Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Sand Bo	rrow	/ Are	ea Te	est Pit No:	TP-BA-13-	03	
Client	: Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, 1	NAD83):	688	8069	91 Pr	oject No:	VM00605E		
Contr	actor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	IAD83):	3896	695	El	evation (m): 1086		
SAM	PLE T			Grab		_					
BACK	(FILL	TYPE 🔀 Bentonite Chips 🔀 Bentonite G	rout Sentonite Pellets	Cem	ent	Gro	out 🔯 Drill Cuttings	s 🚉 Sa	nd	Slou	ıgh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE IYPE	SAMPLE NO	OT C	HER TES OMMENT	TS, S		ELEVATION (m)
- - - - - - - -		SAND Fine to medium grained, trace silt, trace angula surface weathering, loose to compact, some 1 is grained sand laminations spaced 1 to 10 mm at (In Situ) From 0.7 to 1.2 m: Increasing frequency of grained sand laminations spaced 1 to 10 mm at (In Situ)	mm dark grey to black layers part, light grey to brown, damp	of fine	■ ARI		Coordinates taken with 2012 LiDAR survey Test pit completed with excavator. Bucket is 1 m Gravel rock appears to orange oxidized surface s	n a tracked C wide, 1 yd³ c be a meta-s	Caterpillar 324D capacity, 5 teet	1.	- - - - -1085 - - -
- - - - - - - - - -		From 2.1 to 3.1 m: Lower frequency of dark o	coloured laminations.	<u> </u>	■ ARI	6S3 RD-02 -BULI	, K				- - - 1084 - - - -
- - - - - -						GS5 GS6					- - - -1083 - -
4		From 3.1 to 3.7 m: Increasing frequency of gi	ravel to 15%.		A R	2D-03 3SS7					- - - - - - - - - - - - - -
		SAND Fine to medium grained, trace silt, trace gravel, grey to black layers of fine grained sand lamina grey, frozen, Nbn, no visible ice crystals, moist (Permafrost)	itions spaced 1 to 10 mm apai		G	300	Soil temperature: -1°C Taken with a probe therm surface, retrieved in the 6 Below 4.4 m: Hard dig	nometer 10 c excavator bu	m into the sam		_ - - 1081 - -
	pool			Start Date	e: 20	13-09	9-05 8:45:00 AM	Logged By	y: S. Magnusso	on	
	M		AL PERSPECTIVE. IL FOCUS.				2013-09-05 11:00:00 AM	Reviewed	By: R. Wood		
		Engineering Local	L POCUS.	Completi	on De	epth:	5.20 m			Page	1 of 2

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Sand Borro	w Area	. Т	est Pit No: TP-BA	-13-03
Client	: Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, 1	NAD83): 6	880691	Р	roject No: VM006	05E
Contra	actor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83): 38	9695	E	levation (m): 1086	3
	PLE T		SPT (N)	Grab S	ample			
BACK	FILL	TYPE 🛮 Bentonite Chips 🔀 Bentonite Gr	out Bentonite Pellets	Cemer	nt Grout	Drill Cutting	s 👯 Sand	Slough
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP		SAMPLE TYPE	SAMPLE NO		THER TESTS, COMMENTS	ELEVATION (m)
- - - - - - - - - - - - - - - - - - -		END OF TEST PIT at 5.2 m Test pit refusal. Test pit sloughed. No free water observed. Test pit backfilled with excavated material.			ARD-04 GS9			- - - - - -1080 - - -
- - - - - - 7								- - 1079 - - - -
								- - -1078 - - - - - -
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PITLOG)								- -1077 - - - - - - - - - - - - - - - - - -
ZSEN -								-
N N								
05 M	_	Associated Engineering LOCAL				05 8:45:00 AM	Logged By: S. Mag	
7000	M	Associated Engineering GLOBA	IL PERSPECTIVE. FOCUS.			13-09-05 11:00:00 AM	Reviewed By: R. W	
5				Completion	υерτη: 5.	.ZU M		Page 2 of 2

Projec	ct: Mc	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Sand Bo	rrow	Are	ea Te	st Pit No: TP-B/	∖-13-04	
Client	: Gov	rernment of Yukon - AAM	Northing (UTM Zone 8, 1	NAD83):	688	3064	43 Pr	oject No: VM00	605E	
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	3896	316	Ele	evation (m): 108	7	
SAM	PLE T	YPE Z Shelby Tube Core	SPT (N)	Gral	Sar	mple	е			
BACK	FILL 7	「YPE ☑ Bentonite Chips 🄀 Bentonite G	rout Bentonite Pellets	Cen	ent (Gro	out 🔯 Drill Cuttings	🟥 Sand	Slou	ugh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	OTI Co	HER TESTS, OMMENTS		ELEVATION (m)
- - - - - - -		SAND AND GRAVEL Angular rock fragments to about 150 mm diame brown, dry to damp. (Rockfill) SAND Fine to medium grained, trace silt, trace angula surface weathering, loose to compact, some 1 is grained sand laminations spaced 1 to 10 mm a (In Situ)	r gravel to 75 mm diameter w	ith of fine		D-01	Coordinates taken with 2012 LiDAR survey. Test pit completed with excavator. Bucket is 1 m	a tracked Caterpilla	r 324D	- - - - - - 1086
- - - - - - - - - - - - - - - - - -					G RI	D-02 SS2				- - - - -1085 - - -
3						D-03 S3				- - - -1084 - - - -
VM006695 MI NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PTL LOG)		From 3.3 to 3.8 m: Increased frequency of gr From 3.8 to 5.3 m: Moist.	avel to 10%.		G 64-		M Soil temperature: 2°C. Taken with a probe therm surface, retrieved in the e Water level estimated befrom the excavator bucke	ometer 10 cm into th xcavator bucket. pased on moist soil s	e sample	- - - -1083 - - - -
NANSEN GEOTECH.GF3 14-						iS5				- - - -1082 - -
<u>S</u>	_						9-05 2:50:00 PM	Logged By: S. Ma	-	
		nec Associated Engineering LOCA	AL PERSPECTIVE. L FOCUS.				2013-09-05 4:30:00 PM	Reviewed By: R. \		1 1
5 •				Completi	on De	epth:	5.50 M		Page	1 of 2

Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Sand B	orro	w Ar	rea	Test Pi	it No: TP-BA-13	-04	
		vernment of Yukon - AAM	Northing (UTM Zone 8,					Project	t No: VM00605E	Ξ	
Contra	ctor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	IAD83):	38	9616	6	Elevati	on (m): 1087		
SAMF	LE T	YPE Shelby Tube Core	SPT (N)	Gra	ıb S	ampl	le				
BACK	FILL	TYPE 🛮 Bentonite Chips 🔀 Bentonite Gr	out Bentonite Pellets	Cei	ner	nt Gro	out 🔯 Drill Cuttin	ıgs 🗓	<u></u> Sand	· Slou	ıgh
DEРТН (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	C	OTHER COMM	TESTS, //ENTS		ELEVATION (m)
- - - - - - - - - -		SAND Fine to medium grained, trace silt, trace gravel, no visible ice crystals, moist when thawed. (Permafrost) END OF TEST PIT at 5.5 m Test pit has sloughed to a circular shape, 9 m d Free water is slowly ponding on the bottom of th Test pit backfilled with excavated material.	iameter.	n, Nbn,		GS6	Soil temperature: 1° Taken with a probe the surface, retrieved in th From 5.3 to 5.5 m: h marks visible in soil.	ermometo e excava	er 10 cm into the sar ator bucket.	nple	
- - - - - - - - 7											- 1080 - - -
											- - - - - - - - -
02-27 02:34 PM (TEST PIT LOG)											- - - - - - - - - - - - - - - - - - -
WM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PIT LOG)				Start Da	ate:	2013-(09-05 2:50:00 PM	Log	gged By: S. Magnus:	son	_ _ _ _1077 _ _ _
9605		Associated Engineering LOCAL	AL PERSPECTIVE.				2013-09-05 4:30:00 PM		viewed By: R. Wood	3011	
		Engineering LOCAL	FOCUS.				: 5.50 m		•	Page	2 of 2

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Sand Bo	row A	rea	Test	t Pit No: TP-BA-1	3-05	
Client	: Gov	rernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	6880	702	Proj	ect No: VM00605	iΕ	
Contr	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83): 3	38979	8	Elev	vation (m): 1079		
SAM	PLE T	YPE Shelby Tube Core	SPT (N)	Grab	Sam	ple				
BACK	(FILL 1	「YPE ☑ Bentonite Chips 🔯 Bentonite Gr	out Bentonite Pellets	Cem	ent Gr	rout 🔯 Drill Cutti	ngs	Sand	SI	ough
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE NO		OTHI	ER TESTS, MMENTS		ELEVATION (m)
-		SAND Fine to medium grained, trace silt, trace angular surface weathering, loose to compact, some 1 n grained sand laminations spaced 1 to 10 mm ap odor. (In Situ)	nm dark grey to black layers o	of fine		2012 LiDAR survey Test pit completed	with a	handheld GPS. Eleva a tracked Caterpillar 32 de, 1 yd³ capacity, 5 te	4D	- - - -1079 - - -
1 - - - - - - -					RD-GS1					- - - -1078 - - -
2 - - - - - - -					ARD-(GS2					- - - - - - - - -
M (TEST PITLOG)		From 3.0 to 3.8 m: Moist, decreased amount From 3.8 to 5.3 m: wet to saturated.	of gravel.		S3-BL	JI.K Water level estima pit at 3.0 m depth.	ted ba	ised on water seeping i	into the test	- - - -1076 - - -
0M006605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PITLOG)		From 3.0 to 3.5 m. wet to Saturated.		=	GS4					- - - - - -1075 - - -
M S	<u> </u>			Start Date	: 2013	-09-05 11:20:00 AM		Logged By: S. Magnu		
10060		Associated Engineering LOCAL	AL PERSPECTIVE.			: 2013-09-05 2:10:00 PI	М	Reviewed By: R. Woo		
≱ □	71 T	Engineering Local	rocus.	Completion	n Dept	h: 5.30 m			Pag	je 1 of 2

	Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Sand Borro	ow Are	ea	Test Pit No: TP-B	A-13-05
	Client:	Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83): 6	88070)2	Project No: VM00	605E
	Contra	actor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83): 38	39798	1	Elevation (m): 107	79
	SAMF	PLE T	YPE Shelby Tube Core	SPT (N)	Grab S	Sample	е		
	BACK	FILL	TYPE 🛮 Bentonite Chips 🔀 Bentonite Gr	out Bentonite Pellets	Cemer	nt Grou	ut 🔯 Drill Cuttin	gs 🔛 Sand	Slough
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP		SAMPLE TYPE	SAMPLE NO	C	THER TESTS, COMMENTS	ELEVATION (m)
- - - - - - -	-6		END OF TESTPIT at 5.3 m Hole sloughed in to circular shape at 10 m diam Free water slowly seeping in at 3.0 m depth. Test pit backfilled with excavated material.	eter.		ARD-04 GS5	Hard digging at 5.3 ı	n.	- - - - 1074 - - - - -
-	-7								- - - - 1073 - - - - - -
- - - - -	-8								- - -1072 - - - - -
:34 PM (TEST PIT LOG)	-9								- - - -1071 - - - - -
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PIT LOG)					Start Date:	2013-09	9-05 11:20:00 AM	Logged By: S. Ma	- - - - - - - - - - - - - - - - - - -
0900	2		Associated GLOBAL DOCAL	L PERSPECTIVE.			2013-09-05 2:10:00 PM		Wood
₩.	0		Engineering LOCAL	FOCUS.	Completion	Depth:	5.30 m		Page 2 of 2

Proje	ect: Mo	ount Nansen 2013 Site Investigation	Area: "Shale" Borrow A	rea			Γ	est Pit No: TP-l	BA-13-06		
Clien	t: Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	6881	1040	F	Project No: VM0	0605E		
Cont	ractor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38969	94	E	Elevation (m): 1	142		
SAM	IPLE T	YPE Shelby Tube Core	SPT (N)	Grab	Sam	nple					
BAC	KFILL 7	ΓΥΡΕ ☑ Bentonite Chips ☒ Bentonite Gro	out Bentonite Pellets	Cem	ent G	Grout	: Drill Cutting	ıs 🟥 Sand		Sloug	gh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPT	TION	T (1)	SAMPLE ITPE SAMPLE NO		(THER TESTS, COMMENTS			ELEVATION (m)
- - - - - - - - - 1		BEDROCK Fractured, variably oxided from surficial staining to meta-sedimentary rock, grey to brown to orange, (In Situ) END OF TEST PIT at 1.3 m	to crumbling in your hand, dry to damp.		⊒ARD- G\$1-B	20 ex: str 70 the	Coordinates taken wi 212 LiDAR survey. Test pit completed w ccavator. Bucket is 1 r Test pit longitudinal a rike orientation of the 2° to the northwest. The e rippability of the bed	th a tracked Caterpil n wide, 1 yd³ capacit ixis orientated paralli bedrock. Rock is dip ne purpose of this tes	llar 324D y, 5 teeth. el to the prima ping approxim	ry ately	-1141 1141
- - - - - - - - - -		END OF TEST PIT at 1.3 m Hit refusal in test pit. No sloughing. No free water encountered. Test pit backfilled with excavated material.								- - - - - - -	1140
- - - - -3 -										- - - - -	- -1139 - -
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PIT LOG)										- - - - - - - - - -	-1138 -1138 -1
MT NANSEN GEO				Start Date	· 2013	3_00_0	08 11:15:00 AM	Logged By: S. M	Mannusson	-	- -1137 -
20905	\~	Associated GLOBAL Fingineering LOCAL F	PERSPECTIVE.				13-09-08 11:50:00 AM				
VMOC	<i>]] </i>	Associated Engineering LOCAL F	OCUS.	Completio						Page 1	1 of 1

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: "Shale" Borrow A	rea			-	Test Pi	t No: TP-BA-1	3-07	
Client	: Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, I	NAD83):	68	38104	45 F	Project	No: VM00605	Ε	
Contr	actor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38	9739		Elevati	on (m): 1140		
SAM	PLE T	YPE Shelby Tube Core	SPT (N)	Gra	b S	ampl	e				
BACK	FILL	TYPE 🛮 Bentonite Chips 🔀 Bentonite Gr	out Bentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cutting	gs 🗜	: ∴ Sand	Slou	ıgh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	0	THER COMM	TESTS, MENTS		ELEVATION (m)
- - - - - - - -	454444444444444444444444444444444444444	SAND AND GRAVEL AND COBBLES Scree rock overlying bedrock, angular particles oxidized, brown, dry to damp. The south side of highly weathered, while the north side of the tes weathered. (In Situ) BEDROCK Weathered bedrock, variably weathered from br crumbles in your hand to a hard, grey, friable me (In Situ)	the test pit is bright orange a t pit is competant and slightly ight orange colour where it	ind		DD 04	Coordinates taken w 2012 LiDAR survey. Test pit completed w excavator. Bucket is 1 Test pit longitudinal s strike of the beds, dippi Re-orientated the exca the bedrock, but reache	vith a tra m wide, axis orie ing abou vator to	cked Caterpillar 32: 1 yd³ capacity, 5 te entated about 45° to at 70° to the northw dig perpendicular to	4D eeth. o the general rest.	- - - -1140 - - -
- - - - - -		END OF TEST PIT at 1.2 m Test pit hit refusal. No free water observed. Test pit backfilled with excavated material.					After TP-BA-13-07 o base of the bedrock ou exploiting the fractures rip the bedrock into pie wide x 2 m high, the ex the rock in 10 minutes.	itcrop and in the recession to the contract of	d ripped at the vert ock, the excavator v o 300 mm. An area	ical face. By was able to about 8 m	
-2 - - - - - - - -											- - - -1138 - - -
- - -											- - - -1137 - - -
M000605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PITLOG)								1.			- - - -1136 - - -
005 M							9-08 9:50:00 AM		ged By: S. Magnus		
MOOK	M	nec Associated Engineering LOCAL	IL PERSPECTIVE. FOCUS.	Complet			2013-09-08 11:00:00 AM · 1 20 m	vi Re\	viewed By: R. Woo		1 of 1
> _	-= =			Oomplet	J I I U	Jupui.	. 1.40 111			raye	1 01 1

	Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: "Shale" Borrow A	rea				Test	Pit No: TP-BA	\-13-08		
	Client:	Gov	rernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	3811	58	Proje	ect No: VM006	605E		
	Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N.	AD83):	38	9913	1	Elev	ation (m): 114	8		
	SAME	PLE T	YPE Shelby Tube Tore	SPT (N)	Gra	b S	ampl	le					
	BACK	FILL 1	「YPE ☑ Bentonite Chips 🔯 Bentonite Gr	out Bentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cuttin	ngs	Sand Sand		Slo	ugh
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	C		ER TESTS, MMENTS			ELEVATION (m)
-	1		BEDROCK Variably weathered meta-sedimentary rock. Inta be broken with 2 hits of a rock hammer. Weathe oxidized and have phyllite/schist alteration and 1 the rock. Dry. (In Situ)	red areas are orange to red,				Coordinates taken v 2012 LiDAR survey. Test pit completed v excavator. Bucket is 1 Rippability test in th facing uphill on a slop parallel to the major st	with a m wid ne shal e abou	tracked Caterpillar de, 1 yd³ capacity, le borrow area. Th at 4H:1V, digging i	r 324D 5 teeth. e excavato	or is	- - - - -1147 - -
-			END OF TEST PIT at 1.4 m Test pit hit refusal. No free water observed. Test pit backfilled with excavated material.					With the excavator is more rippable where into the face of the roo	e the e	excavator is digging	g more ve	rtically	- - - -1146 - - - - -
-	-3												- - - - - - - - - -
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PIT LOG)	-4 -4												- - -1144 - - - -
MT NANSEN GEOTE					Start Da	te: 2	2013-0	09-08 2:20:00 PM	1	_ogged By: S. Ma	gnusson		- - 1143 - -
0605	7		Associated GLOBA Engineering GLOBA	L PERSPECTIVE.				2013-09-08 3:00:00 PM		Reviewed By: R. V			
VMO	O		Associated Engineering GLOBAL LOCAL	FOCUS.	Complet							Page	1 of 1

Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Ве	ach	-	Test I	Pit No: TP-T-13-01		
Client:	Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, I	VAD83):	6	8807	00 0	Proje	ct No: VM00605E		
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38	9198	1	Eleva	ation (m): 1098		
SAME	PLE T	YPE Shelby Tube Core	SPT (N)	Gra	b S	ampl	le				
BACK	FILL T	「YPE ☑ Bentonite Chips 🔀 Bentonite G	out Bentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cutting	gs	Sand	Slough	1
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	0	THE	R TESTS, IMENTS		ELEVATION (m)
- - - - - - - -1 -		SAND AND SILT Fine to medium grained sand, loose to compact brown, wet, 5 to 20 cm layers of tailings slimes (Tailings) SILT AND SAND Fine to medium grained sand, compact, slightly damp to moist (Tailings)	nterbedded.	ange,		GS2	2012 LiDAR survey Test pit completed wexcavator. Bucket is 1 The tailings surface not very stable for the elevation (about 10 to 3 one pass with the exca around results in major unstuck. Lower lying ar	with a t m wide in the excave 30 cm) avator, r ruttino reas ar re soft	nandheld GPS. Elevation racked Caterpillar 324D e, 1 yd² capacity, 5 teeth. northwest portion of the ator. Local areas slightly h with vegetation are stab multiple passing or turning and requires the bucket re stained red on surface, operator not comfortable.	FSF is - nigher in - le for - ng - to get - and -1	1097
- - - - <u>▼</u>		GRAVEL				ARD1	Below 2.1 m: water	poolinį	g in the test pit.	- - -	1096
- - - -		Some fine to medium grained sand, angular to compact, grey, saturated to free water, with roomm diameter. (In Situ) END OF TESTPIT at 2.7 m	50 mm diameter, trace silt, elets and abundant cobbles to			GS3 SS4Bul	Water level approxin pit.	nated	based on water seeping i	-	1095
WM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PIT LOG)		Test pit is sloughing. Water pooling into the test pit quickly. Test pit backfilled with excavated material.								- - - - - - - - - - - - - - - - - - -	1094
ANSE										'	. 550
ž -				04-4-5		2042	00.07.40.00.00.444		anned Dr. O.M	<u> </u>	
e05 N	_						09-07 10:00:00 AM 2013-09-07 11:15:00 AM		ogged By: S. Magnussor leviewed By: R. Wood	1	
DOM/		Pec Associated Engineering LOCAL	AL PERSPECTIVE. FOCUS.	Complet					onomou by. IV. Wood	Page 1 o	of 1

Client: Government of Yukon - AAM Northing (UTM Zone 8, NAD83): 6880706 Project No: VM00605E Contractor & Method: Boreal Engineering, Test Pit Easting (UTM Zone 8, NAD83): 389263 Elevation (m): 1097	
SAMPLE TYPE Shelby Tube Core SPT (N)	
BACKFILL TYPE Bentonite Chips Bentonite Grout Bentonite Pellets Cement Grout Drill Cuttings Sand	Slough
SOIL SOIL SOUR SAMPLE TYPE SOUR SAMPLE TYPE SOUR SOUR SAMPLE TYPE SOUR SOUR SOUR SOUR SOUR SOUR SOUR SOUR	ELEVATION (m)
SAND Fine to medium grained, trace silt, loose to compact, light brown to orange, damp to moist. (Tailings) Coordinates taken with a handheld GPS. Elevation of 2012 LiDAR survey. Test pit completed with a tracked Caterpillar 324D excavator. Bucket is 1 m wide, 1 yd³ capacity, 5 teeth. The tailings surface in the northwest portion of the T not very stable for the excavator. Local areas slightly helevation (about 10 to 30 cm) with vegetation are stable one pass with the excavator, multiple passing or turning around results in major rutting and requires the bucket unstuck. Lower lying areas are stained red on surface a have little vegetation are soft, operator not comfortable the excavator on these areas.	F is — 1097 for — o get — valking —
SILT trace fine grained sand, soft to firm, slightly stratified grain sizes, grey, moist to wet. (Tailings) SILT Test pit is standing vertically from 0.0 to 2.5 m, buck wet Water level based on seepage observed into the test completion Soil may be slightly plastic, can roll soil into a 2 mm worm. Striking palm of hand holding a ball of soil result water bleeding out (mostly silt). From 1.6 to 2.5 m: brown.	pit at
Water seeping in approximately 0.5 litre/second Most of the seepage is from the north side of the tes ORGANICS Loose to compact, black, moist, with rootlets, smells of decaying vegetation. (In Situ) SAND Fine to medium grained, trace to some silt, trace 1 to 5 mm laminations of organics, compact, grey, moist.	pit - - - - - - - - - -
L Situ) (In Situ)	- - - -1094 - - - -
GRAVEL AND SAND Trace silt, angular gravel particles to about 50 mm diameter, loose to compact, trace organic laminations to 10 mm, grey, free water. (In Situ) Start Date: 2013-09-07 11:40:00 AM	
Start Date: 2013-09-07 11:40:00 AM Logged By: S. Magnusson	
Start Date: 2013-09-07 11:40:00 AM Logged By: S. Magnusson Completion Date: 2013-09-07 2:00:00 PM Reviewed By: R. Wood	
Associated Engineering GLOBAL PERSPECTIVE. LOCAL POCUS. Completion Date: 2013-09-07 2:00:00 PM Reviewed By: R. Wood Completion Depth: 4.80 m	Page 1 of 2

	Projec	t: M	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Bea	ach	1	est Pit No: TP-T-	13-02	
	Client:	Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	380706	6 F	Project No: VM006	605E	
	Contra	ctor	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N.	AD83):	389	9263	E	Elevation (m): 109	7	
	SAMF	LE T	YPE Shelby Tube Tore	SPT (N)	Gral	o Sa	ample				
Ì			TYPE Bentonite Chips Bentonite Gr						gs 👯 Sand	Slo	ugh
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP				SAMPLE NO	0	THER TESTS, COMMENTS		ELEVATION (m)
	-		END OF TEST PIT at 4.8 m Sides sloughing in. At completion, circular shaped on surface, 7.0 m Water observed seeping in below 2.5 m, and at tailings). Test pit backfilled with excavated material.	i diameter. 0.9 m (top of the fine grained	I						- - -1092 - - -
	6 7										
	-										- - - - - - - - - -
PM (TEST PIT LOG)											_ - - -1089 - - - -
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PIT LOG)	-9 - - - - - -				0.10		042.00	07.44.40.00 214	Thomas ou		- - - -1088 - - - -
605 N	_	_						07 11:40:00 AM 113-09-07 2:00:00 PM	Logged By: S. Mag Reviewed By: R. V		
/W00	4		Associated Engineering LOCAL	L PERSPECTIVE. FOCUS.	Completi				I TOVIEWEU Dy. Pt. V		2 of 2
	_				p 24					90	

Pro	ject:	Mc	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Bea	ach		Test	Pit No: TP-T-	13-04		
Cli	ent:	Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	8806	83	Proje	ect No: VM006	605E		
Co	ntrac	ctor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N.	AD83):	38	9415	j	Elev	ation (m): 109	7		
SA	MPI	ET	YPE Shelby Tube Core	SPT (N)	Gral	s S	ampl	le					
ВА	CKF	ILL 7	TYPE ☑ Bentonite Chips 🔯 Bentonite Gr	out Bentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cuttir	ngs	Sand Sand	[.	Slo	ugh
(m)		SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	(ER TESTS, MMENTS	_		ELEVATION (m)
- - - - - - - - - -	<u> </u>		SAND AND SILT Fine grained, compact, laminated 5 to 20 mm this brown to orange, damp. (Tailings)	ick with slightly finer grained		6	S1-BUL		with a m wiv s stab eral p	tracked Caterpillal de, 1 yd³ capacity, le for the excavato asses. Dry loose si	324D 5 teeth. r to traffic and tailing	on. is on	- - - - - - - - - - - - - - - - - - -
- - - -2 - - -			SILT Some sand, trace to some clay, soft to firm, non-layers are an olive-yellow-tan colour finer graine grained sand interbedded in 5 to 30 cm thick lay (Tailings)	d material. Some fine to med	e ium		GS2 GS3	Water level based of free water noted.	on san	npies retrieved from	n test pit.	NO	- - - - - - - - - - - - - - - -
- - -3 -						G	\$5-BUI	.K					- - -1094 - - -
MM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PIT LOG)			SAND Fine to medium grained, silty, trace organics, loc damp to moist, smells of decaying vegetation. (In Situ)	ose to compact, black to grey	,		ARD1 GS6	From 4.9 to 5.2 m:	hard c	ligging.			- - - - - - - - - - - - - - - - - - -
5 MT					Start Dat	e: 2	2013-0	09-06 4:30:00 PM		Logged By: S. Mag			1
09001	2	M	nec Associated Engineering LOCAL	L PERSPECTIVE.				2013-09-06 6:15:00 PN	1	Reviewed By: R. V	Vood		
	J		Engineering Local	70.03.	Completi	on [Depth:	: 5.20 m				Page	1 of 2

	Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Be	ach		Test	Pit No: TP-T	-13-04		
	Client:	Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	8806	83	Proje	ect No: VM00	605E		
	Contra	actor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N/	AD83):	38	9415		Elev	ation (m): 109	97		
	SAMF			SPT (N)	Gra	b S	ampl	le					
	BACK	FILL	「YPE ☑ Bentonite Chips 🔯 Bentonite Gro	out Bentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cuttir	ngs	Sand Sand		Slo	ugh
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPT	ION		SAMPLE TYPE	SAMPLE NO		OTHE	ER TESTS, MMENTS			ELEVATION (m)
VM00805 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PIT LOG)			SAND Fine to medium grained, some gravel to 50 mm of dense, grey, moist. (In Situ) (continued) END OF TEST PIT at 5.2 m Test pit is sloughing in. No freewater observed. Test pit left open overnight to assess stand up pe				ARD2 GS7	Soil temperature: 1 Taken with a probe the surface, retrieved in the Test pit left open over Did not enlarge in some side sloughing in Water ponding to 2 Wet zone of seepages surface The surrounding taid deep from the top of the top	ermonne exc night the size on .3 m dige 2.0 ilings phe tes	neter 10 cm into the avator bucket. o assess stand up surface (6 m widepth with yellow for 2.3 m depth at boond is 8 to 12 m pit.	ne sample o performa e) oam on su oove the w	ance urface vater	
ANSE													-1087
Ž					Ctort D	to: 0	2042.0	00 06 4.20.00 D&4	1.	aggod Dur C B4	ani:ea ==		H
605 N	_		nec Associated GLOBAL Fingineering GLOBAL FOR ASSOCIATED GLOBAL FO					09-06 4:30:00 PM		Logged By: S. Ma			
,M006	8	Π	Associated Engineering LOCAL F	PERSPECTIVE. OCUS.	Complet			2013-09-06 6:15:00 PN : 5.20 m	/1 1	Reviewed By: R.	vvood	Page	2 of 2
> L			- — —		Johnhiot		pui.					. ugo	- 0, 4

