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**IZOK PROJECT FEASIBILITY STUDY**  
**WINTER HAUL ROAD**

**SUBMITTED TO:**

**Metall Mining Corporation**  
**Edmonton, Alberta**  
**and**  
**Bechtel/CESL Joint Venture**  
**Vancouver, B.C.**

**PREPARED BY:**

**EBA Engineering Consultants Ltd.**  
**Edmonton, Alberta**

**0101-11159**

**August, 1993**  
**Revised**  
**October, 1993**



**D006622**



## **2.2 BORROW EVALUATION PROGRAM**

### **2.2.1 General Approach**

A reconnaissance and evaluation of potential borrow sources was carried out during the period July 9 to July 16, 1993. The reconnaissance program was undertaken before sampling locations were chosen. This allowed a site assessment priority system to be implemented.

The various components of the borrow evaluation program are discussed in the following sub-sections.

### **2.2.2 Airphoto Interpretation/Data Review**

Pre-field assessment included an airphoto study, a review of available geological and 1:50,000 NTS maps, and a cursory search of published geologic reports. The airphoto work was conducted by J.D. Mollard using the existing high level airphotos. Some of the airphotos used date back to 1954.

All potential source areas in the vicinity of the proposed winter haul road were identified from the available geologic data and airphotos.

### **2.2.3 Summer Reconnaissance and Sampling Program**

The purpose of the summer borrow reconnaissance program was to examine all potential sources to select those that are required for pad construction. Samples were obtained from the selected sources for laboratory testing. The factors that were considered in selecting or rejecting any potential borrow source were:

- Material requirements in the vicinity of the source.
- Accessibility, haul distance and haul road grades.
- Material gradation, and quality.
- Potential volume, thickness, aerial extent, and variability.
- Drainage, relief, and pit development hazards.

A total of 40 shallow test pits were hand-excavated to obtain bulk samples approximately 20 kilograms in size from the upper layers of the granular deposit. All test pits were confined to the active layer, which was greater than 1 m thick at the time of the sampling program. These samples were retained for particle size distribution analysis and classification. All samples obtained during the summer borrow exploration program were delivered to EBA's Yellowknife laboratory. All laboratory testing was conducted in accordance with CSA procedures and specifications. Test results are presented in the Appendix B. The laboratory program performed included:

- Washed particle size analysis
- Natural moisture content
- Visual classification of soil

The stratigraphy of ice-contact glaciofluvial deposits can be complex. Eskers are composed of stratified, often cross-bedded, sands and gravel's. Gradation analyses, for the samples obtained from the active layer, indicate that the material is highly variable. The material sampled varies from fine-grained sand to coarse-grained sandy gravel. The sand content for the samples analyzed ranged from 12 to 99 percent with the average being 64 percent. The fines content i.e. material with particle size less than 80 microns, for these samples averaged less than 2 percent. The variation in moisture content for samples obtained ranged from 1 to 6 percent, although most were less than 3 percent.

The sample locations and deposit outlines are illustrated on the 1:50,000 photo mosaics presented in Volume II of this report. The approximate aerial extent of the deposits was determined on the basis of the site reconnaissance. The estimated volume of granular material available at each of the 47 granular resource deposits are presented in Table No. A.1 in Appendix A. The surface area and associated thickness has been estimated on the basis of the site reconnaissance and terrain information obtained from high level airphotos.

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**APPENDIX A**

**IZOK PROJECT FEASIBILITY STUDY  
WINTER HAUL ROAD**

**TABLE No. A.1  
GRANULAR DEPOSIT SUMMARY**

Test pits

TABLE No. A.1  
IZOK PROJECT FEASIBILITY STUDY  
WINTER HAUL ROAD  
GRANULAR DEPOSIT SUMMARY

GRANULAR DEPOSIT	LANDFORM	ESTIMATED VOLUME (cu. m)	UTM LOCATION			SAMPLE NUMBER	MOISTURE CONTENT (%)	USC	SOIL DESCRIPTION
			ZONE	NORTHING (m)	EASTING (m)				
1	Esker	50,000	12	7 282 789	417 490	13	1.1	SP	SAND AND GRAVEL-trace silt
2	Outwash	Limited	12	7 283 113	415 211	12	2.0	SP	SAND-some gravel, trace silt
3	Esker	1,000,000 +	12	7 285 890	414 628	10	6.3	GP	GRAVEL AND SAND-trace silt
3	Esker	-	12	7 286 153	413 991	11	1.9	SP	SAND AND GRAVEL-trace silt
3	Esker	-	12	7 286 244	414 909	9	2.2	SP	SAND AND GRAVEL-trace silt
3	Esker	-	12	7 286 957	412 892	7	1.7	SP	SAND-trace gravel, trace silt
3	Esker	-	12	7 287 012	412 911	8	2.1	SP	SAND-gravelly, trace silt
4	Esker	1,000,000 +	12	7 286 705	410 893	40	2.2	SP	SAND-trace gravel, trace silt
4	Esker	-	12	7 289 462	407 187	39	1.9	SP	SAND-gravelly, trace silt
4	Esker	-	12	7 293 527	403 791	38	2.4	SP	SAND-trace gravel, trace silt
5	Esker/Kame	45,000	12	7 295 545	402 373	37	1.5	SP	SAND-trace gravel, trace silt
6	Esker	60,000	12	7 298 525	401 344	36	3.5	SP	SAND-gravelly, trace silt
7	Outwash	Limited	12	7 299 800	403,000	-			
8	Esker	45,000	12	7 301 945	401 279	35	2.4	SP	SAND-trace gravel, trace silt
9	Outwash	Limited	12	7 304 400	402 600	-			

TABLE No. A.1  
IZOK PROJECT FEASIBILITY STUDY  
WINTER HAUL ROAD  
GRANULAR DEPOSIT SUMMARY

GRANULAR DEPOSIT	LANDFORM	ESTIMATED VOLUME (cu. m)	UTM LOCATION			SAMPLE NUMBER	MOISTURE CONTENT (%)	USC	SOIL DESCRIPTION
			ZONE	NORTHING (m)	EASTING (m)				
10	Outwash	Limited	12	7 306 500	402 350	-			
11	Outwash	Limited	12	7 110 100	402 600	-			
12	Outwash	100,000	12	7 313 368	402 366	34	1.9	SP	SAND AND GRAVEL-trace silt
13	Esker	200,000	12	7 315 204	399 647	33	2.9	GP	GRAVEL-sandy, trace silt
14	Esker	300,000	12	7 317 089	398 561	32	4.1	SP	SAND-trace gravel, trace silt
15	Outwash	Limited	12	7 315 600	402 400	-			
16	Outwash	Limited	12	7 320 600	405 000	-			
17	Outwash	Limited	12	7 321 800	403 400	-			
18	Esker	1,000,000 +	12	7 356 774	387 685	31	0.9	GP	GRAVEL-sandy, trace silt
19	Esker	1,000,000 +	12	7 364 315	391 722	30	3.1	G W/G M	GRAVEL AND SAND-trace silt
19	Esker	-	12	7 365 392	389 829	29	2.6	S P/S M	SAND AND GRAVEL-trace silt
19	Esker	-	12	7 369 583	385 461	28	3.2	GP	GRAVEL AND SAND-trace silt
20	Esker	300,000	12	7 372 858	382 265	27	2.9	GP	GRAVEL AND SAND-trace silt
20	Esker	-	12	7 376 832	382 653	26	1.9	SW	SAND AND GRAVEL-trace silt
21	Esker	20,000	12	7 380 300	380 500	-			

TABLE No. A.1  
IZOK PROJECT FEASIBILITY STUDY  
WINTER HAUL ROAD  
GRANULAR DEPOSIT SUMMARY

GRANULAR DEPOSIT	LANDFORM	ESTIMATED VOLUME (cu. m)	UTM LOCATION			SAMPLE NUMBER	MOISTURE CONTENT (%)	USC	SOIL DESCRIPTION
			ZONE	NORTHING (m)	EASTING (m)				
22	Esker	40,000	12	7 390 795	380 287	25	3.7	SP	SAND AND GRAVEL-trace silt
23	Esker	Limited	12	7 391 800	377 000	-			
24	Esker	120,000	12	7 395 260	377 116	24	1.5	GP	GRAVEL AND SAND-trace silt
25	Esker	50,000	12	7 401 601	376 247	23	4.6	SP	SAND-trace gravel, trace silt
26	Esker	35,000	12	7 409 600	371 700	-			
27	Esker	400,000	12	7 410 673	372 332	22	2.3	SP	SAND AND GRAVEL-trace silt
27	Esker	-	12	7 415 622	370 732	21	3.4	SP	SAND-trace gravel, trace silt
28	Outwash	200,000	11	7 424 220	628 880	20	3.1	SP	SAND AND GRAVEL-trace silt
29	Esker	Limited	11	7 425 450	629 000	-			
30	Esker	Limited	11	7 428 500	627 000	-			
31	Esker	75,000	11	7 430 529	626 217	19	2.0	SP	SAND AND GRAVEL-trace silt
32	Esker	30,000	11	7 434 000	625 000	-			
33	Esker	400,000	11	7 439 668	622 320	18	4.0	S P/S M	SAND-trace silt
34	Esker	Limited	11	7 441 400	621 600	-			
35	Esker	Limited	11	7 443 100	621 000	-			

TABLE No. A.1  
IZOK PROJECT FEASIBILITY STUDY  
WINTER HAUL ROAD  
GRANULAR DEPOSIT SUMMARY

GRANULAR DEPOSIT	LANDFORM	ESTIMATED VOLUME (cu. m)	UTM LOCATION			SAMPLE NUMBER	MOISTURE CONTENT (%)	USC	SOIL DESCRIPTION
			ZONE	NORTHING (m)	EASTING (m)				
36	Esker	25,000	11	7 444 978	620 462	17	1.5	GP	GRAVEL-some sand, trace silt
37	Esker	75,000	11	7 448 848	619 478	16	4.1	S P/S M	SAND-trace gravel, trace silt
38	Outwash	60,000	11	7 464 685	612 418	15	1.6	GW	GRAVEL AND SAND-trace silt
39	Esker	100,000	11	7 470 985	611 676	6	1.6	SP	SAND-gravelly, trace silt
40	Esker	Limited	11	7 474 000	610 150	-			
41	Outwash	Limited	11	7 485 000	606 000	-			
42	Kame	20,000	11	7 490 350	603 500	-			
43	Esker/Kame	35,000	11	7 491 735	600 036	5	3.2	SP	SAND-gravelly, trace silt
44	Outwash	Limited	11	7 498 300	605 700	-			
45	Esker	1,000,000 +	11	7 508 725	603 800	4	2.0	SP	SAND-trace gravel, trace silt
45	Esker	-	11	7 508 095	601 701	2	1.8	GP	GRAVEL AND SAND-trace silt
45	Esker	-	11	7 508 725	598 916	3	1.7	SP	SAND-gravelly, trace silt
46	Outwash	400,000	11	7 510 062	601 500	1	2.5	SP	SAND-some gravel, trace silt
47	Outwash	75,000	11	7 512 950	601 625	14	3.3	GP	GRAVEL AND SAND-trace silt

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**APPENDIX B**

**IZOK PROJECT FEASIBILITY STUDY  
WINTER HAUL ROAD**

**GRAIN SIZE DISTRIBUTION RESULTS**  
*from test pits.*

## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 13 Source #1

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 282 789

Project Number: 0101-11159

E. 417 490

Date Sampled: 93/07/14 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/23 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 1.1 %

EDMONTON, ALBERTA

Crushed Faces: Faces:

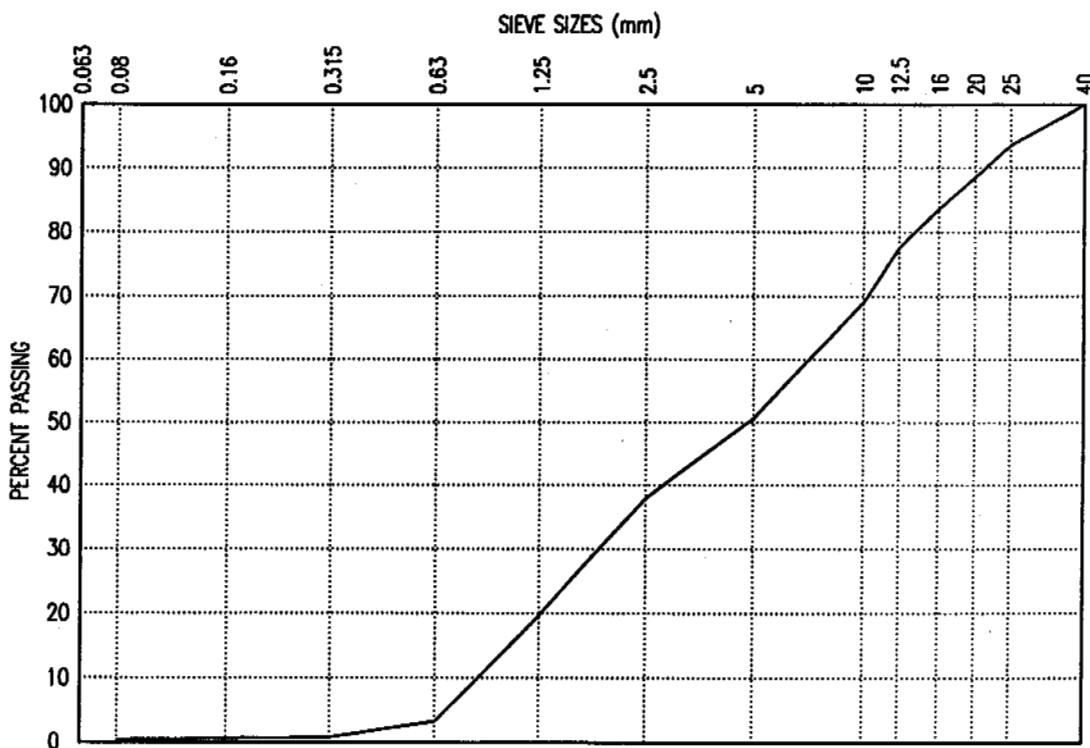
Attention: MR. K.J. HILL

Soil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS

- MEDIUM BROWN.

Remarks: COLOUR PLATE #5.

Sieve	% Passing
40	100.0
25	93.6
20	88.7
16	83.6
12.5	77.6
10	69.1
5	50.7
2.5	37.9
1.25	19.7
0.63	3.3
0.315	0.8
0.16	0.6
0.08	0.4



Reviewed By:

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 12 Source #2Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 283 113Project Number: 0101-11159E. 415 211Date Sampled: 93/07/14 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

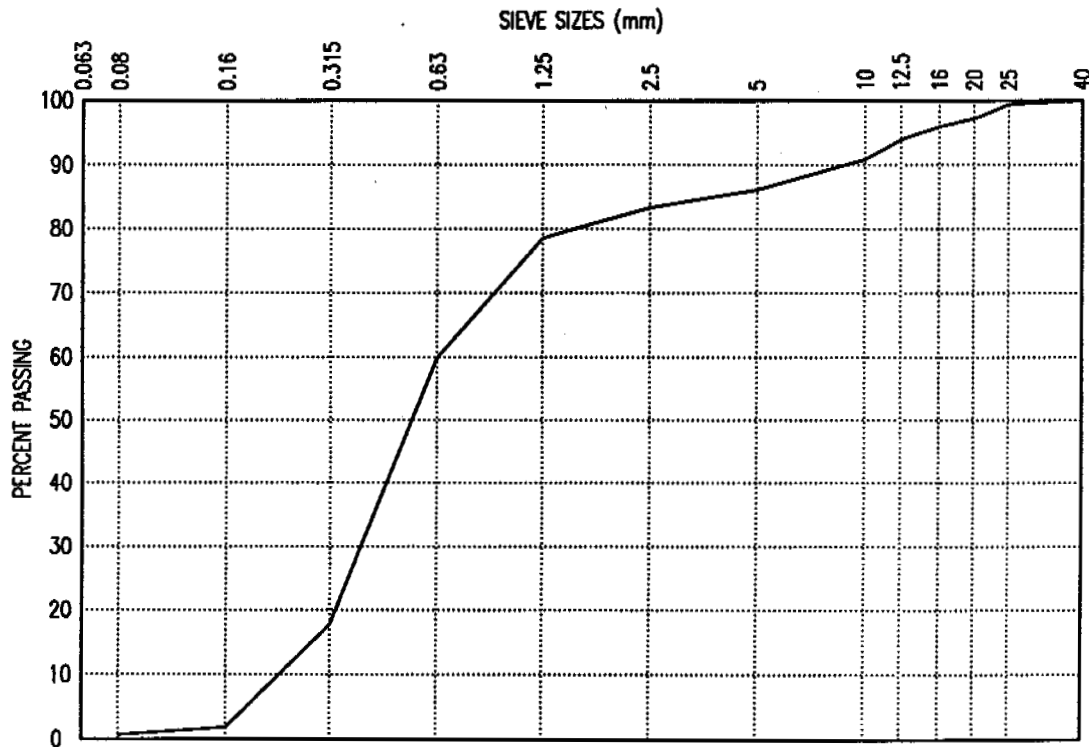
Client: METALL MINING CORPORATIONDate Tested: 93/07/23 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 2.0 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, SOME GRAVEL, TRACE SILT, ORGANICS- LIGHT BROWN.

