacustrine beach deposit			
12.047	85-C(14)	DPW-169.4km(48) DPW-168.5km(48) DPW-168.3km(48)	ZONE 11 478000E 6760000N	along the Mackenzie Highway (KP 169)	-volumes not determined		2.20	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-			
12.048	85-C(14)	DPW-165.8km(48) DPW-164.2km(48)	ZONE 11 480000E 6758000N	S of Mackenzie Highway (KP 165)	-volumes not determined		2.00	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-			
12.049	85-C(14)	DPW-162.7km(48) DPW-161.0km(48) DPW-159.2km(48)	ZONE 11 495000E 6757000N	along the Mackenzie Highway (KP 161)	-volumes not determined		1.80	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-			
12.050	85-C(15)	DPW-156.3km(48) DPW-155.0km(48) DPW-154.1km(48) DPW-152.8km(48)	ZONE 11 500000E 6754000N	along the Mackenzie Highway (KP 154)	-volumes not determined		3.70	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-			

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of Boreholes/ Max Depth (m)	No. of Testpits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
fair to good unfrozen	-	access by snow road to Mackenzie Hwy 30 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	12.041
fair to good unfrozen	-	access by snow road to Mackenzie Hwy 35 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	12.042
fair to good unfrozen	-	access by snow road to Mackenzie Hwy 53 km N	active channel of Kakisa River	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable* medium	12.043
fair low to unfrozen	-	access by snow road to Mackenzie Hwy 51 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to favourable low to medium	12.044
fair to good unfrozen	-	access by snow road to Mackenzie Hwy 44 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	poor to favourable low to medium	12.045
fair to good unfrozen	-	access by snow road to Mackenzie Hwy 12.9 km N	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	none	favourable to good medium to high	12.046
-	-	via Mackenzie Highway	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	not possible	12.047
-	-	via Mackenzie Highway	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	not possible	12.048
-	-	via Mackenzie Highway	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	not possible	12.049
-	-	via Mackenzie Highway	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	not possible	12.050

SITE IDENTIFICATION					SOURCE DESCRIPTION					
BORROW SOURCE NUMBER	NTS REFERENCE	CROSS REFERENCE	UTM	LOCATION GENERAL	MATERIAL TYPE	MATERIAL CLASS	AVERAGE THICKNESS (m)	VOLUMES ($\times 10^6$ m 3)	GENERIC ORIGIN/ LANDFORM	
12.051	85-C(15)	DPW-148.6km(48) ZONE 11 DPW-146.7km(48) 506000E DPW-146.2km(48) 6755000N DPW-145.9km(48)		along the Mackenzie Highway (KP 147)	-volumes not determined		2.20	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-	
12.052	85-C(15)	DPW-144.0km(48) ZONE 11 DPW-143.0km(48) 510000E DPW-140.2km(48) 6753000N		N of the Mackenzie Highway	-volumes not determined		2.70	A) 0.000 B) 0.000 C) 0.000 D) 0.000 E) 0.000 F) 0.000	-	

Source Description				Tests and Assessments						
Drainage/ Ice Content	Overburden Type and Thickness (m)	Access	Development Constraints	No. of BoReHoles/ Max Depth (m)	No. of TestPits/ Max Depth (m)	Laboratory Testing	Data Reliability	Overall Assessment/ Study Priority	Borrow Source Number	
-	-	via Mackenzie Highway	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	not possible	12.051
-	-	via Mackenzie Highway	-	0/ 0.00	0/ 0.00	A) B) C) D)	0 0 0 0	poor	not possible	12.052