Project: Mount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings Be	each	-	Test Pit No: TP-1	Г-13-05	
Client: Government of Yukon - AAM	Northing (UTM Zone 8, N	IAD83): 6	8806	20	Project No: VM00	0605E	
Contractor & Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, NA	AD83): 38	39250	1	Elevation (m): 10	97	
SAMPLE TYPE Shelby Tube Core	SPT (N)	Grab S	Sampl	le			
BACKFILL TYPE Bentonite Chips Bentonite Gr	out Sentonite Pellets	Ceme	nt Gro	out 🔯 Drill Cuttin	gs 🟥 Sand	Slo	ugh
SOIL SYMBOL SOIL SYMBOL DESCRIP.		SAMPLE TYPE	SAMPLE NO		THER TESTS, COMMENTS		ELEVATION (m)
SAND Fine to medium grained, trace to some silt, loos 20 mm laminations of grey finer grained materia (Tailings)			GS1	Coordinates taken w 2012 LiDAR survey Test pit completed v excavator. Bucket is 1 Excavator access to 15 cm ruts, two passes walking on foot. Test p above the surroundings At 0.8 m, water seep The tailings pond is of the test pit The test pit is slough	with a tracked Caterpill m wide, 1 yd³ capacity test pit site difficult. C e results in large ruts the it completed on a mous s tailings. Dring into the test pit. 12.5 m away, and 0.8	ar 324D y, 5 teeth. One pass results in nat liquifies when and about 30 cm	- - - - - - - - - - - - - -
			GS2				- - - - - - - - - - - - - -
END OF TEST PIT at 2.6 m Test pit is sloughing to 4 m wide. Water seeping into excavation from 0.8 m depth Test pit backfilled with excavated material.	1.			The excavator is sin Terminated test pit due After backfilling, the about a dozen times to approximately 5 to 15 cm of water ponded on the site after several dabackfill was still very so	e to safety. excavator bucket tapped liquefy the backfill. Dom in diameter developed the surface of the testays, the ponded water	ped the surface ozens of sandboils ped, and about 10 st pit. Revisiting was gone and the	
ANO00000 MT NANSEN GEOTECH, GPJ 14-02-27 02:34 PM (TEST PITLOG) Associated Engineering CLOCK							- -1093 - - - - - - - - - - - - - - - - -
		Start Date:	2013-0	09-07 3:10:00 PM	Logged By: S. M	agnusson	<u> </u>
amec Associated Engineering LOCAL	AL PERSPECTIVE.			2013-09-07 3:50:00 PM			
Engineering LOCAL	FOCUS.	Completion	Depth	: 2.60 m		Page	1 of 1

Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings E	3ea	ıch	Т	est Pit N	o: TP-T-13-06		
Client:	Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, 1	NAD83):	688	8059	93 P	roject No	: VM00605E		
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83): 3	389	198	E	levation	(m): 1099		
SAME	PLE T	YPE Shelby Tube Tore	SPT (N)	Grab	Sa	mpl	е				
BACK	FILL T	YPE 🛮 Bentonite Chips 🔯 Bentonite Gr	out Bentonite Pellets	Cem	ent	Gro	out 🔯 Drill Cutting	s 🟥 🤄	Sand	· Slo	ugh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP		L CYPE	SAIMPLE I TPE	SAMPLE NO		THER TE			ELEVATION (m)
- - - - - - - - -		SAND AND SILT Fine to medium grained sand, compact, stratified layers, brown to orange, moist. (Tailings) From 0.9 to 2.0 m: wet to saturated.	d with some some sulphide ri		<u>S</u> 31		Coordinates taken wi 2012 LiDAR survey. Test pit completed wi excavator. Bucket is 1 n No difficulty for excav area is raised, coarser g after multiple passes.	th a tracked wide, 1 yo ator to acc	d Caterpillar 324D d³ capacity, 5 teeth ess the test pit site	. The	- - - - - - - - - - - - - - - - - - -
- - - - - - - - -		From 1.7 to 2.01 m: grey coloured.									- - - -1098 - - - -
- - - - - - -		SAND Fine to medium grained sand, silty, trace organic saturated, smells of decaying vegetation. (In Situ)	cs, compact to dense, dark g	rey,		GS2 IRD1	Moderately hard digg Soil temperature: 5°C				- - - -1097 - - -
1 (TEST PIT LOG)						GS3 IRD2	Soil temperature: 2°C				- - - - -1096 - -
0M00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:34 PM (TEST PITLOG)		END OF TEST PIT at 4.1 m Water seeping in at 2.5 m depth. Test pit sloughing in. Test pit left open overnight to assess stand up p	erformance.	=	■ CA	RD3	Soil temperature: 1°C Taken with a probe ther surface, retrieved in the Cracks forming aroun Test pit left open overnig the morning of Sept 8, 2 Surface dimensions 7 long and 7 m wide Water surface at 1.6 Wet seepage zone 1 Tension cracks visible Sides are vertical to 0 water surface Test pit backfilled with	mometer 10 excavator of the test post. A brief 013. In long an one of the test post. The test post of the test post of the test post. The test post post post post post. The test post post post post post post post po	O cm into the samp bucket. it and excavator heavy rainfall occu d 6 m wide enlarge and frothy yellow depth, above wate in from the edge on the about 2H:1\	ured in ed to 8 m r surface surface	- - - - - - - - - - - - - - - - - - -
25 MT				Start Date	: 20	013-0	9-07 5:30:00 PM		By: S. Magnusso	n	
1000€	M	Associated Engineering LOCAL	L PERSPECTIVE. FOCUS.				2013-09-07 6:40:00 PM	Review	ed By: R. Wood		4
\geqslant		Engineering Local	- or cods	Completion	n De	epth:	4.10 m			Page	1 of 1

Project: Mount Nansen 2013 Site Investigation	Area: Tailings Facility - 1	Tailings Be	ach	-	Test Pit No: TP-	Г-13-07	
Client: Government of Yukon - AAM	Northing (UTM Zone 8, N	IAD83): 6	8805	63 F	Project No: VM0	0605E	
Contractor & Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, NA	AD83): 38	9263	3	Elevation (m): 10)98	
SAMPLE TYPE Shelby Tube Core	SPT (N)	Grab S	Samp	le			
BACKFILL TYPE Bentonite Chips Bentonite G	rout Bentonite Pellets	Cemer	nt Gro	out 🔯 Drill Cutting	gs 🟥 Sand	Slo	ugh
SOIL SYMBOL DESCRIE		SAMPLE TYPE	SAMPLE NO		THER TESTS, COMMENTS		ELEVATION (m)
SILT Some fine to medium grained sand, loose to or fine grained silmes, brown to orange, moist. (Tailings) From 1.0 to 3.4 m: saturated, test pit sloughi		grey	GS1	Coordinates taken w 2012 LiDAR survey Test pit completed w excavator. Bucket is 1 The tailings surface pit. 25 mm ruts occur a Water level based or The tailings pond water 1.0 m below the top of	ith a tracked Caterpil m wide, 1 yd³ capacit is red coloured and fil fter one pass of the e	lar 324D y, 5 teeth. m around the test excavator.	- - - - - - - - - - - - - - - - - - -
- - - - 2			GS2				- - - -1096 - - - -
			GS3				- - - -1095 - - -
END OF TEST PIT at 3.4 m Test pit sloughing in. No free water. Test pit left open overnight to assess stand up	performance.			Cracks on the tailing Soil temperature: 2° Taken with a probe the surface, retrieved in the Test pit left open overn Test pit size on surfa diameter Water level is at 1.4 Wet seepage zone c Depth of water in the Test pit backfilled wi	C. Value considered rmometer 10 cm into excavator bucket. ight to assess stand ice is unchanged at a m depth in pit sides is at 1.2 to excerte of the test pit	very approximate. the sample up performance bout 7.0 m o 1.4 m depth is 0.5 m.	- - - -1094 - - - - -
TANSEN GEOTE			0040		I		- 1093 - -
				09-07 4:15:00 PM 2013-09-07 5:15:00 PM	Logged By: S. M		
amec Associated Engineering Local	BAL PERSPECTIVE. AL FOCUS.	Completion			Reviewed By: R		1 of 1

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Be	ach	T	est Pit	No: TP-T-13-	09	
Client	: Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, I	NAD83):	68	8805	57 P	roject	No: VM00605	E	
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38	9379	E	levatio	n (m): 1097		
SAMI	PLE T	YPE Shelby Tube Core	SPT (N)	Gra	b S	amp	le				
BACK	FILL 7	TYPE 🛮 Bentonite Chips 🔀 Bentonite G	rout Bentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cutting	s 🚉	<u></u> Sand	Slo	ugh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	OT (HER OMM	TESTS, ENTS		ELEVATION (m)
1		SAND Fine to medium grained, some silt to silty, slight sediments, loose to compact, light brown to ora (Tailings)	lly stratified with finer grained nge, moist to wet.			GS1	Coordinates taken wit 2012 LiDAR survey Test pit completed wit excavator. Bucket is 1 m Tailings surface was s Minor rutting after severa surface.	th a trac wide, 1 stable fo	ked Caterpillar 324 1 yd ³ capacity, 5 te or the excavator to	4D eth. traffic on.	- - - - - - - - - - - - - -
_ <u>_</u>		At 1.2 m: water seeping into testpit, wet to sa Side sloughing in 150 to 300 mm wide slabs, te	st pit vertical to 1 m depth.				Water level based on	water s	eeping in test pit a	t 1.2 m.	- - - -1095 - - -
3		From 2.0 to 3.0 m: grey coloured, wet to satu	rated.			GS2					- - - - -1094 - - -
WM00605 MI NANSEN GEOTECH GFV 14-02-27 02:34 PM (TEST PH LOG)						GS4					- - - -1093 - - - - -
NANSEN GEOTECH. GPJ		END OF TESTPIT at 4.4 m No free water visible. Test pit sloughing in to 3.5 m depth, slough app Test pit left open overnight to assess stand up p					Test pit left open overnig Test pit is 8.0 m in die the following day Side walls are vertical water level Water in test pit is 1.6 Seepage, wet zone is	for abo	at the end of the da out 1 m, then 2H:1\ th, yellow and froth	ay, and 9.0 m / to the	- - -1092 - - -
S M							09-06 2:30:00 PM		ged By: S. Magnus		•
7000	M		AL PERSPECTIVE. L FOCUS.				2013-09-06 4:20:00 PM	Revi	ewed By: R. Woo		1 -5 0
≶ ₩	7	Linging Local		Complet	ion [∪epth	: 4.40 m			Page	1 of 2