Remarks: \_\_\_\_\_

Sieve	% Passing
40	100.0
25	99.4
20	97.2
16	96.0
12.5	94.0
10	91.0
5	86.1
2.5	83.4
1.25	78.6
0.63	59.9
0.315	17.7
0.16	2.0
0.08	0.7



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## AGGREGATE ANALYSIS REPORT

3A

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 10 Source #3

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 285 890

Project Number: 0101-11159

E. 414 628

Date Sampled: 93/07/13 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/23 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 6.3 %

EDMONTON, ALBERTA

Crushed Faces: Faces:

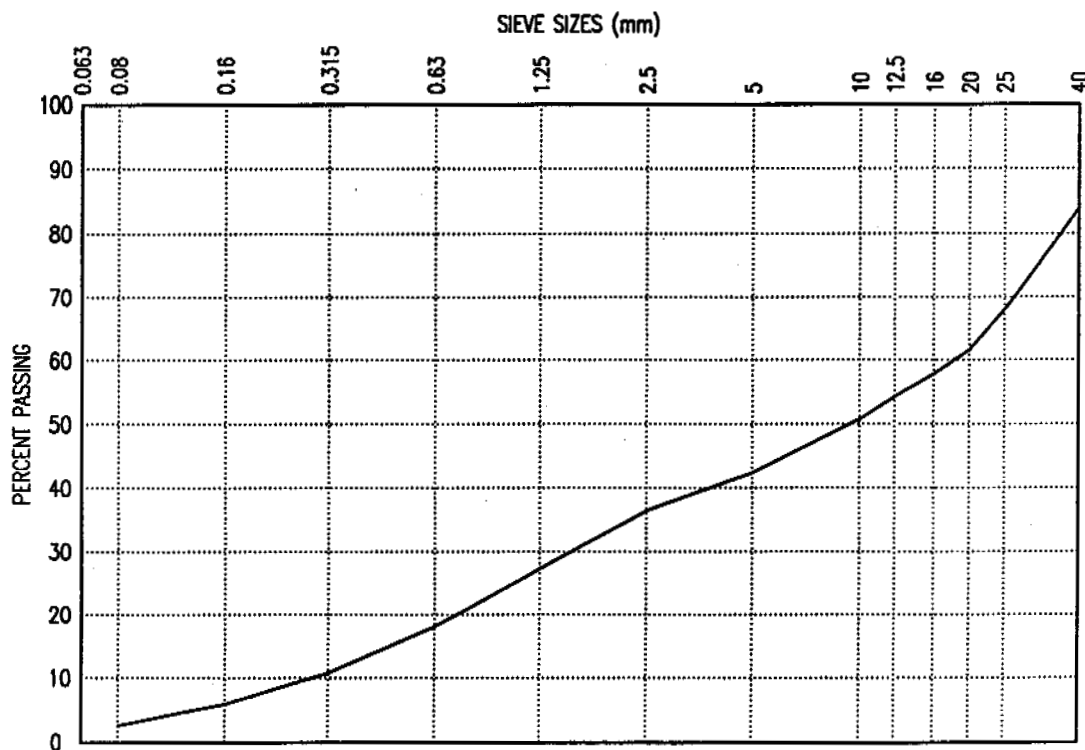
Attention: MR. K.J. HILL

Soil Description: GRAVEL AND SAND, TRACE SILT, ORGANICS

- MEDIUM BROWN.

Remarks:

Sieve	% Passing
80	100.0
50	89.6
40	83.8
25	68.0
20	61.6
16	57.8
12.5	54.3
10	50.8
5	42.4
2.5	36.5
1.25	27.3
0.63	18.1
0.315	10.8
0.16	5.9
0.08	2.6



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## AGGREGATE ANALYSIS REPORT

36

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 11 Source #3Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 286 153Project Number: 0101-11159E. 413 991Date Sampled: 93/07/13 By: MAV

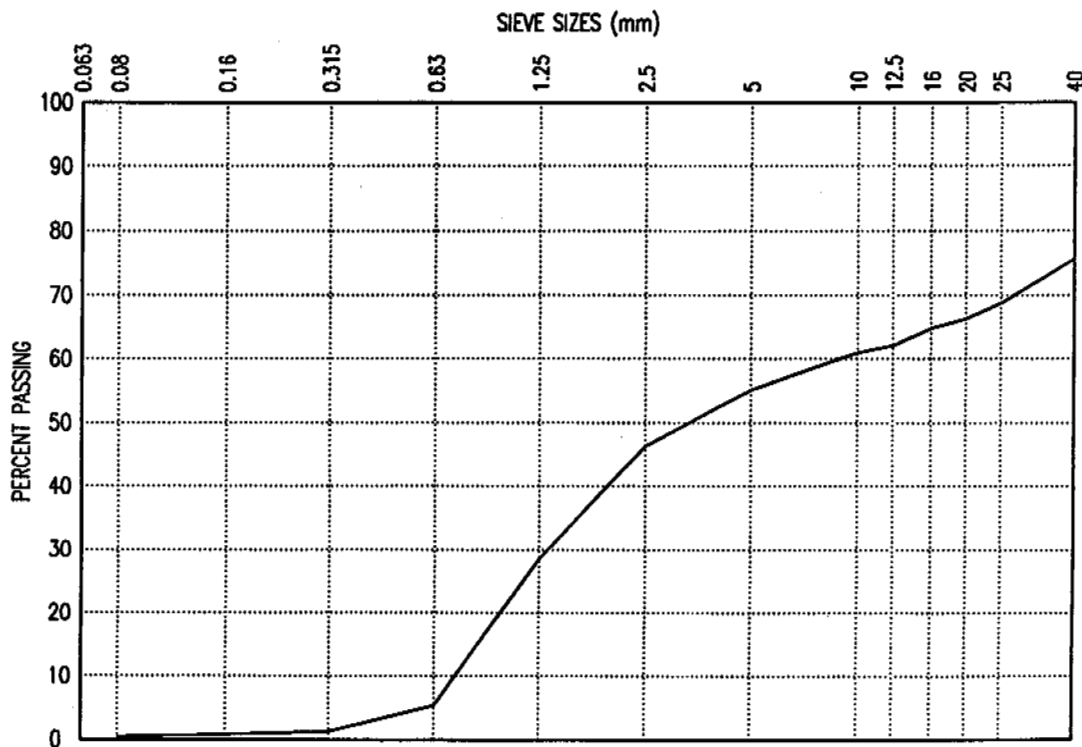
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/23 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 1.9 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS- MEDIUM BROWN.Remarks: COLOUR PLATE #3.

Sieve	% Passing
80	100.0
50	78.9
40	75.6
25	68.8
20	66.3
16	64.8
12.5	62.1
10	61.0
5	55.2
2.5	46.3
1.25	28.5
0.63	5.4
0.315	1.3
0.16	0.8
0.08	0.6



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

36

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 9 Source #3Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 286 244Project Number: 0101-11159E. 414 909Date Sampled: 93/07/13 By: MAV

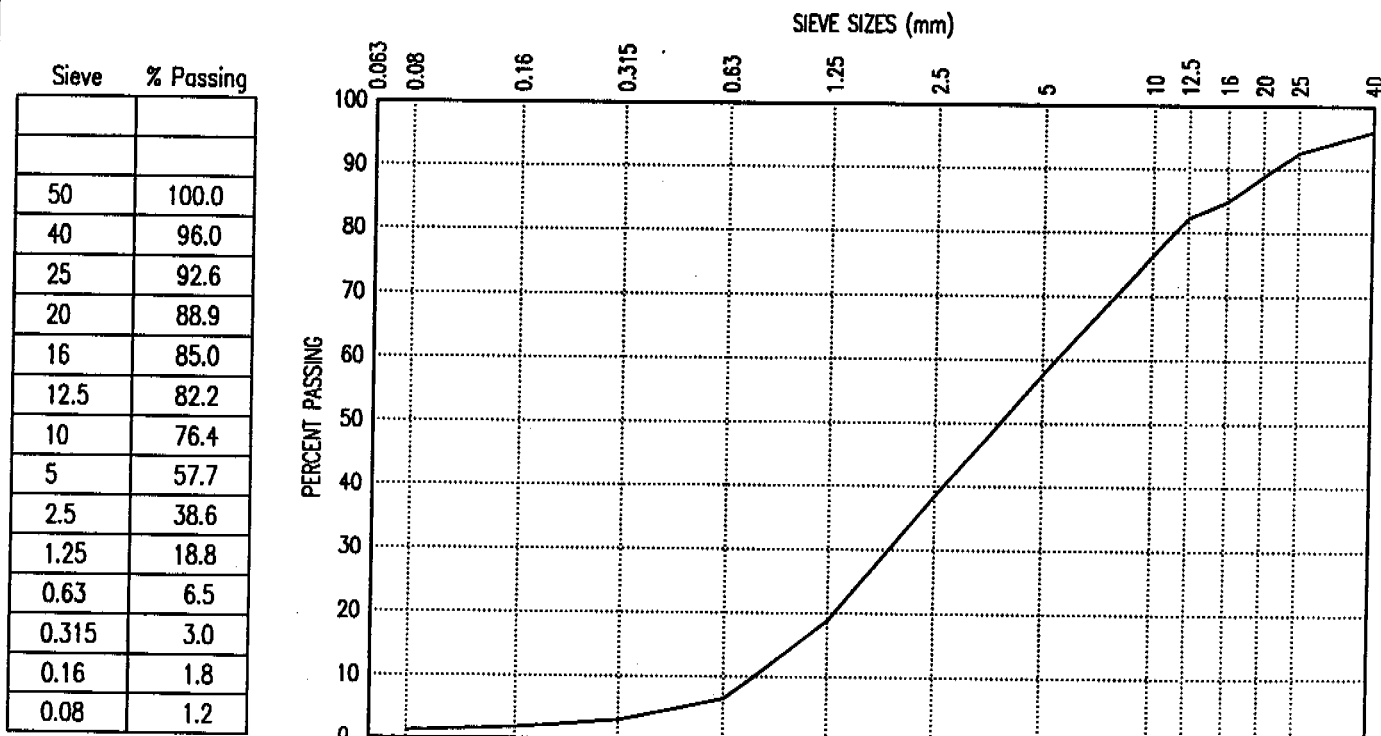
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/23 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 2.2 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS - DARK BROWN

Remarks: \_\_\_\_\_



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

30

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 7 Source #3

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 286 957

Project Number: 0101-11159

E. 412 892

Date Sampled: 93/07/13 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/22 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 1.7 %

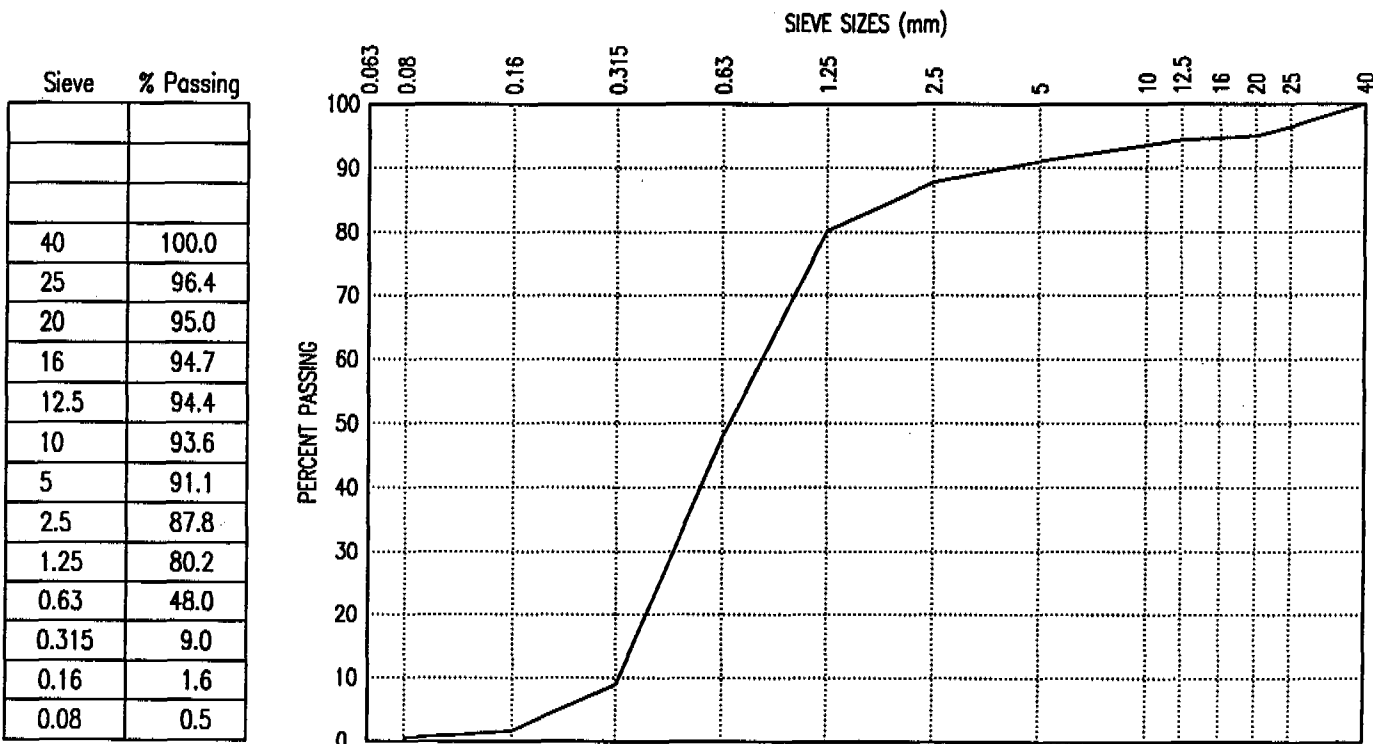
EDMONTON, ALBERTA

Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - BROWN.

Remarks:



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## AGGREGATE ANALYSIS REPORT

3E

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 8 Source #3Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 287 012Project Number: 0101-11159E. 412 911Date Sampled: 93/07/13 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

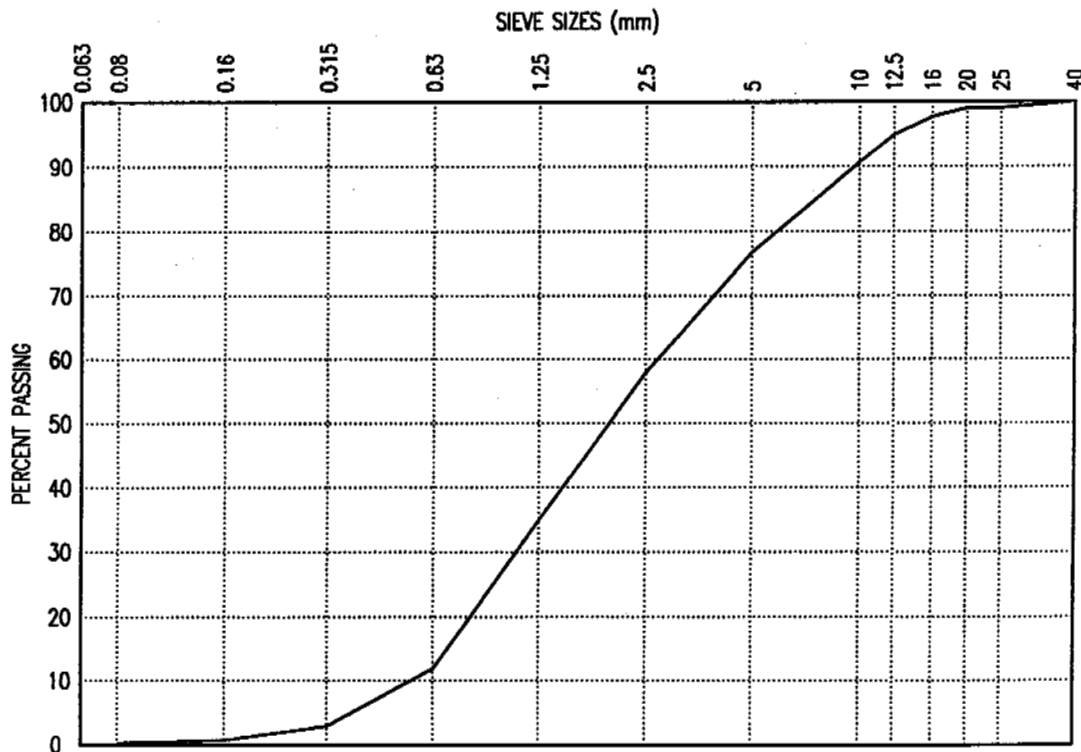
Client: METALL MINING CORPORATIONDate Tested: 93/07/22 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 2.1 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, GRAVELLY, TRACE SILT, ORGANICS- MEDIUM BROWN.

Remarks: \_\_\_\_\_

Sieve	% Passing
40	100.0
25	99.0
20	99.0
16	97.7
12.5	94.9
10	90.7
5	76.7
2.5	57.9
1.25	34.9
0.63	11.9
0.315	2.9
0.16	0.8
0.08	0.3



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

4A

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 40 Source #4

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 286 705

Project Number: 0101-11159

E. 410 893

Date Sampled: 93/07/16 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/26 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 2.2 %

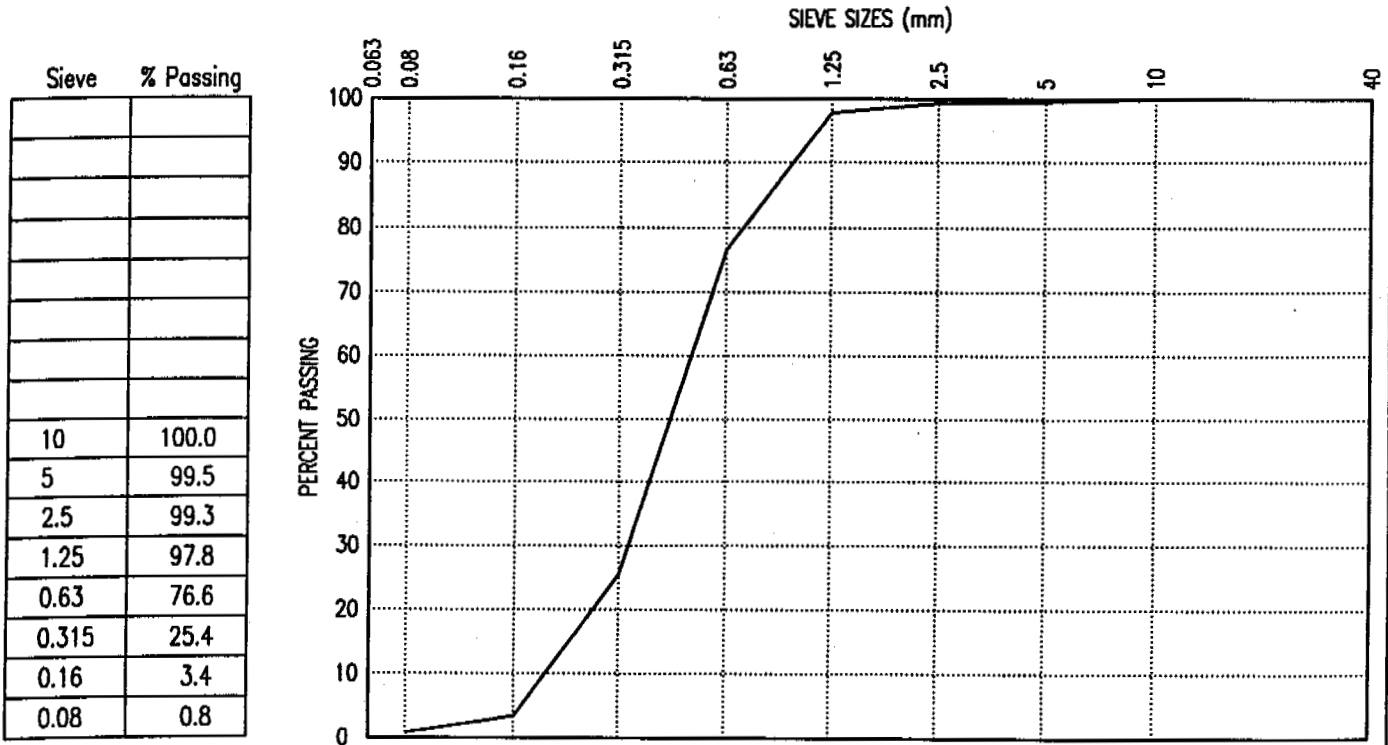
EDMONTON, ALBERTA

Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - BROWN.

Remarks:



Reviewed By:

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## AGGREGATE ANALYSIS REPORT

4B

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 39 Source #4Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 289 462Project Number: 0101-11159E. 407 187Date Sampled: 93/07/16 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

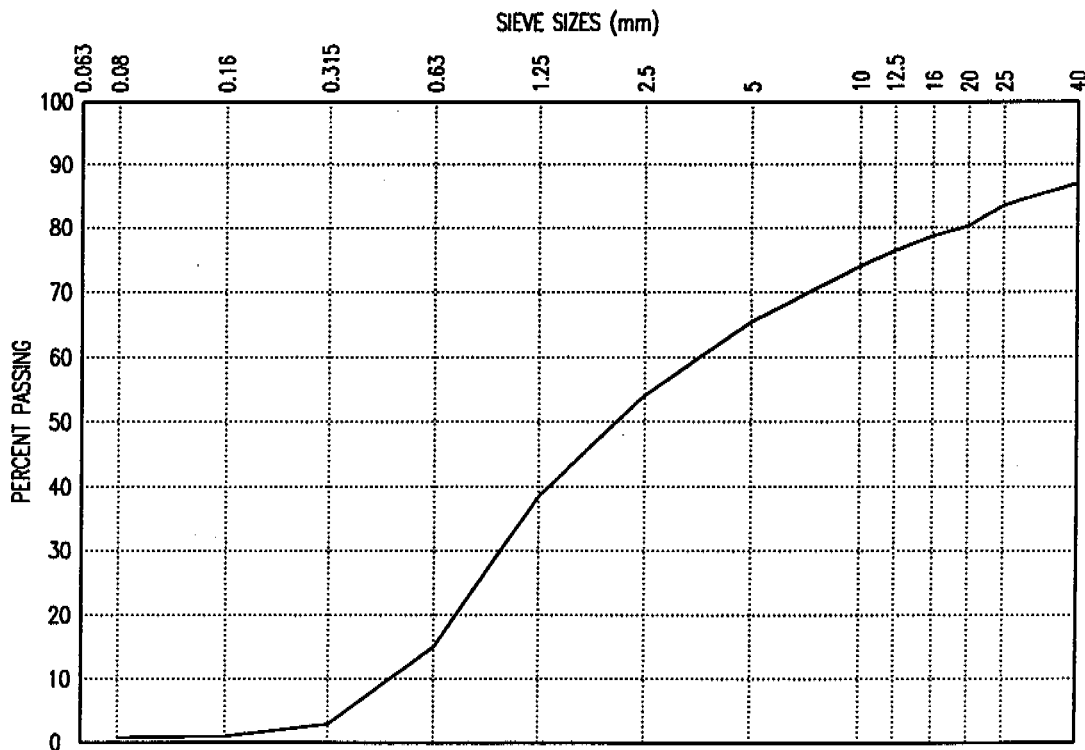
Client: METALL MINING CORPORATIONDate Tested: 93/07/26 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 1.9 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, GRAVELLY, TRACE SILT, ORGANICS- MEDIUM BROWN.

Remarks: \_\_\_\_\_

Sieve	% Passing
80	100.0
50	87.0
40	87.0
25	83.5
20	80.3
16	78.7
12.5	76.4
10	74.0
5	65.4
2.5	54.3
1.25	38.5
0.63	15.1
0.315	2.9
0.16	1.0
0.08	0.8



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

42

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 38 Source #4

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 293 527

Project Number: 0101-11159

E. 403 791

Date Sampled: 93/07/16 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/26 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 2.4 %

EDMONTON, ALBERTA

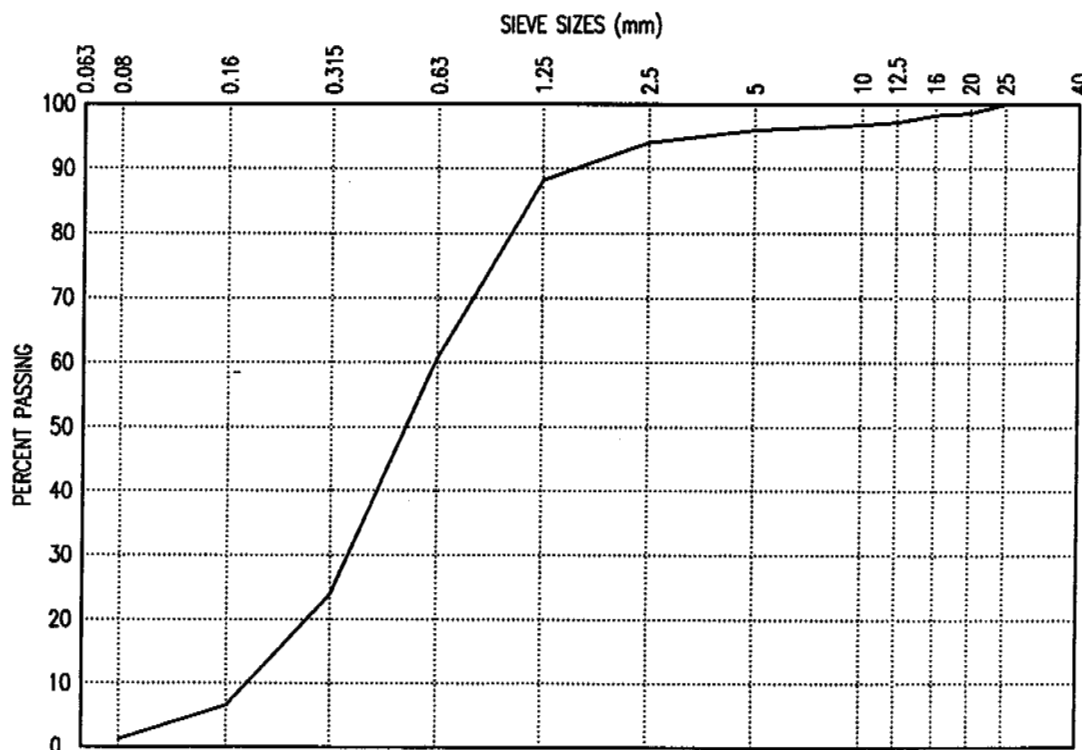
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - MEDIUM BROWN.

Remarks:

Sieve	% Passing
25	100.0
20	98.6
16	98.3
12.5	97.2
10	96.8
5	96.0
2.5	94.2
1.25	88.3
0.63	60.8
0.315	24.0
0.16	6.5
0.08	1.2



Reviewed By:

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 36 Source #6Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 298 525Project Number: 0101-11159E. 401 344Date Sampled: 93/07/16 By: MAV

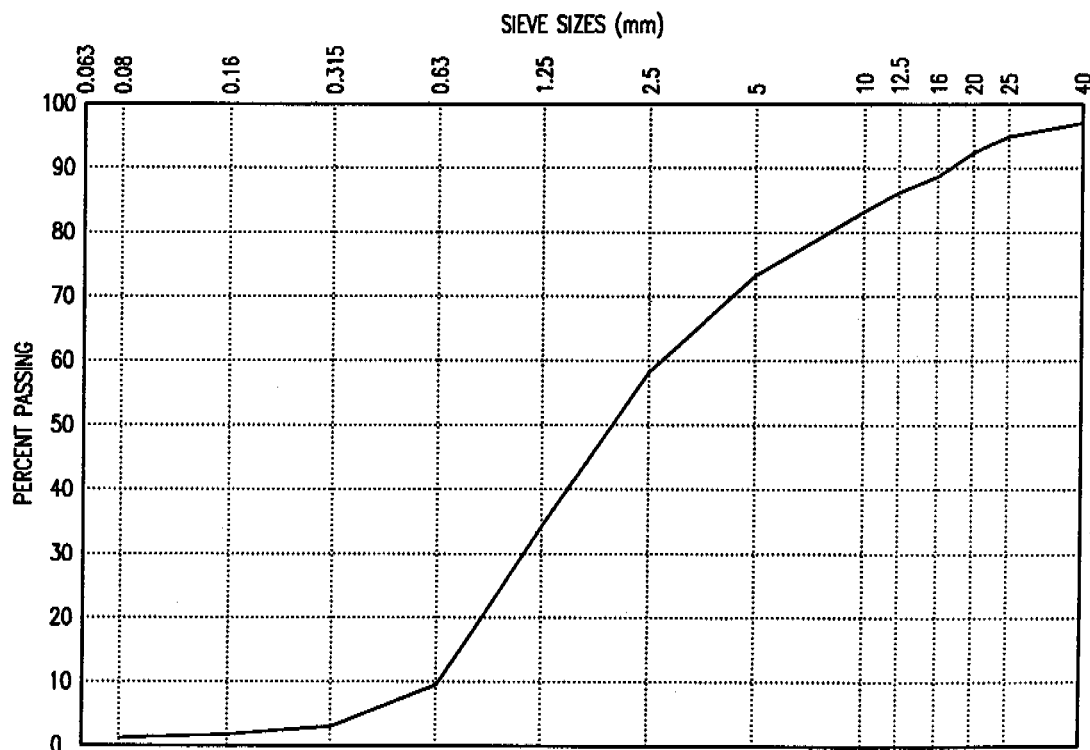
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/26 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 3.5 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, GRAVELLY, TRACE SILT, ORGANICS - DARK BROWN.Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sieve	% Passing
80	100.0
50	97.1
40	97.1
25	94.9
20	92.5
16	88.8
12.5	86.3
10	83.3
5	73.3
2.5	58.2
1.25	34.3
0.63	9.4
0.315	3.0
0.16	1.7
0.08	1.3



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 35 Source #8Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 301 945Project Number: 0101-11159E. 401 279Date Sampled: 93/07/16 By: MAV

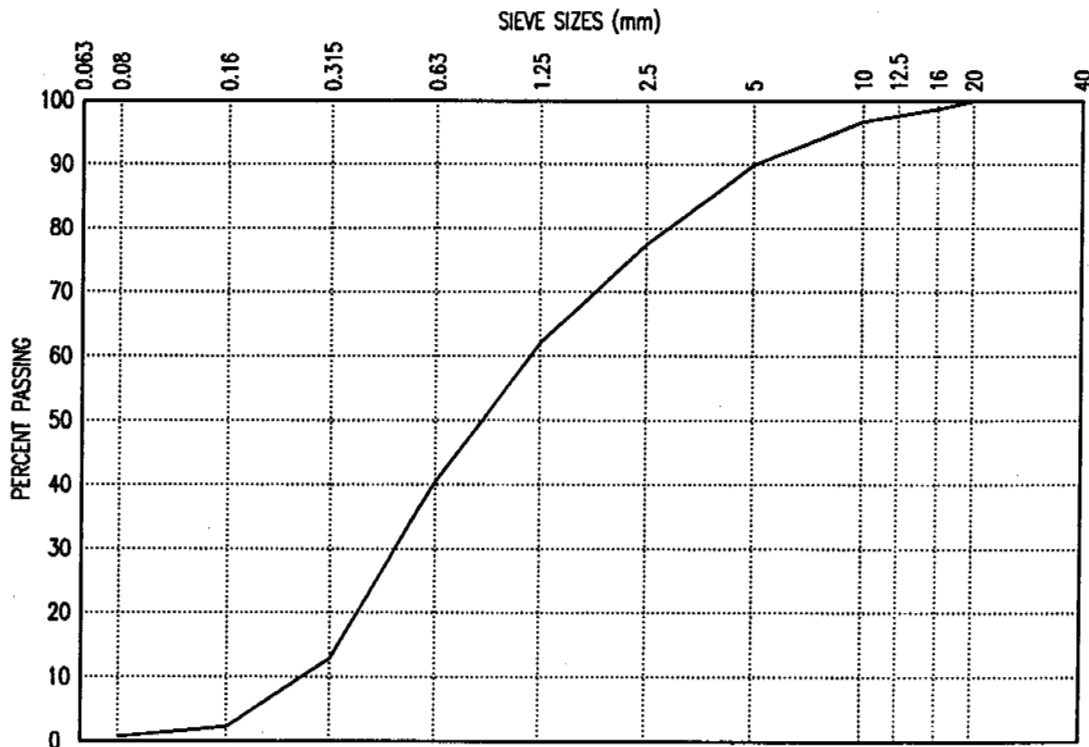
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/26 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 2.4 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - LIGHT BROWN.Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sieve	% Passing
20	100.0
16	98.7
12.5	97.6
10	96.8
5	90.0
2.5	77.5
1.25	62.0
0.63	40.6
0.315	12.9
0.16	2.3
0.08	0.7



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 34 Source #12Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 313 368Project Number: 0101-11159E. 402 366Date Sampled: 93/07/16 By: MAV