	Projec	t: M	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Bea	ach		Test	Pit No: TP-T-13-09)	
	Client:	Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	88055	57	Proje	ect No: VM00605E		
	Contra	ctor	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38	9379		Elev	ation (m): 1097		
	SAME			SPT (N)	Gral	b S	ample	e		. ,		
	BACKI	FILL	TYPE Bentonite Chips Bentonite Gro	ut Bentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cuttin	ngs	∷ Sand	· Slo	ugh
Ī	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPT	ION		SAMPLE TYPE	SAMPLE NO	C	OTHE COM	ER TESTS, MMENTS		ELEVATION (m)
-								the top of the test pit	ut 1 m	t 7 m to the north, and 0.7 m to the north, and 0.7 m away from the perimeter cavated material.		- - - - - - - - - - - - - - - - - - -
-												- - - - - - - - - - - -
												_ _ 1089 _ _ _ _
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PIT LOG)	9 											- 1088
T NANSEN G												-
305 M			Associated Engineering LOCAL RO					9-06 2:30:00 PM		Logged By: S. Magnusso	n	
M006	a	N	Associated Engineering LOCAL FO	PERSPECTIVE. OCUS.	Completi			2013-09-06 4:20:00 PN 4 40 m	n l	Reviewed By: R. Wood	Pane	2 of 2
> L					Journhiel	JII L	Sopur.	10 111			ı aye	2 01 2

Projec	ct: Mc	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Da	m	-	Test l	Pit No: TP-TD-13-01		
Client	: Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, 1	VAD83):	: 68	3806	79	Proje	ct No: VM00605E		
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38	9479		Eleva	ation (m): 1096		
SAMI	PLE T	YPE Shelby Tube Core	SPT (N)	Gra	b S	ampl	e				
BACK	FILL 7	YPE Bentonite Chips 🔀 Bentonite Gr	out Bentonite Pellets	Cer	nen	t Gro	out 🔯 Drill Cuttin	gs	Sand [Slou	ıgh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	C	THE	R TESTS, IMENTS		ELEVATION (m)
-	2000 2000 2000 2000	SAND AND GRAVEL Some cobbles, angular, to approximately 150 m ("Shale" Borrow Material) SAND					2012 LiDAR survey. Test pit completed w excavator. Bucket is 1 Below 0.3 m: Sand I	vith a t m wid has lar	nandheld GPS. Elevation for racked Caterpillar 324D e, 1 yd³ capacity, 5 teeth. ninations and appears to b		- 1096
- - - - - - - - - - - - - - - - - - -		Fine to medium grain, trace to some silt, fine lar mm thick every 25 to 75 mm, compact, light bro oxidized rock fragments up to 75 mm diameter. (In Situ)	minations of dark grey materia wn to grey, with trace angular	al 1 r		RD-01	insitu, not fill placed for				- - - - - - - - - - - - - - - - - - -
3		From 2.2 to 4.4 m: Fewer rock fragments.									1094
WM00000 MI INANGEN GEOTECH.GF7 14-02-21 02.33 FM (1ES) FN 1 LOG)						.RD-03 GS1					- -1093 - - - - - - - - - - - - - - - - - - -
		From 4.4 to 4.7 m: Hard digging, possible per moist when thawed. END OF TESTPIT at 4.7 m. Excavator hit refusal Side sloughing in. No free water observed. Test pit backfilled in excavator bucket compacted.	al.			.RD-04		ermom	ue considered very approveter 10 cm into the sample vator bucket.		- - - -
Σ					ıte: 2	2013-0	9-05 5:00:00 PM	L	ogged By: S. Magnusson		1
		Associated Engineering LOCAL	AL PERSPECTIVE.				2013-09-05 6:30:00 PM		leviewed By: R. Wood		
	<i>II I</i>	Engineering LOCAL	FOCUS.	Complet					·	Page	1 of 2

	Projec	t: M	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings Da	am	Т	est Pit No: TP-TD-	13-01
	Client:	Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83): 6	880679	9 P	roject No: VM0060	5E
İ	Contra	ctor	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N/	AD83): 38	39479	E	levation (m): 1096	
	SAMF			SPT (N)	Grab S	Sample	:		
	BACK	FILL	TYPE Bentonite Chips Bentonite Gro		Ceme	nt Grou	ıt 🔯 Drill Cutting	s 👯 Sand	Slough
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPT		SAMPLE TYPE		01	THER TESTS, COMMENTS	ELEVATION (m)
	- - - - - - - - - - - - -		material.						- -1091 - - - - - - - - -1090 - - - -
	- - - - - - - - - - - - -								- - 1089 - - - - - - - - -
14-02-27 02:35 PM (TEST PIT LOG)	- - - - - - - - - 9 -								- 1088 - - - - - - - - - - - - - -
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PIT LOG)			Associated GLOBAL FOLIA FINITE OF THE PROPERTY	PERSPECTIVE. DCUS.	Completion	Date: 20	-05 5:00:00 PM 013-09-05 6:30:00 PM	Logged By: S. Magni Reviewed By: R. Wo	od
5					Completion	Debtu: 7	4.7U III		Page 2 of 2

Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Dan	n	Te	st Pit No: TP-TD-13	3-02	
Client:	Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, 1	NAD83):	68	806	68 Pr	oject No: VM00605	E	
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	389	459) Ele	evation (m): 1095		
SAMF	PLE T	YPE Z Shelby Tube Core	SPT (N)	Gra	b Sa	mpl	le			
BACK	FILL 1	TYPE 🛮 Bentonite Chips 🔀 Bentonite G	rout Bentonite Pellets	Cen	nent	Gro	out 🔯 Drill Cuttings	Sand	Slou	ugh
DEРТН (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	OTI C	HER TESTS, OMMENTS		ELEVATION (m)
-		SAND AND GRAVEL Some cobbles, angular, to approximately 150 n with trace rootlets. ("Shale" Borrow Material) SAND Fine to medium grained, trace silt, trace angula surface weathering, no laminations/structure, or grey, damp. (FILL)	r gravel to 75 mm diameter w	ith			Coordinates taken with 2012 LiDAR survey Test pit completed with excavator. Bucket is 1 m Test pit walls standing	wide, 1 yd3 capacity, 5 te	I D	- - - -1095 - - - -
-1 - - - - - -					A F	RD-01				- - - - -1094 - - - -
-2 - - - - - -		SAND Fine to medium grained, trace silt, fine lamination light brown to grey, damp. (In Situ)	ons of dark grey material, con	npact,	AF	RD-02				- - - -1093 - - -
2:35 PM (TEST PIT LOG)		From 3.2 to 3.7 m: Colour is grey, dense, dar From 3.7 to 6.0 m: Less frequent laminations dense, damp to moist.		ļ,			3 Soil temperature: 5°C. Taken with a probe therm surface, retrieved in the e	ometer 10 cm into the sa xcavator bucket.	mple	- - - - - - - - - - - -
WM00605 MT NANSEN GEOTECH GPJ 14-02-27 02:35 PM (TEST PITLOG)							Soil temperature: 3°C. Taken with a probe therm surface, retrieved in the e	ometer 10 cm into the sa		- - -1091 - - - -
2 M	ا م م م			Start Da	te: 20	013-0	09-06 8:20:00 AM	Logged By: S. Magnus	son	
20000		Associated Engineering LOCA	AL PERSPECTIVE.				2013-09-06 10:20:00 AM	Reviewed By: R. Wood		
ğ O		Engineering LOCA	L FOCUS.	Complet	ion D	epth:	: 6.00 m		Page	1 of 2

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings Da	am	Т	est Pit No: TP-T	D-13-02
Client	: Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83): 6	880668	P	Project No: VM00	605E
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N.	AD83): 38	39459	E	levation (m): 109	95
SAMI	PLE T	YPE Shelby Tube Tore	SPT (N)	Grab S	Sample			
BACK	FILL 1	「YPE ☑ Bentonite Chips 🔯 Bentonite Gr	out Bentonite Pellets	Cemer	nt Grout	Drill Cutting	ıs 📆 Sand	Slough
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP		SAMPLE TYPE	SAMPLE NO		THER TESTS, COMMENTS	ELEVATION (m)
- - - - - - -		SAND Fine to medium grained, trace silt, fine laminatio light brown to grey, damp. (In Situ) (continued)	ns of dark grey material, com	npact,	ARD-04			- - -1090 - - - -
-6 - - - - - - - -		END OF TEST PIT at 6.0 m Maximum reach of the excavator. Test pit is not sloughing, standing up near vertic No free water observed. Test pit backfilled in bucket compacted 0.5 m thi		ial.	G52			- - - -1089 - - - -
- - - - - - -								- - 1088 - - - - -
PM (TEST PIT LOG)								- - - - - - - - -
MM006605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PITLOG)								- - - - 1086 - - - -
DS MT				Start Date:	2013-09-0	06 8:20:00 AM	Logged By: S. Ma	agnusson
10006		Associated GLOBAL DOCAL	L PERSPECTIVE.			13-09-06 10:20:00 AM	Reviewed By: R.	
\ge		Engineering LOCAL	rocus.	Completion	Depth: 6.	.00 m		Page 2 of 2