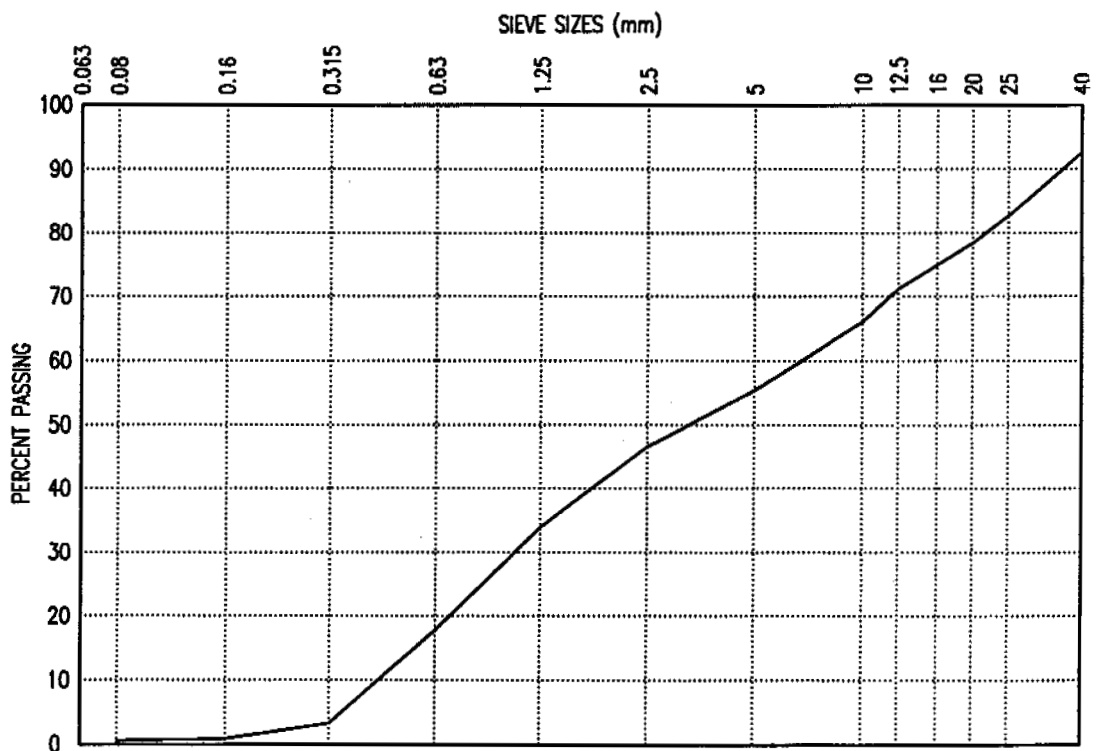
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/26 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 1.9 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS- MEDIUM BROWN.Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sieve	% Passing
50	100.0
40	92.6
25	82.7
20	78.3
16	75.0
12.5	71.1
10	66.1
5	55.4
2.5	46.6
1.25	34.0
0.63	17.8
0.315	3.4
0.16	0.9
0.08	0.6



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 33 Source #13Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 315 204Project Number: 0101-11159E. 399 647Date Sampled: 93/07/16 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

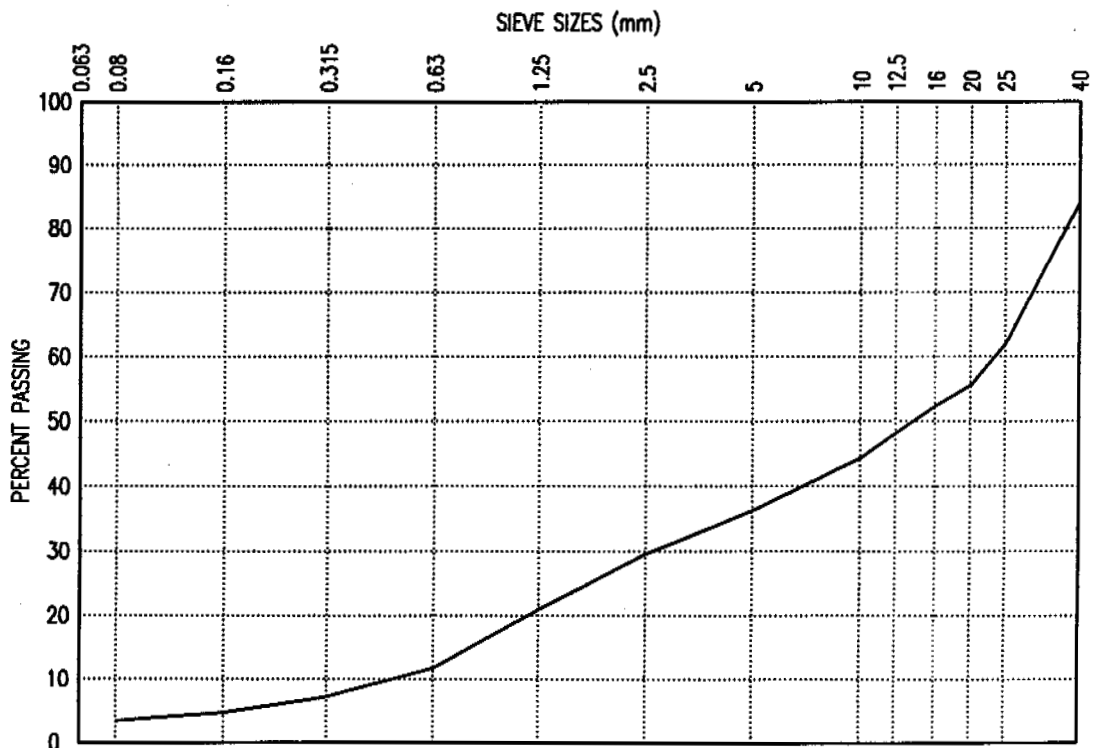
Client: METALL MINING CORPORATIONDate Tested: 93/07/26 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 2.9 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: GRAVEL, SANDY, TRACE SILT, ORGANICS - BROWN.

Remarks: \_\_\_\_\_

Sieve	% Passing
50	100.0
40	83.9
25	61.9
20	55.5
16	52.3
12.5	48.2
10	44.5
5	36.2
2.5	29.6
1.25	21.0
0.63	11.8
0.315	7.2
0.16	4.7
0.08	3.5



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 32 Source #14

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 317 089

Project Number: 0101-11159

E. 398 561

Date Sampled: 93/07/16 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/26 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 4.1 %

EDMONTON, ALBERTA

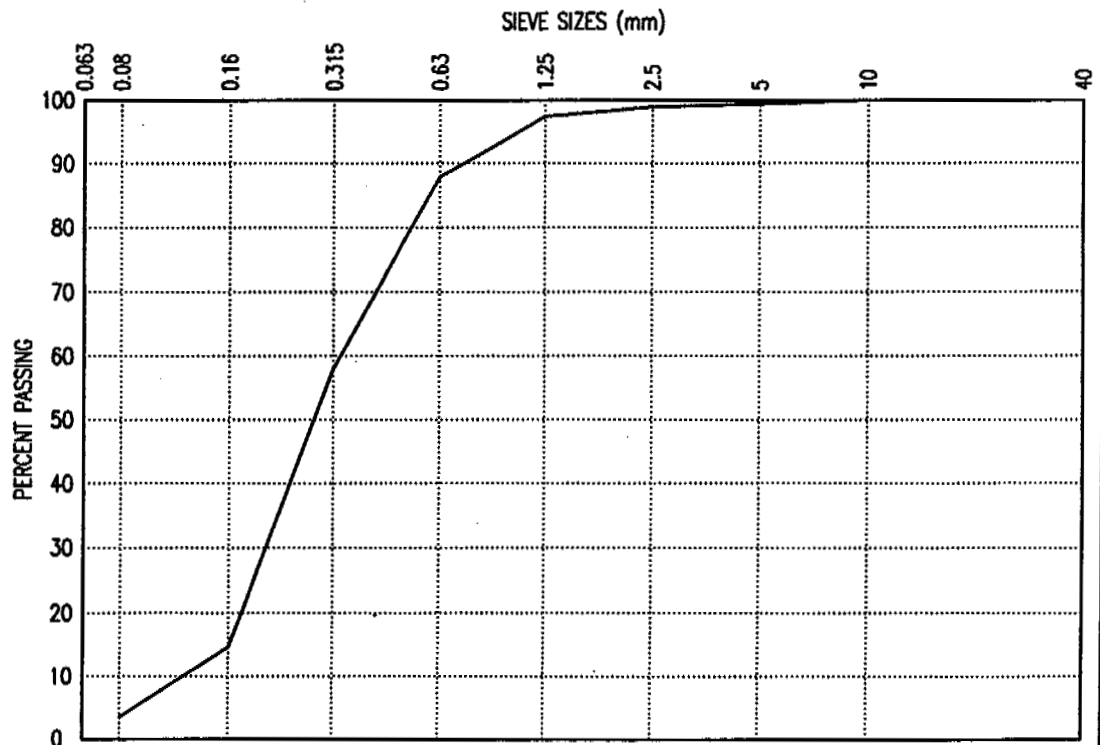
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - MEDIUM BROWN.

Remarks:

Sieve	% Passing
10	100.0
5	99.4
2.5	98.9
1.25	97.4
0.63	87.9
0.315	58.1
0.16	14.7
0.08	3.5



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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 31 Source #18Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 356 774Project Number: 0101-11159E. 387 685Date Sampled: 93/07/16 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

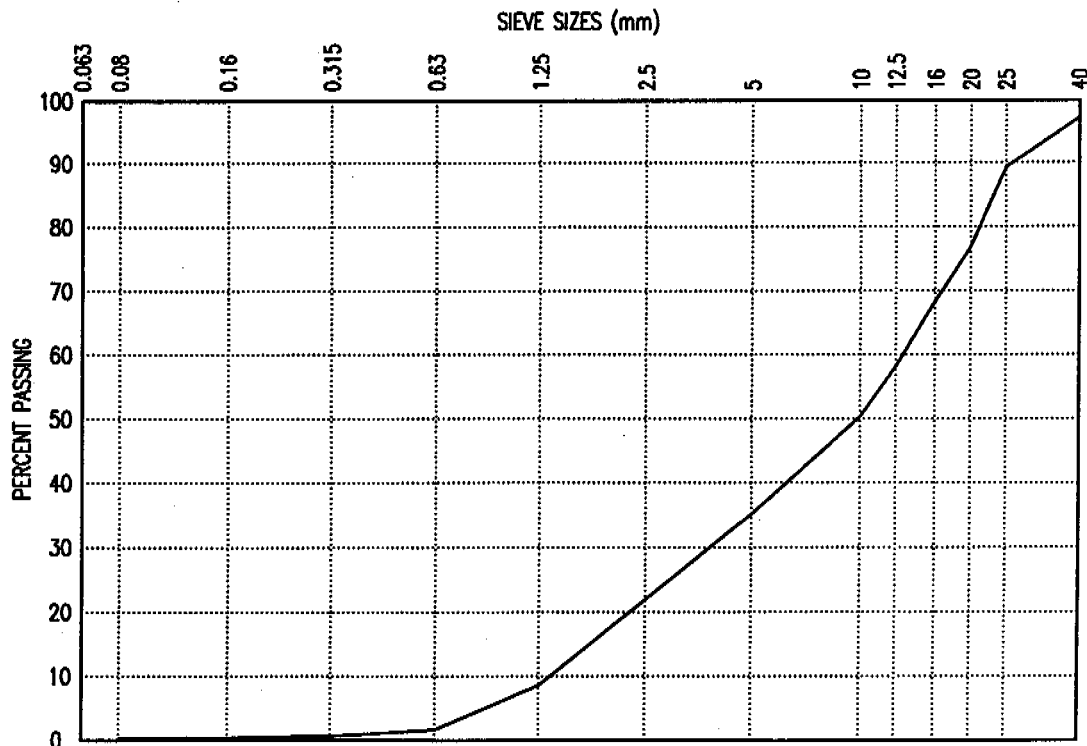
Client: METALL MINING CORPORATIONDate Tested: 93/07/26 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 0.9 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: GRAVEL, SANDY, TRACE SILT, ORGANICS - BROWN.

Remarks: \_\_\_\_\_

Sieve	% Passing
50	100.0
40	97.2
25	89.4
20	76.8
16	68.3
12.5	58.2
10	50.5
5	35.2
2.5	21.9
1.25	8.6
0.63	1.7
0.315	0.7
0.16	0.4
0.08	0.3



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

19A

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 30 Source #19Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 364 315Project Number: 0101-11159E. 391 722Date Sampled: 93/07/16 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

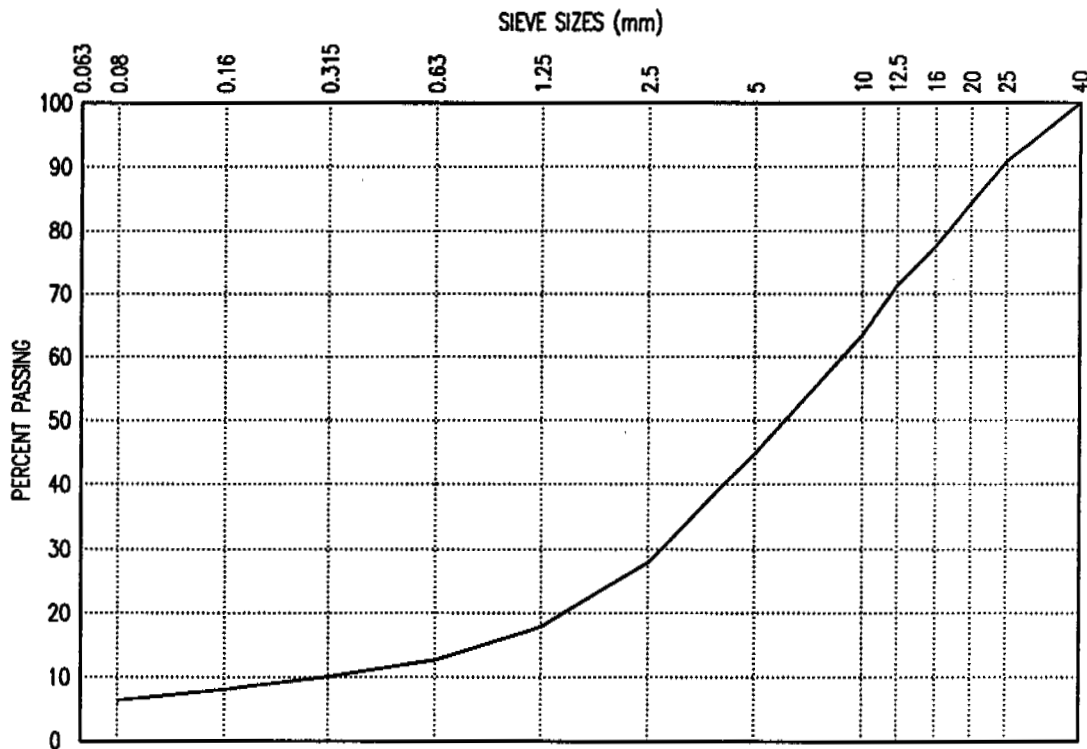
Client: METALL MINING CORPORATIONDate Tested: 93/07/24 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 3.1 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: GRAVEL AND SAND, TRACE SILT, ORGANICS- MEDIUM GREY.