Project: M	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Dam		Test Pit No	o: TP-TD-13-0	03	
Client: Go	vernment of Yukon - AAM	Northing (UTM Zone 8, N	VAD83):	6880	521	Project No	: VM00605E		
Contractor	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38947	74	Elevation ((m): 1095		
SAMPLE 1	「YPE ☑ Shelby Tube 【 Core	SPT (N)	Gral	Sam	ple				
BACKFILL	TYPE Bentonite Chips 🔀 Bentonite G	rout Bentonite Pellets	Cen	ent G	rout 🔯 Drill Cuttir	ngs 🟥 S	Sand	Sloug	gh
DEPTH (m) SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE SAMPLE NO		OTHER TE COMMEN	STS, ITS		ELEVATION (m)
- 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	SAND AND GRAVEL Some cobbles, angular, to approximately 150 n ("Shale" Borrow Material) SAND Fine to medium grained, trace to some silt, trac diameter with surface weathering, compact, no l brown, damp to moist. (Fill) From 1.2 to 2.8 m: 10 to 30 cm thick layers o	e angular gravel to 50 mm aminations/structure, grey to l	light	■ ARD-	Coordinates taken v 2012 LiDAR survey. Test pit completed excavator. Bucket is 1	with a tracked	d Caterpillar 324D		- - - - - - - - - - - - - -
- 2				ARD-	02			-	- - - - - - - - -
- 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	From 2.8 to 4.5 m: dense.			RD-	03			-	- 1092 - - - - - - - - 1091
	From 4.4 to 4.5 m: Above the organics layer, have crystals/precipitates. ORGANICS Compact, black, moist, smells of decomposing (In Situ)			ARD-ARD-GS	05	Lonned	By: S. Magnussc	-	- - - - - - - - -
	Associated GLOB	AI DEDSDECTIVE			e: 2013-09-06 1:45:00 PN		ed By: R. Wood	<i></i>	
di	Nec Associated Engineering LOCA	AL PERSPECTIVE. L FOCUS.			th: 6.00 m		,	Page '	1 of 2

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Tailings Facility -	Tailings	Da	m		Test	: Pit No: TP-T	D-13-03		
Client	: Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	3805	21	Proje	ect No: VM00	605E		
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38	9474		Elev	ation (m): 109	95		
SAM	PLE T	YPE / Shelby Tube Core	SPT (N)	Gra	b S	ampl	le					
BACK	(FILL 7	「YPE ☑ Bentonite Chips 🔯 Bentonite Gro	out Bentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cuttir	ngs	Sand Sand		Slo	ugh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPT	TION		SAMPLE TYPE	SAMPLE NO	(ER TESTS, MMENTS			ELEVATION (m)
6 6		SAND Fine to medium grained, trace silt, compact, interbrown sand, grey, moist. (In Situ) (continued) SAND Fine to medium grained, trace silt, dense, grey, ficrystals, moist to wet when thawed. (Permafrost)		j		GS2	Soil temperature: 0 Taken with a probe th surface, retrieved in th	ermor ne exc 1°C. V ermor ne exc	neter 10 cm into t avator bucket. 'alue considered v neter 10 cm into t avator bucket.	he sample very approx he sample	imate.	- - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -		END OF TESTPIT at 6.0 m Small amount of free water observed on the bottom of the pottom of the pott	ertical.	nutes.			in test pit From 5.8 to 6.0 m:	Hard (digging			- - - - - - - - - - - - - - - - - - -
(TEST PIT LOG)												- -1087 - - - - - - -
MM008605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PITLOG)						20040	000445005	1:				- 1086 - - - - - - - - - - - - - - - - - - -
305 N							9-06 1:45:00 PM		Logged By: S. Ma			
MOOK	Associated Engineering LOCAL		PERSPECTIVE.	Complet			2013-09-06 1:45:00 PN	VI	Reviewed By: R.	vvood	Dago	2 of 2
>				Complet	iUII L	շերլլյ:	. 0.00 111				raye	2 UI Z

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	a - Northw	est Pil	le To	est Pit No: TP-WA-13	3-01
Client	: Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, I	NAD83):	68817	707 P	roject No: VM00605E	
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	IAD83): 3	8877	0 E	levation (m): 1232	
SAM	PLE T	YPE Shelby Tube Core	SPT (N)	Grab	Samp	ole		
BACK	FILL 7	「YPE ☑ Bentonite Chips ဩ Bentonite G	rout Bentonite Pellets	Ceme	ent Gr	out Drill Cutting	s 🚉 Sand	Slough
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP		SAMPI E TYDE	SAMPLE NO	OT C	THER TESTS, COMMENTS	ELEVATION (m)
- - - - - - - - -	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GRAVEL Sandy, some cobbles, trace boulders to 500 mr silt, compact to dense, brown to orange to grey, weathered from intact grey colour, and hard to I vibrant orange colour which crumbles to the tou (Waste Rock) From surface to 0.6 m: dry, approximately 50 From 0.6 to 1.3 m: dense, orange.	damp to moist, rocks are valoreak with a rock hammer, to ch, approximately 50% > 25	riably a	GS2	2012 LiDAR survey Test pit completed wit excavator. Bucket is 1 m	h a handheld GPS. Elevation that racked Caterpillar 324 wide, 1 yd³ capacity, 5 tee	D -
2	29 29 29 29 29 29 29 29 29 29 39 39 39 39 39 39 39 39 39 39 39 39 39	GRAVEL AND COBBLES Sandy, trace silt, some boulders to 600 mm dia brown to orange, variably weathered, damp to r mm. (Waste Rock)	meter, angular, compact to denoist, approximately 70% > 2	ense, 5	GS3			- - - - - - - - - - -
-3	4 24 24 24 24 24 24 24 24 24 24 24 24 24				3 84-BU	ЦK		- - - - 122 - - -
MM00605 MT NANSEN GEOTECH GPU 14-02-27 02:35 PM (TEST PIT LOG)	9 09 09 09 09 09 09 09 09 09 09 09 09 09	From 3.8 to 4.5 m: less weathered with surfa	ce staining only.		GS5	Taken with a probe therr surface, retrieved in the	. Value considered approxi nometer 10 cm into the sar excavator bucket.	
IT NANSEN GEO		Maximum reach of excavator. No free water observed. Test pit sloughed, becoming unstable. Test pit backfilled with excavated material.					I	- 122 -
∑ 202 <u>~</u>						09-10 5:30:00 PM	Logged By: S. Magnuss	son
NOUE	M		AL PERSPECTIVE. L FOCUS.	<u> </u>		2013-09-10 6:45:00 PM	Reviewed By: R. Wood	Doga 1 -f
\$ -	· # #			Completion	Deptr	i. 4.50 III		Page 1 of

Project: Mount Nansen 2013 Site Investigation	Area: Waste Rock Area	- East Pil	е		Test Pit No: TP-V	VA-13-02	
Client: Government of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68816	573	Project No: VM00)605E	
Contractor & Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83): 3	88958	3	Elevation (m): 12	13	
SAMPLE TYPE Shelby Tube Core	SPT (N)	Grab	Samp	ole			
BACKFILL TYPE Bentonite Chips Bentonite Gr	out Bentonite Pellets	Ceme	nt Gr	out Drill Cuttin	gs 📆 Sand	Slo	ugh
SOIL SAMBOL DESCRIP		SAMPI F TYPE	SAMPLE NO		OTHER TESTS, COMMENTS		ELEVATION (m)
SAND AND GRAVEL Some cobbles, trace boulders to 300 mm, trace dense, brown to orange to grey, damp to moist, intact, grey colour and hard to break with a rock colour which crumbles to the touch, approximate (Waste Rock) From 0.7 to 1.9 m: compact to dense, moist. ORGANICS Compact, black, moist, smells of decaying vege roots/branches. (In Situ) GRAVEL AND SAND Some cobbles to 150 mm diameter, angular, tramoist to wet, slightly weathered, approximately	rocks are variably weathered hammer, to a vibrant orange ely 40% > 25 mm. tation, with 5 cm diameter ce to some silt, compact, brow	from	ARD-0 GS1	2012 LiDAR survey Test pit completed v excavator. Bucket is 1	vith a handheld GPS. E with a tracked Caterpilla m wide, 1 yd³ capacity	ar 324D	
ORGANICS Soft, brown to black, moist, with wood fibres and (In Situ) SAND Fine to medium grained, subangular, some graved diameter, trace to some silt, compact, grey to light and cobbles are slightly weathered and stained 30% > 25 mm. (In Situ) Associated Engineering LOCAL	d rootlets. rels and cobbles to 150 mm ght brown, damp to moist, gra		GS4	Below 3.3 m: Test p Above 3.3 m, the test p Soil temperature: 2° Taken with a probe the surface, retrieved in the	°C. Value considered a ermometer 10 cm into te excavator bucket.	pproximate. he sample	- - - - - - - - - - - - - - - - - - -
				09-10 10:50:00 AM	Logged By: S. Ma		
anec Associated Engineering LOCAL	AL PERSPECTIVE. FOCUS.			2013-09-10 12:10:00 PI	M Reviewed By: R.		1 -1 0
		Completion	ı Depth	i. 0.00 M		Page	1 of 2

	⊃rojec	t: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	- East F	Pile			Test	Pit No: TP-V	VA-13-02		
(Client:	Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	8167	73	Proje	ect No: VM00	605E		
(Contra	ctor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	388	3958		Eleva	ation (m): 12	13		
	SAMF	LE T	YPE 🖊 Shelby Tube 👖 Core	SPT (N)	Gra	b Sa	ampl	e					
Ī	BACK	FILL 1	TYPE 🛮 Bentonite Chips 🔀 Bentonite Gro	out Bentonite Pellets	Cen	nent	Gro	out 🔯 Drill Cuttin	ngs	Sand		Slou	ıgh
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPT	TION		SAMPLE TYPE	SAMPLE NO	C		R TESTS,			ELEVATION (m)
	6 8 9		BEDROCK Fractured rock to 300 mm, angular, dense, orang trace silt, fairly hard to break with a rock hammer (In Situ) (continued) END OF TEST PIT at 5.6 m Maximum reach of the excavator. No free water observed. Test pit backfilled with excavated material.	ge, moist, weathered to sand, approximately 60% > 25 m	and		GS5	Taken with a probe the surface, retrieved in the			he sample		
Σ					Start Dat	te: 20	013-0	9-10 10:50:00 AM	I	.ogged Bv: S. Ma	agnusson		
0605			Associated GLOBAL LOCAL IN LOC	PERSPECTIVE.				2013-09-10 12:10:00 P					
NM0	d		Associated Engineering LOCAL P	FOCUS.	Complet					•	TESTS, MENTS er 10 cm into the sample stor bucket.		