Remarks: \_\_\_\_\_

Sieve	% Passing
40	100.0
25	90.8
20	84.4
16	77.6
12.5	71.4
10	63.5
5	44.8
2.5	28.0
1.25	17.8
0.63	12.6
0.315	10.1
0.16	8.1
0.08	6.4



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

19B

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 29 Source #19

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 365 392

Project Number: 0101-11159

E. 389 829

Date Sampled: 93/07/16 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/24 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 2.6 %

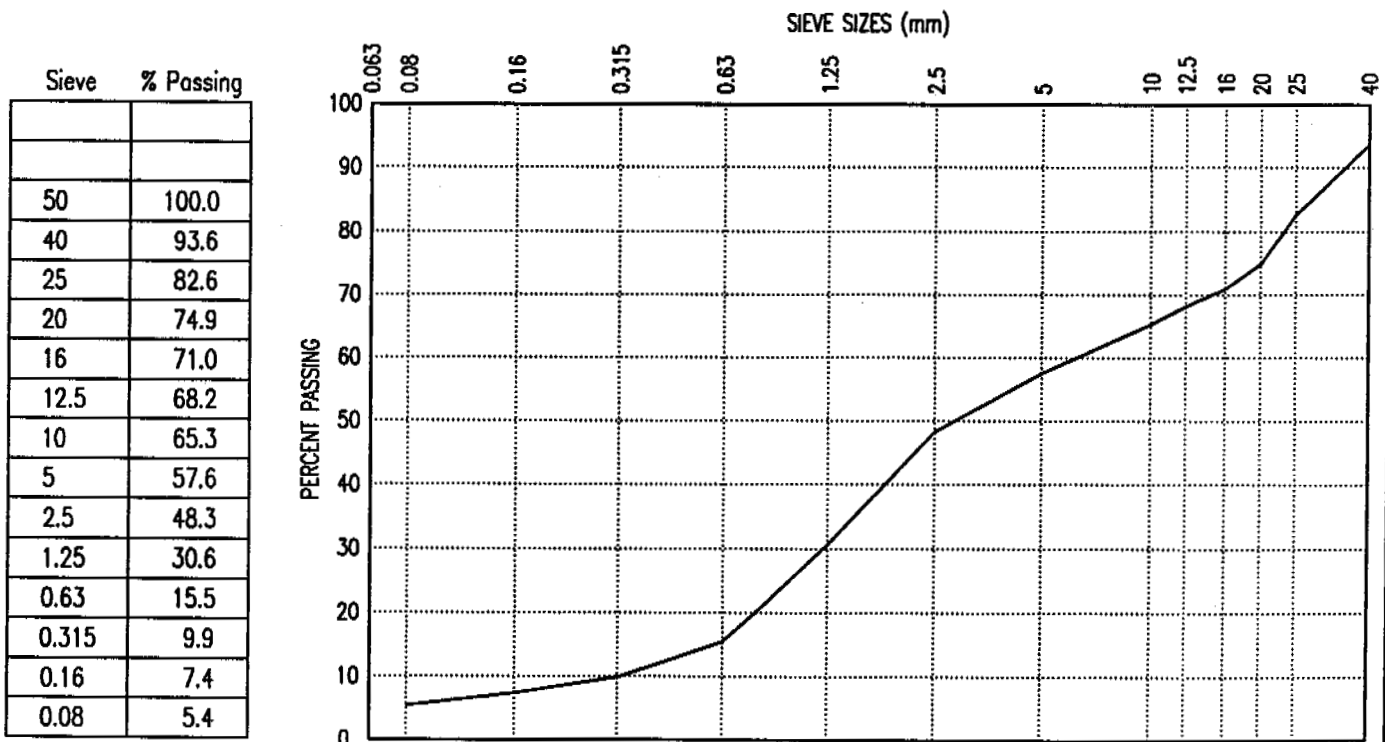
EDMONTON, ALBERTA

Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS - DARK BROWN

Remarks:



Reviewed By:

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## AGGREGATE ANALYSIS REPORT

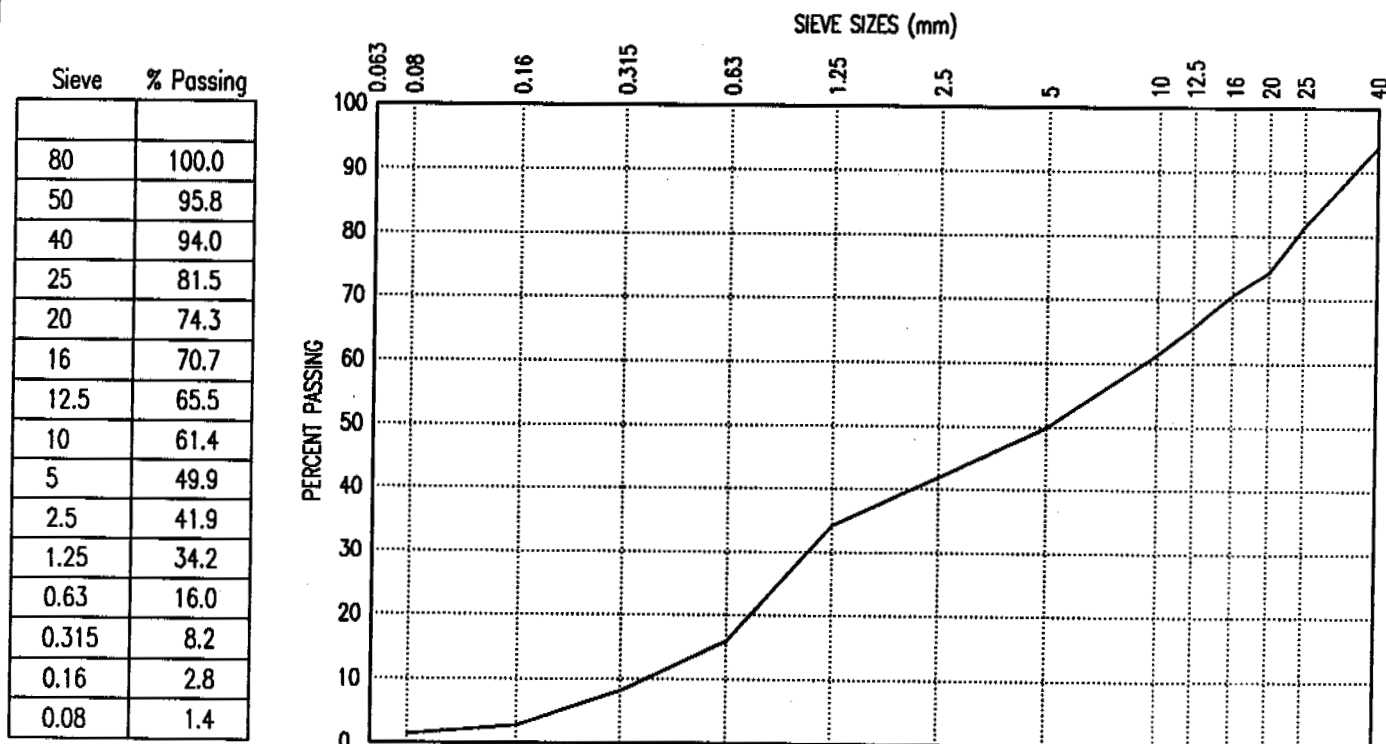
19C

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 28 Source #19Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 369 583Project Number: 0101-11159E. 385 461Date Sampled: 93/07/16 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/24 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 3.2 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: GRAVEL AND SAND, TRACE SILT, ORGANICS - DARK BROWNRemarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

20A

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 27 Source #20

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 372 858

Project Number: 0101-11159

E. 382 265

Date Sampled: 93/07/16 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/24 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 2.9 %

EDMONTON, ALBERTA

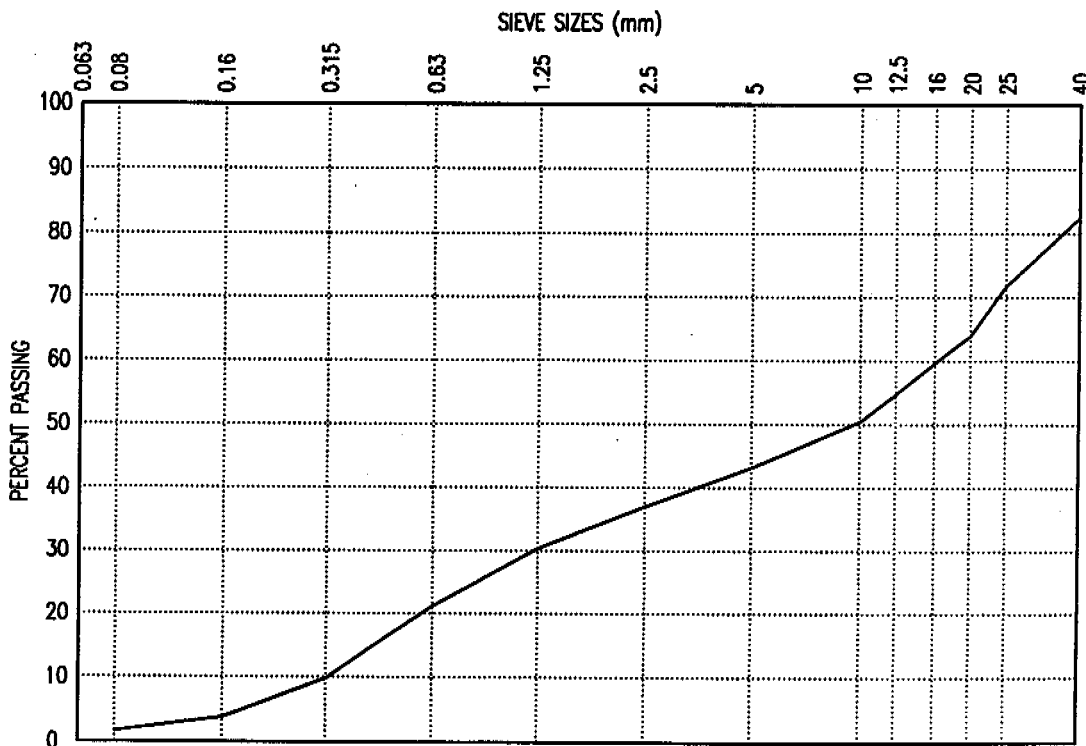
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: GRAVEL AND SAND, TRACE SILT, ORGANICS - DARK BROWN

Remarks:

Sieve	% Passing
80	100.0
50	90.7
40	82.4
25	71.8
20	64.0
16	59.7
12.5	54.8
10	50.6
5	43.2
2.5	37.0
1.25	30.4
0.63	21.2
0.315	9.8
0.16	3.8
0.08	1.6



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## AGGREGATE ANALYSIS REPORT

20B

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 26 Source #20

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 376 832

Project Number: 0101-11159

E. 382 653

Date Sampled: 93/07/16 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/24 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 1.9 %

EDMONTON, ALBERTA

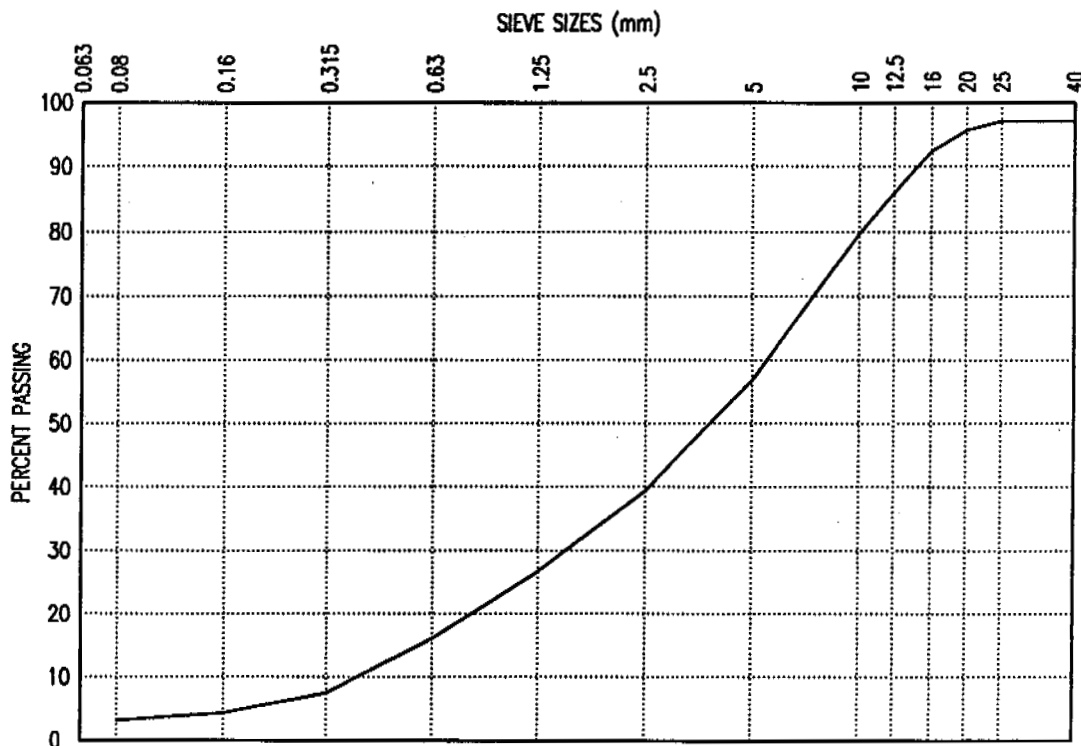
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS - DARK BROWN

Remarks:

Sieve	% Passing
50	100.0
40	97.1
25	97.1
20	95.7
16	92.5
12.5	86.1
10	79.7
5	56.9
2.5	39.5
1.25	26.7
0.63	16.0
0.315	7.5
0.16	4.3
0.08	3.1



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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 25 Source #22Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 390 795Project Number: 0101-11159E. 380 287Date Sampled: 93/07/16 By: MAV

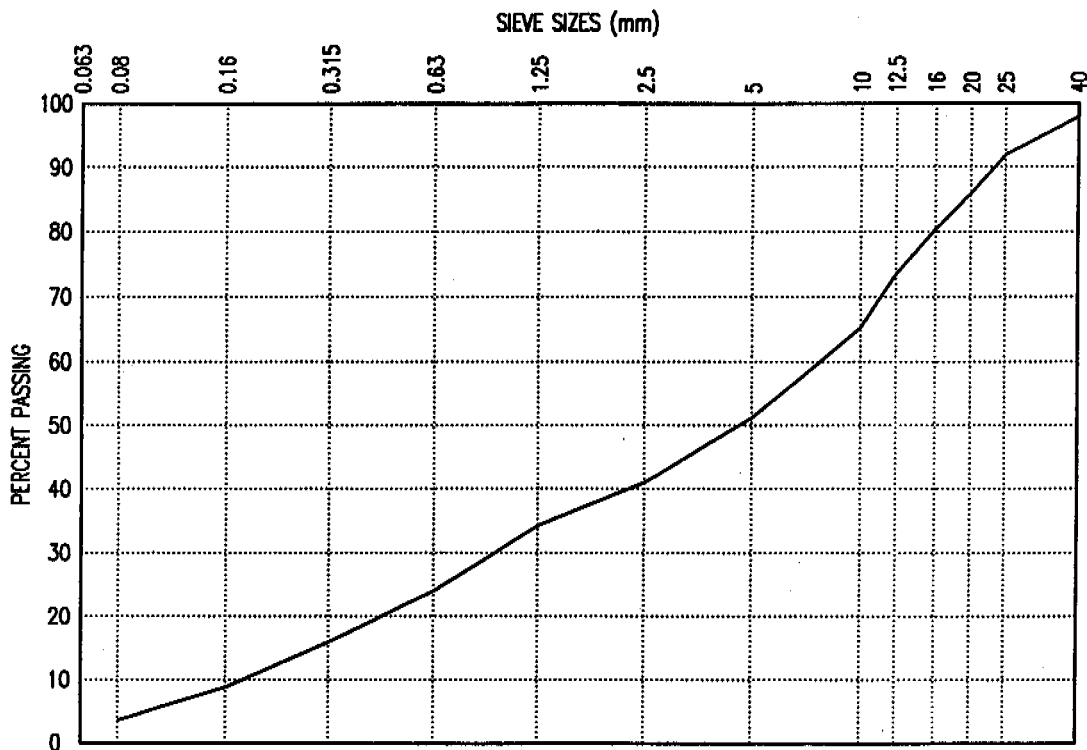
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/24 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 3.7 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS - BROWN.Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sieve	% Passing
50	100.0
40	97.9
25	92.0
20	86.0
16	80.4
12.5	73.6
10	65.3
5	51.2
2.5	41.0
1.25	34.2
0.63	24.0
0.315	16.0
0.16	8.8
0.08	3.6



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 24 Source #24

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 395 260

Project Number: 0101-11159

E. 377 116

Date Sampled: 93/07/15 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/24 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 1.5 %

EDMONTON, ALBERTA

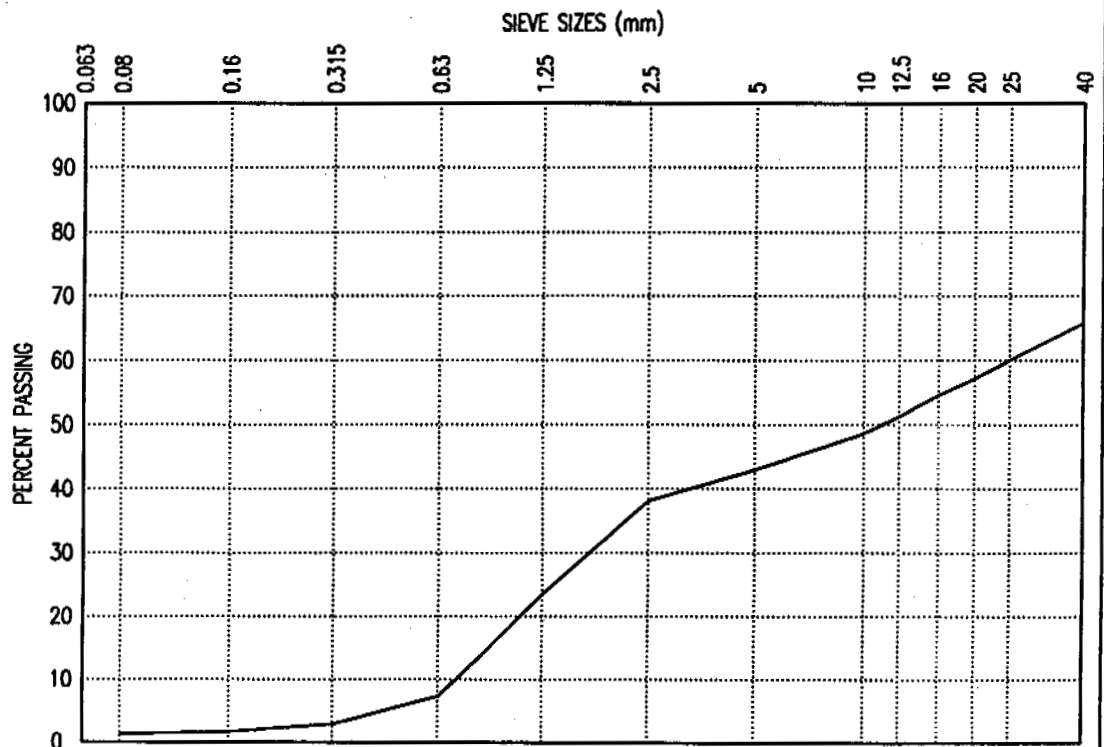
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: GRAVEL AND SAND, TRACE SILT, ORGANICS - BROWN.

Remarks:

Sieve	% Passing
80	87.3
50	67.5
40	65.8
25	60.1
20	57.2
16	54.6
12.5	51.3
10	48.7
5	43.0
2.5	38.2
1.25	23.5
0.63	7.2
0.315	2.9
0.16	1.7
0.08	1.3



Reviewed By:

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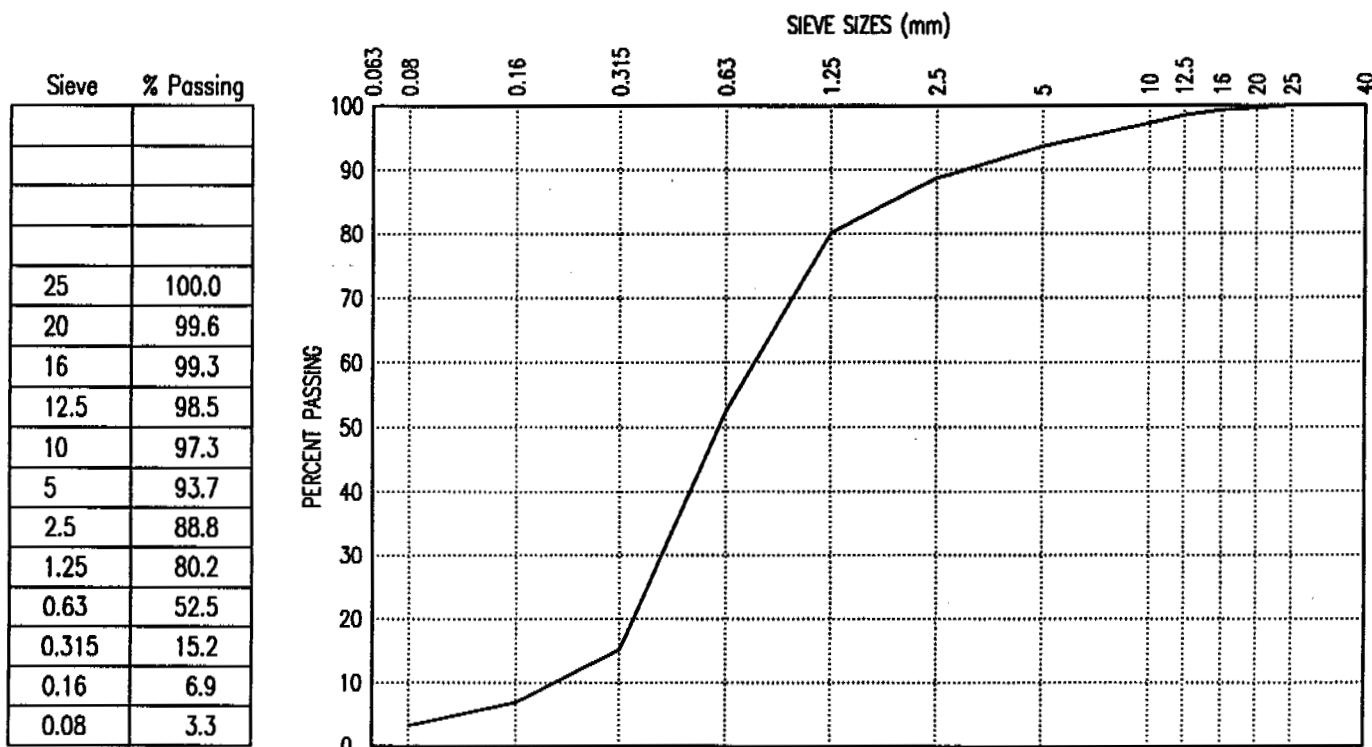
## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 23 Source #25Address: COMPONENT "C"Sample Location: UTM ZONE 12HAUL ROADSN. 7 401 601Project Number: 0101-11159E. 376 247Date Sampled: 93/07/15 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/24 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 4.6 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - DARK BROWN.Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

27A

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 22 Source #27

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 410 673

Project Number: 0101-11159

E. 372 332

Date Sampled: 93/07/15 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/24 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 2.3 %

EDMONTON, ALBERTA

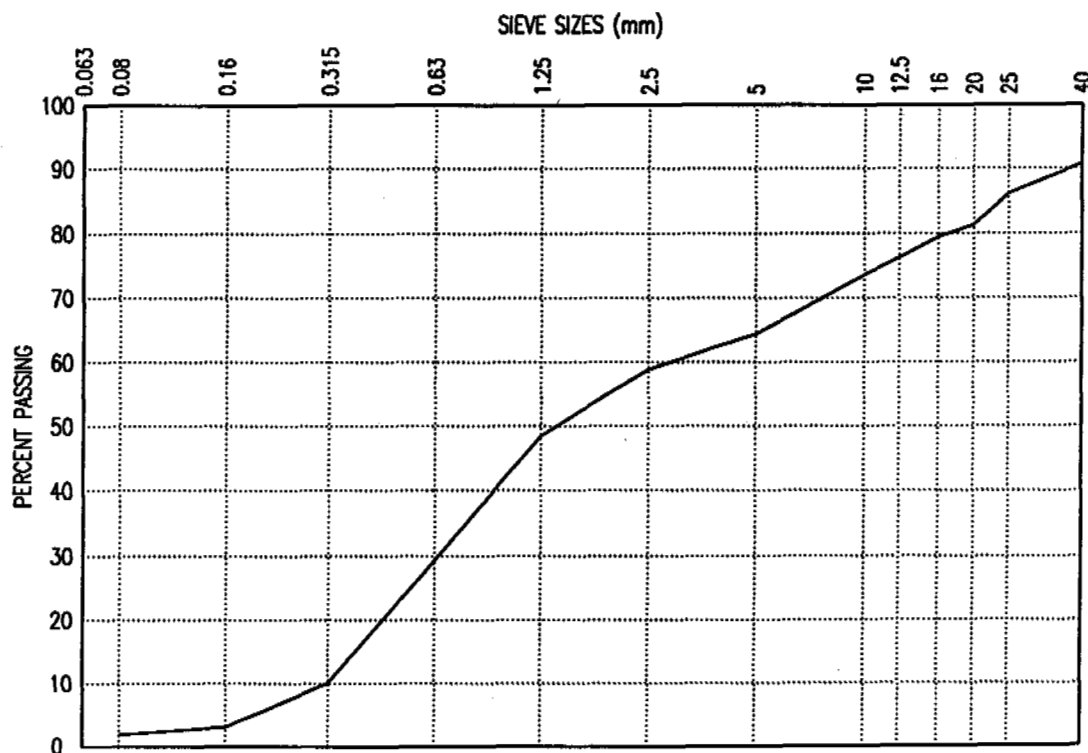
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS - BROWN.

Remarks:

Sieve	% Passing
80	100.0
50	94.9
40	90.7
25	86.2
20	81.3
16	79.4
12.5	76.3
10	73.5
5	64.3
2.5	58.8
1.25	48.5
0.63	29.4
0.315	10.1
0.16	3.1
0.08	1.9



Reviewed By:

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## AGGREGATE ANALYSIS REPORT

27B

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 21 Source #27

Address: COMPONENT "C"

Sample Location: UTM ZONE 12

HAUL ROADS

N. 7 415 622

Project Number: 0101-11159

E. 370 732

Date Sampled: 93/07/15 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/24 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 3.4 %

EDMONTON, ALBERTA

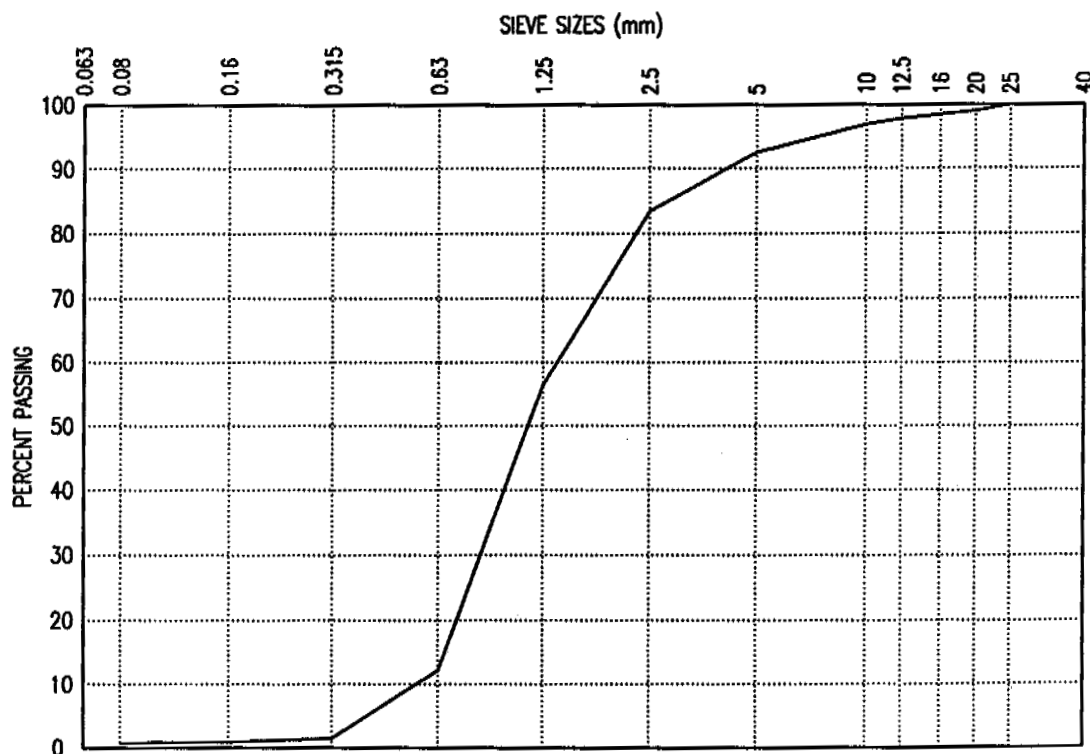
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - BROWN.

Remarks:

Sieve	% Passing
25	100.0
20	99.1
16	98.4
12.5	97.8
10	96.9
5	92.6
2.5	83.5
1.25	56.5
0.63	12.2
0.315	1.5
0.16	0.9
0.08	0.8



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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 20 Source #28

Address: COMPONENT "C"

Sample Location: UTM ZONE 11

HAUL ROADS

N. 7 424 220

Project Number: 0101-11159

E. 628 880

Date Sampled: 93/07/15 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/24 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 3.1 %

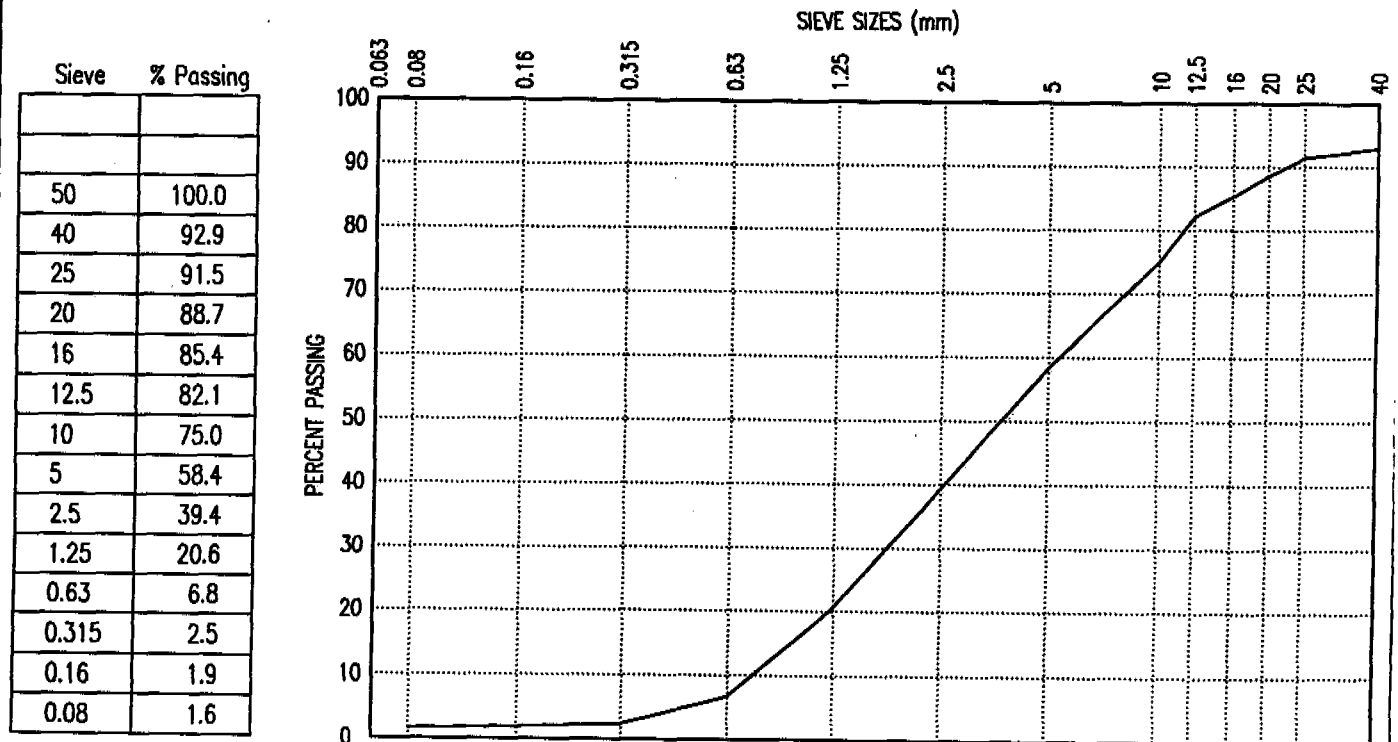
EDMONTON, ALBERTA

Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS - DARK BROWN

Remarks:



Reviewed By:

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 19 Source #31

Address: COMPONENT "C"

Sample Location: UTM ZONE 11

HAUL ROADS

N. 7 430 529

Project Number: 0101-11159

E. 626 217

Date Sampled: 93/07/15 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/23 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 2.0 %

EDMONTON, ALBERTA

Crushed Faces: Faces:

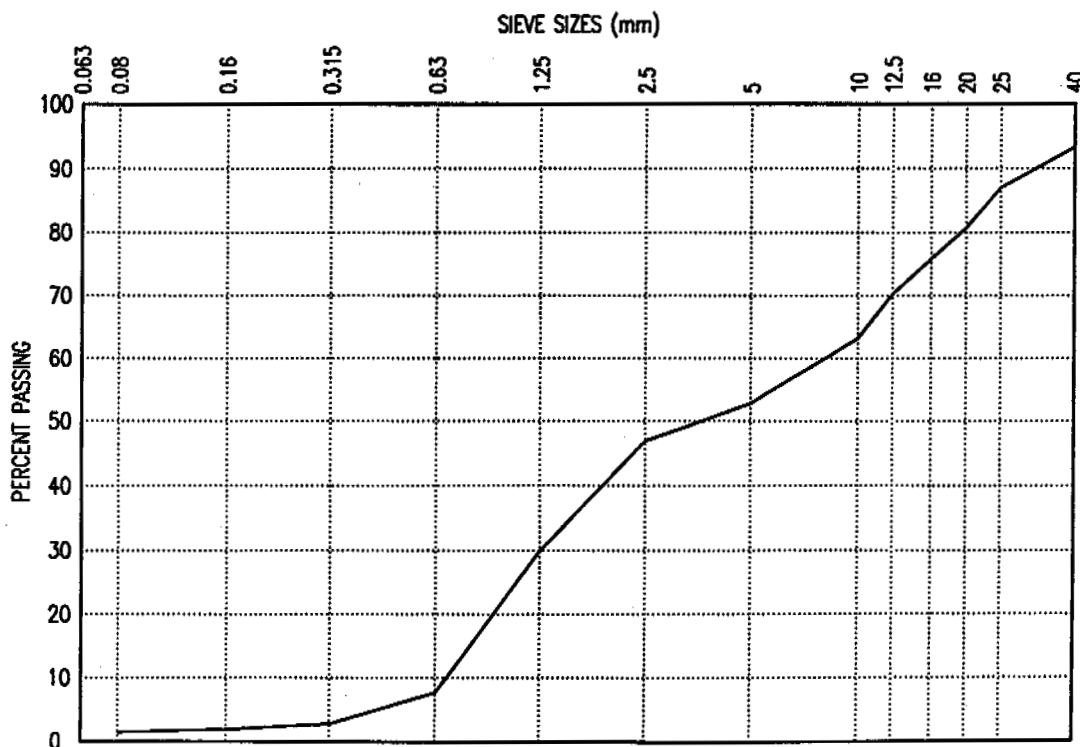
Attention: MR. K.J. HILL

Soil Description: SAND AND GRAVEL, TRACE SILT, ORGANICS

- DARK BROWN.

Remarks:

Sieve	% Passing
80	100.0
50	95.6
40	93.3
25	87.0
20	80.7
16	75.9
12.5	70.3
10	63.3
5	52.8
2.5	46.9
1.25	30.0
0.63	7.7
0.315	2.8
0.16	1.9
0.08	1.5



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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 17 Source #36Address: COMPONENT "C"Sample Location: UTM ZONE 11HAUL ROADSN. 7 444 978Project Number: 0101-11159E. 620 462Date Sampled: 93/07/15 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

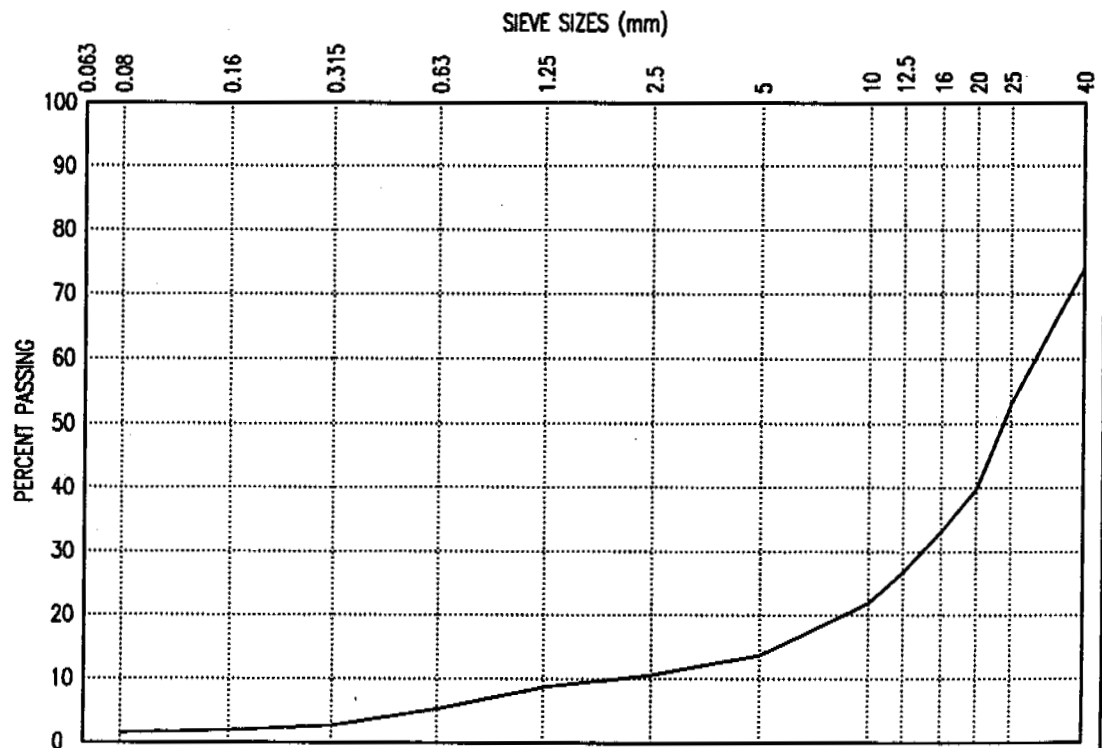
Client: METALL MINING CORPORATIONDate Tested: 93/07/23 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 1.5 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: GRAVEL, SOME SAND, TRACE SILT, ORGANICS- DARK BROWN.

Remarks: \_\_\_\_\_

Sieve	% Passing
80	100.0
50	85.9
40	73.8
25	53.1
20	39.9
16	33.2
12.5	26.8
10	21.9
5	13.7
2.5	10.6
1.25	8.7
0.63	5.3
0.315	2.7
0.16	1.9
0.08	1.5



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 16 Source #37Address: COMPONENT "C"Sample Location: UTM ZONE 11HAUL ROADSN. 7 448 848Project Number: 0101-11159E. 619 478Date Sampled: 93/07/15 By: MAV

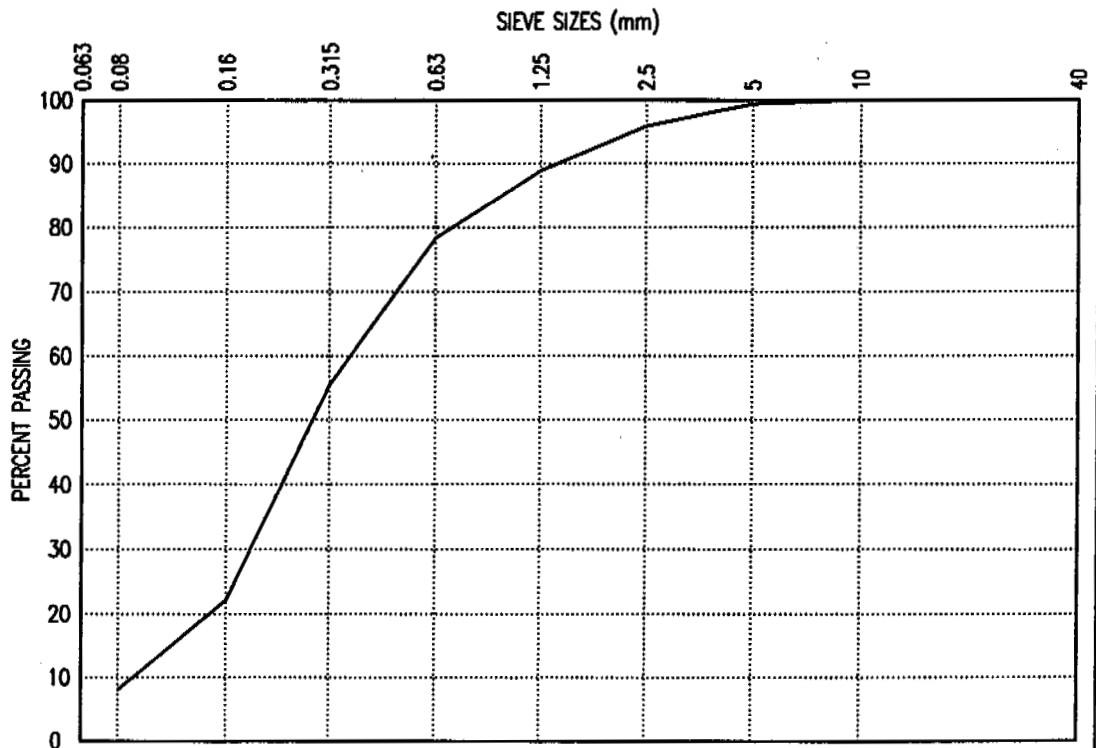
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/23 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 4.1 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - MEDIUM BROWN.Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sieve	% Passing
10	100.0
5	99.4
2.5	95.9
1.25	88.9
0.63	78.4
0.315	55.5
0.16	22.1
0.08	8.1



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 15 Source #38

Address: COMPONENT "C"

Sample Location: UTM ZONE 11

HAUL ROADS

N. 7 464 685

Project Number: 0101-11159

E. 612 418

Date Sampled: 93/07/15 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/23 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 1.6 %

EDMONTON, ALBERTA

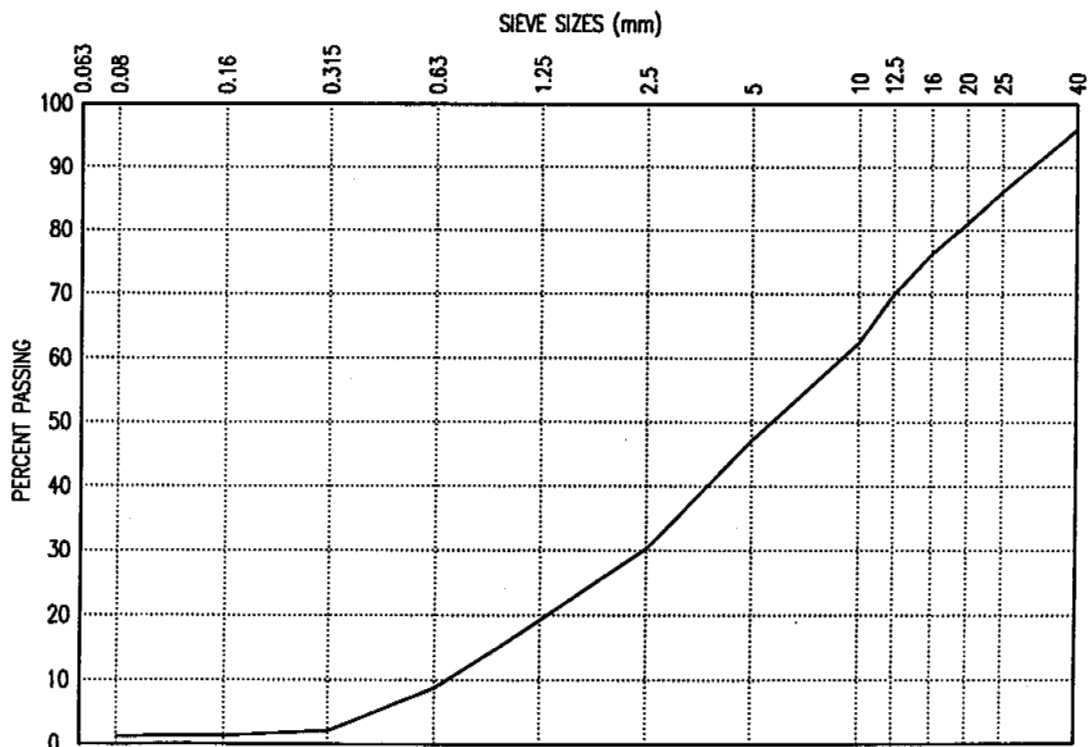
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: GRAVEL AND SAND, TRACE SILT, ORGANICS - DARK BROWN

Remarks:

Sieve	% Passing
50	100.0
40	96.1
25	86.2
20	81.0
16	76.2
12.5	69.8
10	62.5
5	47.2
2.5	30.3
1.25	19.2
0.63	8.8
0.315	2.1
0.16	1.3
0.08	1.2



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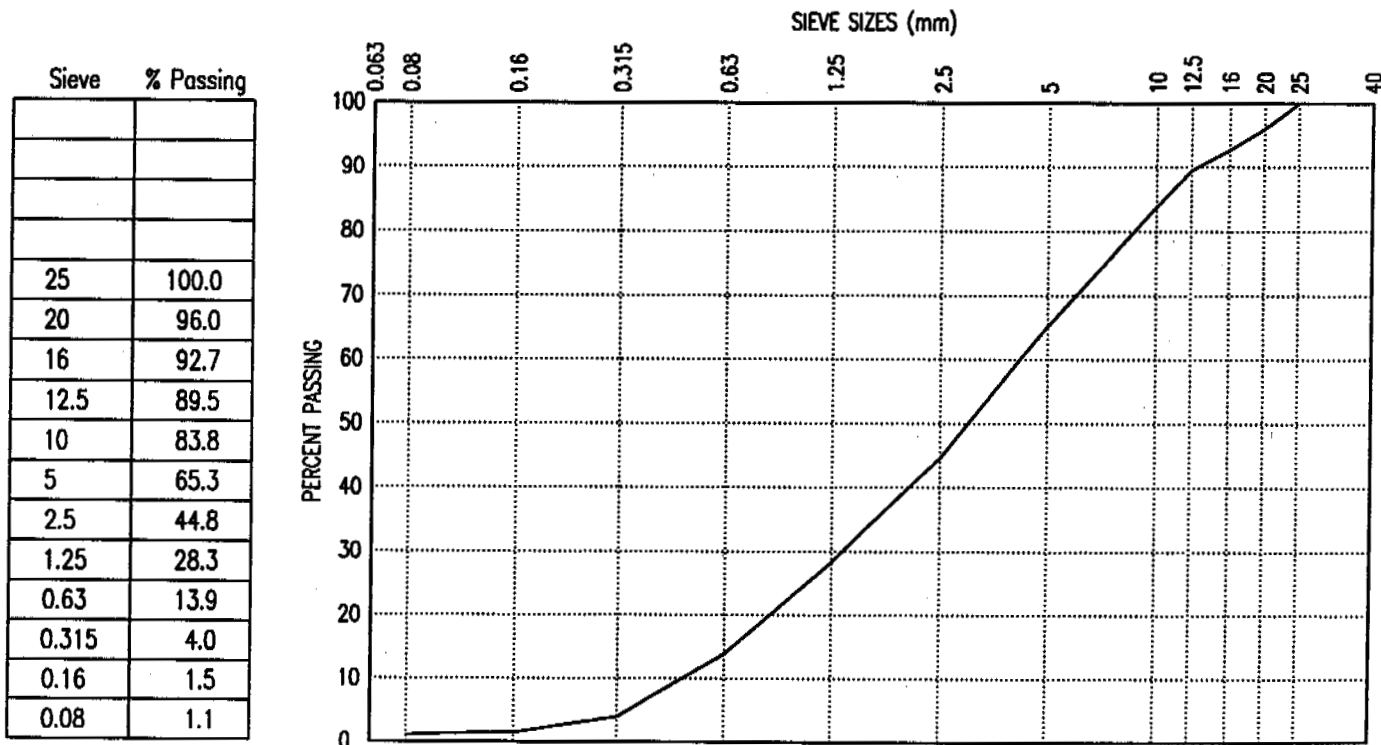
## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 6 Source #39Address: COMPONENT "C"Sample Location: UTM ZONE 11HAUL ROADSN. 7 470 985Project Number: 0101-11159E. 611 676Date Sampled: 93/07/12 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/22 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 1.6 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, GRAVELLY, TRACE SILT, ORGANICS- MEDIUM BROWN.Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 5 Source #43

Address: COMPONENT "C"

Sample Location: UTM ZONE 11

HAUL ROADS

N. 7 491 735

Project Number: 0101-11159

E. 600 036

Date Sampled: 93/07/12 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATION

Date Tested: 93/07/22 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 3.2 %

EDMONTON, ALBERTA

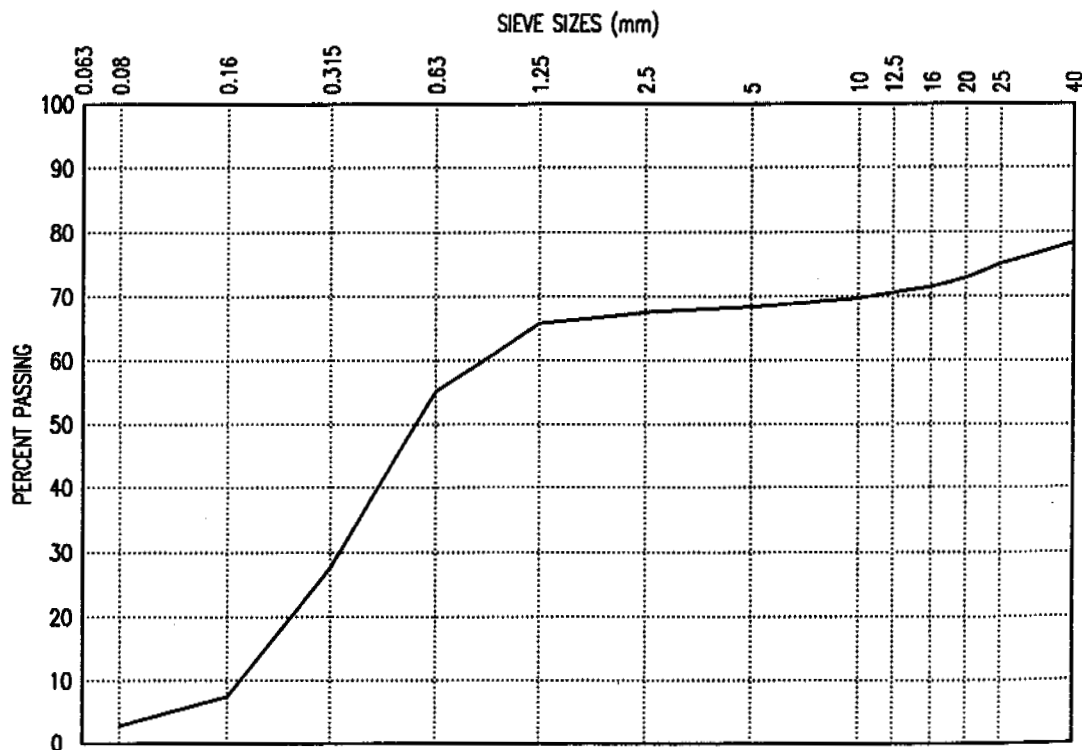
Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILL

Soil Description: SAND, GRAVELLY, TRACE SILT, ORGANICS - DARK BROWN.

Remarks: \_\_\_\_\_

Sieve	% Passing
80	100.0
50	80.9
40	78.4
25	75.1
20	72.9
16	71.5
12.5	70.6
10	69.7
5	68.4
2.5	67.5
1.25	65.8
0.63	55.2
0.315	27.6
0.16	7.5
0.08	2.8



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

45A

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 4 Source #45Address: COMPONENT "C"Sample Location: UTM ZONE 11HAUL ROADSN. 7 508 743Project Number: 0101-11159E. 603 800Date Sampled: 93/07/12 By: MAV

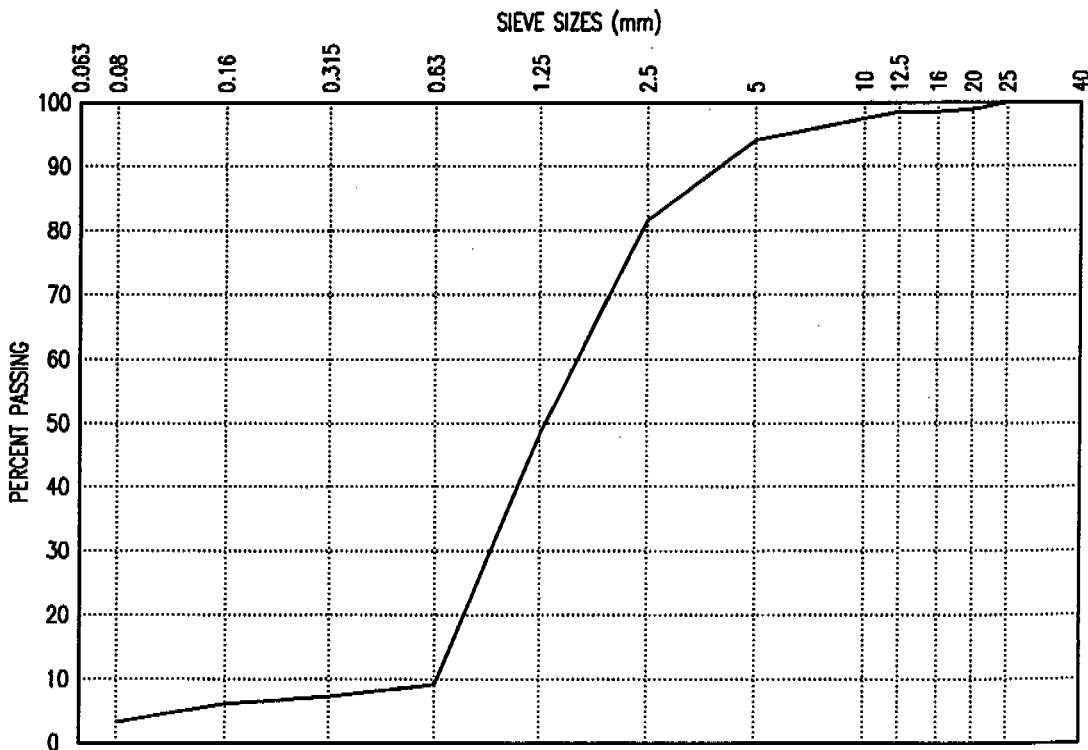
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/22 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 2.0 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: SAND, TRACE GRAVEL, SILT, ORGANICS - MEDIUM BROWN.Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sieve	% Passing
25	100.0
20	99.0
16	98.6
12.5	98.6
10	97.5
5	94.2
2.5	81.6
1.25	48.3
0.63	9.2
0.315	7.3
0.16	6.2
0.08	3.3



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

45B

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 2 Source #45Address: COMPONENT "C"Sample Location: UTM ZONE 11HAUL ROADSN. 7 508 095Project Number: 0101-11159E. 601 701Date Sampled: 93/07/12 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

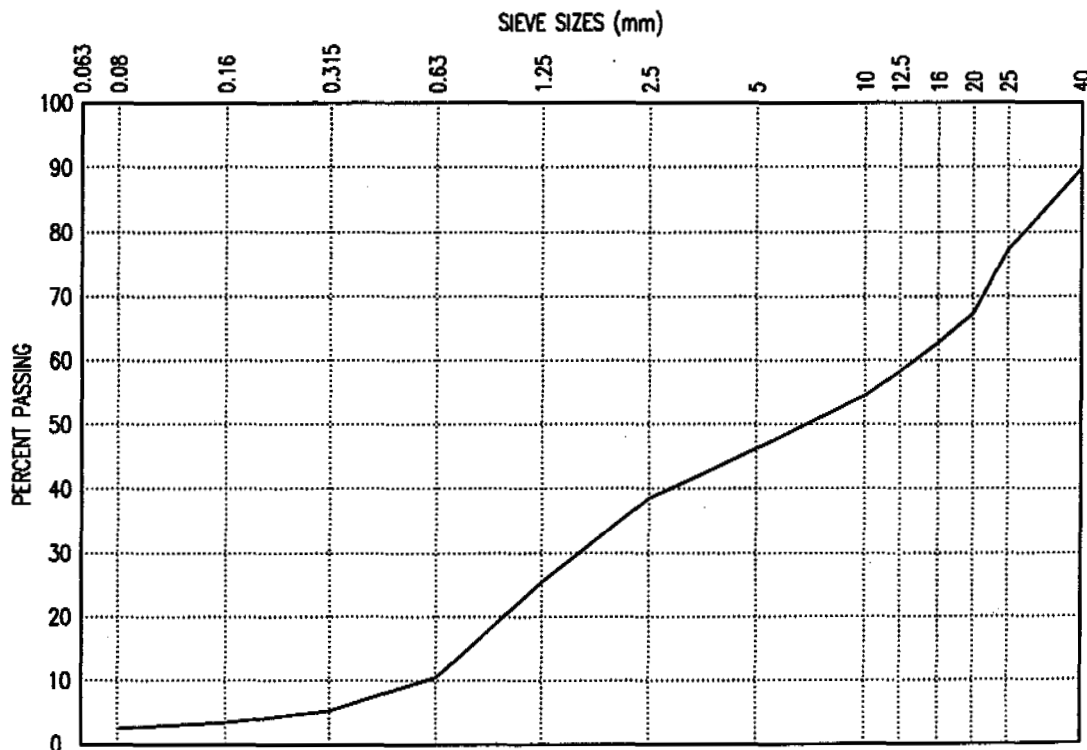
Client: METALL MINING CORPORATIONDate Tested: 93/07/22 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 1.8 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: GRAVEL AND SAND, TRACE SILT, ORGANICS- DARK BROWN.

Remarks: \_\_\_\_\_

Sieve	% Passing
80	100.0
50	94.4
40	89.7
25	77.3
20	67.3
16	62.8
12.5	58.4
10	54.5
5	46.2
2.5	38.5
1.25	25.5
0.63	10.5
0.315	5.3
0.16	3.4
0.08	2.5



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## AGGREGATE ANALYSIS REPORT

45C

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 3 Source #45

Address: COMPONENT "C"

Sample Location: UTM ZONE 11

HAUL ROADS

N. 7 508 725

Project Number: 0101-11159

E. 598 916

Date Sampled: 93/07/12 By: MAV

Time: Temp:

Client: METALL MINING CORPORATION

Date Tested: 93/07/22 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 1.7 %

EDMONTON, ALBERTA

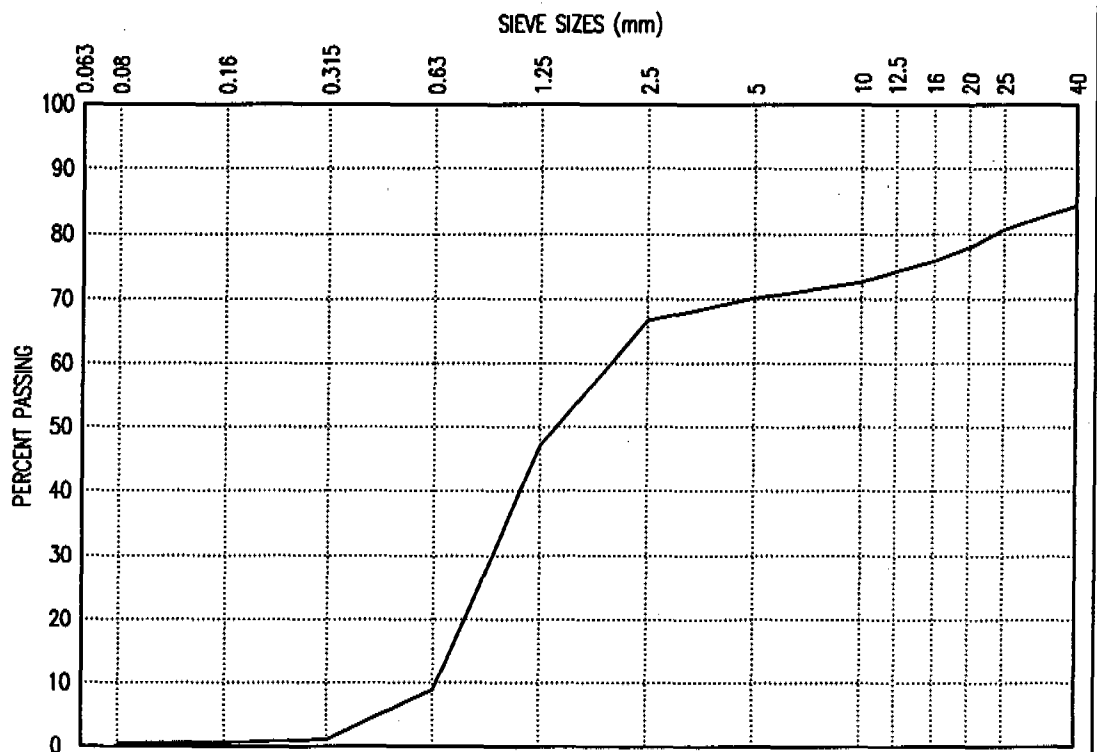
Crushed Faces: Faces:

Attention: MR. K.J. HILL

Soil Description: SAND, GRAVELLY, TRACE SILT, ORGANICS - DARK BROWN.

Remarks:

Sieve	% Passing
80	100.0
50	93.0
40	84.4
25	80.7
20	77.9
16	75.8
12.5	74.3
10	72.7
5	70.2
2.5	66.6
1.25	47.1
0.63	8.9
0.315	1.1
0.16	0.6
0.08	0.5



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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDYSample Number: 14 Source #47Address: COMPONENT "C"Sample Location: UTM ZONE 11HAUL ROADSN. 7 512 950Project Number: 0101-11159E. 601 625Date Sampled: 93/07/15 By: MAV

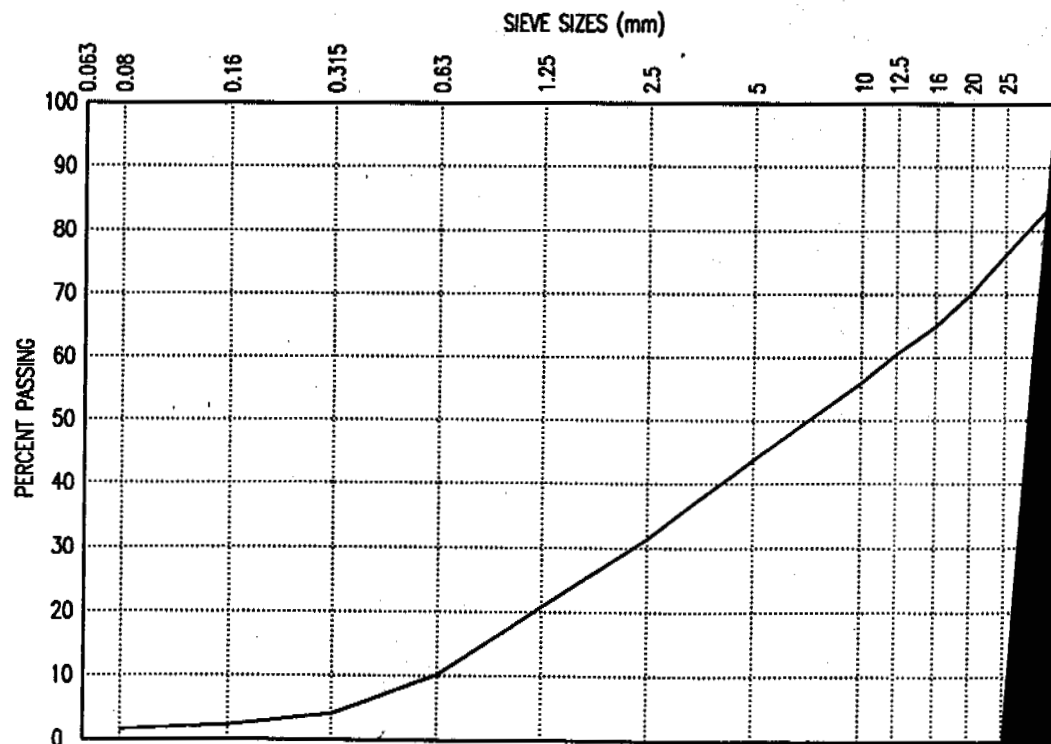
Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATIONDate Tested: 93/07/23 By: BL#105, 4208 - 97 STREETNatural Moisture Content: 3.3 %EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

Attention: MR. K.J. HILLSoil Description: GRAVEL AND SAND, TRACE SILT, ORGANICS - DARK BROWNRemarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sieve	% Passing
80	100.0
50	94.7
40	88.9
25	76.3
20	70.1
16	65.0
12.5	60.6
10	56.0
5	43.8
2.5	31.4
1.25	20.9
0.63	10.2
0.315	4.1
0.16	2.3
0.08	1.6



Reviewed By: \_\_\_\_\_

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## AGGREGATE ANALYSIS REPORT

Project: IZOK PROJECT FEASIBILITY STUDY

Sample Number: 1 Source #46

Address: COMPONENT "C"

Sample Location: UTM ZONE 11

HAUL ROADS

N. 7 510 062

Project Number: 0101-11159

E. 601 500

Date Sampled: 93/07/12 By: MAV

Time: \_\_\_\_\_ Temp: \_\_\_\_\_

Client: METALL MINING CORPORATION

Date Tested: 93/07/22 By: BL

#105, 4208 - 97 STREET

Natural Moisture Content: 2.5 %

EDMONTON, ALBERTA

Crushed Faces: \_\_\_\_\_ Faces: \_\_\_\_\_

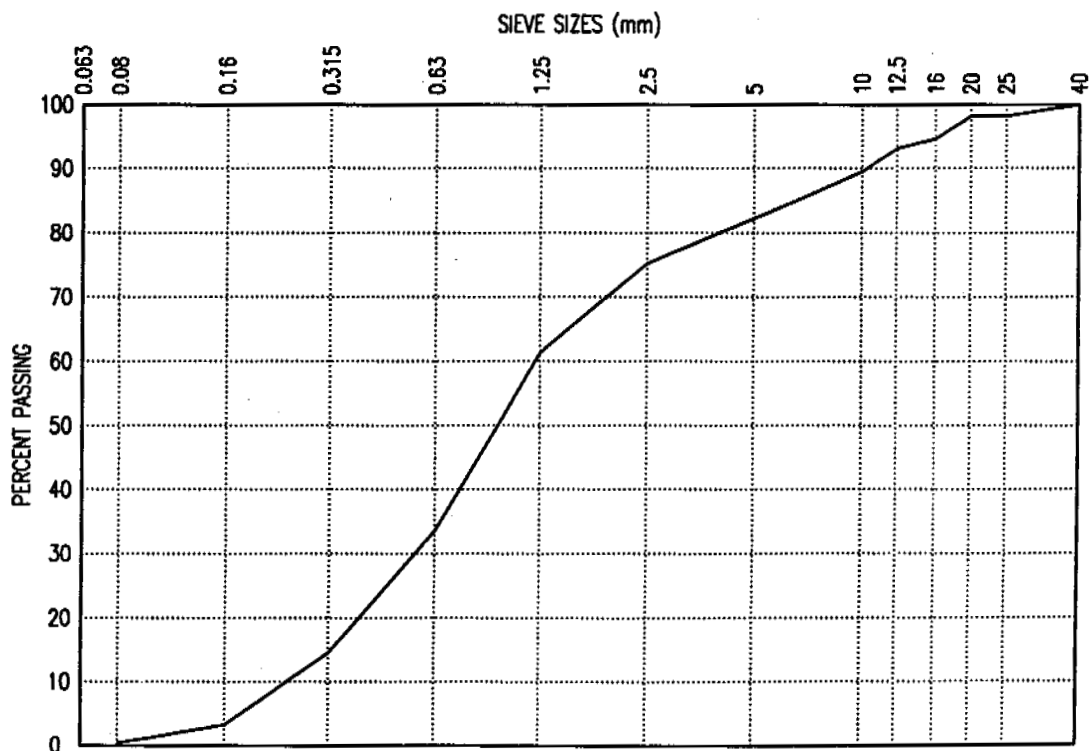
Attention: MR. K.J. HILL

Soil Description: SAND, SOME GRAVEL, TRACE SILT, ORGANICS

- DARK GREY.

Remarks: \_\_\_\_\_

Sieve	% Passing
40	100.0
25	98.2
20	98.2
16	94.6
12.5	93.2
10	89.5
5	82.2
2.5	75.3
1.25	61.4
0.63	33.6
0.315	14.6
0.16	3.3
0.08	0.4



Reviewed By: \_\_\_\_\_

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