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	- East F	Pile		Т	est Pit No: TP-WA-13	-03	
Client	: Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	688	816	34 P	roject No: VM00605E		
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	388	988	E	levation (m): 1217		
SAM	PLE T	YPE Z Shelby Tube Core	SPT (N)	Gra	b Sa	mpl	e			
BACK	FILL	「YPE ☑ Bentonite Chips ဩ Bentonite Gr	out Bentonite Pellets	Cen	nent	Gro	out 🔯 Drill Cutting	s 🔛 Sand	Slou	ugh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO		THER TESTS, COMMENTS		ELEVATION (m)
- - - - - - - - -	3 42 42 42 42 42 42 42 42 42 42 42 42 42	SAND Cobbly to 150 mm diameter, some gravel, angular brown to orange, damp to moist, low to moderat staining, rock is hard to break with a rock hamm (Waste Rock)	e oxidation with mostly surface	ce			2012 LiDAR survey. Test pit completed wi	th a handheld GPS. Elevatio th a tracked Caterpillar 324C n wide, 1 yd³ capacity, 5 teet)	- - - - - - -1216
- - - - - - - 2 -	12 42 42 42 42 42 42 42 42 42 42 42 42 42	From 1.4 to 2.6: Compact to dense, moist. From 1.9 to 2.6 m: Brown, lower level of oxide rootlets mixed with the waste rock.	ation, trace pieces of organics	s and		RD-02 GS2	2			- - - - - - 1215 - - - -
- - - - - - - - - - - - - - - - - - -		ORGANICS Compact, black, moist, with pieces of decompost branches laying down over top the organics. (In Situ) GRAVEL AND COBBLES Particles to 200 mm diameter, anuglar, some sat trace rootlets and organics, rock is slightly weat rock hammer, approximately 75% > 25 mm. (Waste Rock) ORGANICS Some sand, loose, black, moist, with rootlets and	and, trace silt, brown, moist, w hered and hard to break with	vith _	AR C			is standing up nearly vertica	I, and	- - - - - - - - - - -
Wildows MI NAMEN GEOTECH, ST. 1 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		(In Situ) SAND Trace to some boulders and cobbles to 600 mm brown, moist to wet, rocks are lightly weathered a rock hammer, approximately 30% > 25 mm. (In Situ) END OF TEST PIT at 4.6 m	ı, some to trace silt, compact,	c with	5 54	l-BUL	ĸ			- -1213 - - - - - -
NANSEN GE		Test pit hit refusal. No free water observed. Test pit sloughed abov Test pit backfilled with backfilled material.	e 3.1 m.					I		- 1212 -
000							9-10 8:45:00 AM	Logged By: S. Magnusso	on	
	M		AL PERSPECTIVE. FOCUS.	Completion Date: 2013-09-10 10:40:00 AM Reviewed By: R. Wood Completion Depth: 4.60 m Page						1 of 1
5				Complet	IUII DE	epın:	. 4 .00 III		rage	1 of 1

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	- Northw	est F	Pile	Т	est Pit No	: TP-WA-13	-04	
Client	: Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	688	1591	Р	roject No	: VM00605E		
Contr	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83): 3	3888	07	E	levation (m): 1228		
SAM	PLE T	YPE Shelby Tube Core	SPT (N)	Grab	Sam	nple					
BACK	(FILL 1	「YPE ☑ Bentonite Chips 🔀 Bentonite G	out Bentonite Pellets	Cem	ent G	Grout	Drill Cutting	s 🟥 S	Sand	Slo	ugh
DEРТН (m)	SOIL SYMBOL	SOIL DESCRIP		L C// H	SAMPLE LYPE SAMPLE NO		07	HER TES	STS, TS		ELEVATION (m)
-1-11	: 49 49 49 49 49 49 49 49 49 49 49 49 49	GRAVEL AND SAND Some cobbles, angular, trace silt, trace boulder dense, dark brown, damp to moist, rock fragem break with a rock hammer, granitic rocks preser crumble in hands, approximately 40% > 25 mm (Waste Rock)	ents are slightly weathered, hat are heavily weathered and	ard to	GS	20 exe	Coordinates taken wit 112 LiDAR survey. Test pit completed wi cavator. Bucket is 1 n	th a tracked	I Caterpillar 324D)	- - - - - - - - - 1227 - - - -
2	24 29 29 29 29 29 29 29 29 29 29 29 29 29	From 2.3 to 3.2 m: Increasing oversize conte the matrix soil has lower amounts of weathering		i mm,	■ GS	 sta	Below 2.3 m: Test pit arting to undercut belo rtions. Test pit is slou	w 3 m, resu	ulting in overhand	l, and ing	- -1226 - - - - - - - - - - - - -
2-27 02:36 PM (TEST PIT LOG)	09 09 09 09 09 09 09 09 09 09 09 09 09	From 3.2 to 4.2 m: Increasing oversize to app boulders up to 1 m diameter, rock fragments are moist and consists of sand, trace silt, with some	e more oxidized, matrix soil is		GS GS						
M000605 MT NANSEN GEOTECH GPJ 14-02-27 02:35 PM (TEST PIT LOG)	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	From 4.2 to 5.6 m: Decreasing oversize to appoulders, moist to wet.		Start Date			0 3:10:00 PM		By: S. Magnuss	on	-
MOC	III	Associated Engineering LOCAL	AL PERSPECTIVE. FOCUS.	Completion Date: 2013-09-10 5:10:00 PM Reviewed By: R. Wood Completion Depth: 6.10 m					Paga	1 of 2	
>				Completio	л рер	טווו. ט.	IV III			rage	1 UT 2

	Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	- North	wes	st Pile	e i	Test Pit N	o: TP-WA-13-0	4	
	Client:	Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	6	8815	91	Project No	: VM00605E		
	Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N.	AD83):	38	8807	,	Elevation	(m): 1228		
Ī	SAMF	PLE T	YPE Shelby Tube Tore	SPT (N)	Gra	b S	ampl	le				
	BACK	FILL 1	「YPE ☑ Bentonite Chips 🔯 Bentonite Gr	out Bentonite Pellets	Cer	nen	t Gro	out 🔯 Drill Cuttin	gs 🟥	Sand [Slou	ıgh
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO		OTHER TE			ELEVATION (m)
- - - - - -	- - - - - - -	09 09 09 09 09 09 09 09 0	GRAVEL AND SAND Some cobbles, angular, trace silt, trace boulders dense, dark brown, damp to moist, rock frageme break with a rock hammer, granitic rocks presen crumble in hands, approximately 40% > 25 mm. (Waste Rock) (continued) From 5.6 to 6.1 m: Increasing oversize to app weathered, moist to wet.	ents are slightly weathered, h t are heavily weathered and o	ard to can		GS5	Soil temperature: -1 Taken with a probe the surface, retrieved in th	ermometer 1	0 cm into the sample	ite.	- - - - - - - -
		1.1.	END OF TEST PIT at 6.1 m Maximum reach of excavator. No free water observed. Test pit is standing nearly vertical. Test pit backfilled with excavated material.				GS6					- - - - -
- - - - - -	- -7 - - - - -											- -1221 - - - - -
-	-8 - - - - -											1220
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PIT LOG)	-9 - - - - - -				05		2046					1219
305 N	_							09-10 3:10:00 PM		By: S. Magnusson		
/M006	a		Associated GLOBA LOCAL	L PERSPECTIVE. FOCUS.			n Date: 2013-09-10 5:10:00 PM				Page	2 of 2
~ L							P ** **				5-	

Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	a - West L	OW	er P	Pile To	est Pit No	: TP-WA-13	-05	
Client	: Gov	rernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	814	99 P	oject No:	: VM00605E		
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	388	3708	E	evation (ı	m): 1211		
SAME	PLE T	YPE Shelby Tube Core	SPT (N)	Grab	Sa	ampl	le				
BACK	FILL	「YPE ☑ Bentonite Chips 🔯 Bentonite G	rout Bentonite Pellets	Cem	ent	Gro	out Drill Cutting	s 🚉 s	and	Slou	ıgh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP		Í	SAMPLE TYPE	SAMPLE NO	ОТ	HER TES			ELEVATION (m)
-	24 25 25 25 25 25 25 25 25 25 25 25 25 25	GRAVEL Cobbly, trace to some boulders to 600 mm dian compact, brown, damp to moist, rock fragments break with a rock hammer, rock mostly igneous with trace pieces of blasting cord. (Waste Rock)	s slightly weathered and hard	to			Coordinates taken wit 2012 LiDAR survey. Test pit completed wit excavator. Bucket is 1 m	n a tracked	Caterpillar 324D)	- - 1211 - -
- -1 - - - - -	29 29 29 29 29 29 29 29 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20			=		RD-01 GS1					- - - - - - - - - - - - -
- -2 - - -	24 424 24 424 424 424 424 424 424 424 4	GRAVEL AND COBBLES Angular, sandy, trace silt, some boulders to 1 m	n diameter, angular, compact	to		RD-02 GS2	From 2.5 to 4.2 m: Te large boulders present.	st pit is slun	nping, difficult di	gging with	- - - -1209 -
- 3	24 29 24 29 24 24 29 24 29 24 24 24 24 24 24 24 24 24 24 24 24 24	dense, brown, moist, slightly weathered, approx	лиа се ту 70% > 25 mm.			RD-03 GS3	8				- - - - - - - - - - - - -
Wildows MI NANSEN GEOTECHISTS 14-02-27 05:38 FM (TEST FIT LOG)	2000	END OF TEST PIT at 4.2 m Test pit hit refusal. No free water observed. Test pit sloughed. Test pit backfilled with excavated material.				RD-04 GS4	At completion: Test pi m wide on surface, the to and overhanging the high	p 2.5 m of	finer grained soi	l is vertical	- - - - - - - - - - -
Σ				Start Date	e: 20	013-0)9-09 1:15:00 PM	Logged I	By: S. Magnuss	on	1
			AL PERSPECTIVE.				2013-09-09 3:00:00 PM		ed By: R. Wood		
	11 T	Engineering LOCAL	L FOCUS.	Completion	on D	epth:	: 4.20 m			Page	1 of 1

Projec	ct: Mo	unt Nansen 2013 Site Investigation	Area: Waste Rock Area	- West	Low	ver P	Pile	Test F	Pit No: TP-	WA-13-06					
Client	: Gov	ernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83)	: 68	3814	42	Proje	ct No: VM0	0605E					
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	388	3711		Eleva	tion (m): 12	209					
SAMI	PLE T	YPE Shelby Tube Core	SPT (N)	Gra	b Sa	ampl	le								
BACK	FILL T	YPE 🛮 Bentonite Chips 🔀 Bentonite Gi	out Bentonite Pellets	Cer	nent	t Gro	out 🔯 Drill Cuttin	ngs	Sand		Slough				
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO		OTHE	R TESTS, IMENTS		EI EVATION (m)	ELEVATION (III)			
- - - - - - - - -	29 29 29 29 29 29 29 29 29 29 29 29 29 2	SAND Fine to medium grained, trace silt, trace gravel dry. (Road Topping) GRAVEL AND SAND Cobbly, trace boulders to 600 mm diameter, and in 300 mm layers, brown to orange, damp to move and hard, approximately 45% > 25 mm. (Waste Rock) From 1.2 to 2.2 m: Less weathering of the rock	gular, trace silt, compact, stra ist, rock is moderately weath	tified		RD-01 GS1	Coordinates taken v 2012 LiDAR survey. Test pit completed v excavator. Bucket is 1 In order to start the had to be moved, son excavator bucket when	with a to m wide test pit ne of th	racked Caterpi e, 1 yd³ capacit some 1-2 m di nese boulders c	lar 324D y, 5 teeth. ameter bould rumbled in the	-12i	209			
-2 -	3 43 43 43 43 43 43 43 43 43 43 43 43 43	From 2.2 to 3.5 m: Some boulders to 600 mn pieces are highly weathered and crumble in you mm.		· 25		RD-02 GS2	Below 2.2 m: Test phard digging. Test pit i				- - - - - - - - - - - - - - - - - - -	<u>?</u> 07			
-3	09 09 09 09 09 09 09 0	From 3.5 to 4.5 m: Orange, high level of wea	thering.		GS	RD-03 3-BUL	B LK				- - - -12i - - - -	206			
WM00665 MI NANSEN GEOLIECH GPJ 14-02-27 02:35 PM (TEST PIT LOG)	24 24 24 24 24 24 24 24 24 24 24 24 24 2	END OF TEST PIT at 4.5 m Test pit hit refusal. No free water observed. Test pit sloughed a bit.				RD-04 GS4					- - - - - - - - - - - -	.05			
AN -		Test pit backfilled with excavated material.													
Σ				Start Da	te: 2	:013-N	09-09 3:15:00 PM	10	ogged By: S. N	lagnusson					
\$090		Associated GLOB	AL PERSPECTIVE.				2013-09-09 5:00:00 PM	_				_			
	<i>]] [</i>]	Associated Engineering LOCAL	FOCUS.				: 4.50 m		•	· · · · · · · · · · · · · · · · · · ·					

Project: I	Mount Nansen 2013 Site Investigation	Area: Waste Rock Area	- West I	∕lid Pile	e	Test Pit N	lo: TP-WA-13	3-07	
Client: G	overnment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68814	130	Project N	o: VM00605E	<u> </u>	
Contracto	or & Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38877	4 1	Elevation	(m): 1214		
SAMPLE	TYPE Shelby Tube Core	SPT (N)	Grat	Samp	ole				
BACKFILI	L TYPE 🛮 Bentonite Chips 🔀 Bentonite Gr	out Bentonite Pellets	Cem	ent Gr	out 🔯 Drill Cuttin	gs 👯	Sand	Slou	ugh
DEPTH (m)	SOIL DESCRIP			SAMPLE LYPE SAMPLE NO	C	THER TE COMMEI	ESTS, NTS		ELEVATION (m)
- 20 20 20 20 20 20 20 20 20 20 20 20 20	orange, dry to damp, moderate level of weather (Waste Rock) From 0.3 to 4.8 m: Trace to some silt, dense	ing, approximately 40% > 25	vn to mm.		Coordinates taken w 2012 LiDAR survey. Test pit completed v excavator. Bucket is 1 From 0.3 to 4.8 m: H pit sides, test pit standi sloughing and widening	vith a tracke m wide, 1 y lard digging ing near ver	ed Caterpillar 324 yd³ capacity, 5 tee g, bucket teeth ma rtical to 1.5 m dep	D eth. arks on test	- 1214 - - - - -
	24 24 24 24 24 24 24 24 24 24 24 24 24 2			GS1					- -1213 - - - - - -
- 2	24 24 24 24 24 24 24 24 24 24 24 24 24 2			5 2-BU	ŲK				- 1212 - - - - - -
- 27:	24 24 24 24 24 24 24 24 24 24 24 24 24 2			GS3 GS3					- 1211 - - - - - - -
- 24.	2			GS5		· · · · · · · · · · · · · · · · · · ·			- -1210 - - - - - -
					09-10 1:30:00 PM 2013-09-10 3:00:00 PM		d By: S. Magnuss wed By: R. Wood		
ar	nec Associated Engineering LOCAL	AL PERSPECTIVE. FOCUS.			1: 5.80 m	Reviev	vea by. R. Wood		1 of 2
			Ochhod	J., Dopu	5.00 111	1		i uye	1 01

Proj	ect:	Мо	unt Nansen 2013 Site Investigation	Area: Waste Rock Area	- West	Mic	l Pile		Test	Pit No: TP-WA-1	3-07	
Clie	nt: G	ove	ernment of Yukon - AAM	Northing (UTM Zone 8, N	VAD83)	6	8814	30	Proje	ect No: VM00605	Ē	
Con	tracto	or &	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N.	AD83):	38	8774		Eleva	ation (m): 1214		
SAI	MPLE	: T\	YPE Shelby Tube Tore	SPT (N)	Gra	b S	ampl	le				
BAC	KFIL	LΤ	YPE 🛮 Bentonite Chips 🔀 Bentonite Gr	out Bentonite Pellets	Cer	nen	t Gro	out 🔯 Drill Cuttin	ngs	Sand	Slo	ough
DEPTH (m)	IOS/WBOI		SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO			ER TESTS, IMENTS		ELEVATION (m)
- - - - - - - - - - - - - - - - - - -	0 00 00 00 00 00 00 00 00 00 00 00 00 0	09 09 09 09	GRAVEL Cobbly, trace silt, sandy, trace boulders to 300 moist, high level of weathering, rock crumbled wapproximately 60% > 25 mm. (Waste Rock) (continued) From 5.6 to 5.8 m: Some silt/clay, brown, moisting the same silt silt silt silt silt silt silt silt	ith a blow from the rock hami	mer,		GS6	Soil temperature: 1° Taken with a probe the surface, retrieved in th	ermom	neter 10 cm into the sai	imate. mple	- -1209 - - - - - - - - - - - - - - - - - - -
- - - - - - - - -												- -1207 - - - - - -
7 02:35 PM (TEST PIT LOG)												-1206 - - - - - - - -
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PITLOG)					Start Do	to: 1	2013.0	09-10 1:30:00 PM	1	orned By: S Magnus	son.	1205
1605 1	_	_						2013-09-10 3:00:00 PM		ogged By: S. Magnus Reviewed By: R. Wood		
VMOO	anec Associated Engineering Local		Associated Engineering LOCAL	L PERSPECTIVE. FOCUS.				: 5.80 m	· r	TOTIONION Dy. IV. WOUL		e 2 of 2

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	- South	Pile	е	Te	est Pit No:	TP-WA-13-	08	
Client	: Gov	rernment of Yukon - AAM	Northing (UTM Zone 8, N	NAD83):	68	3813	56 Pr	oject No: \	/M00605E		
Contra	actor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	388	8922	? El	evation (m):	1215		
SAM	PLE T	YPE Z Shelby Tube Core	SPT (N)	Gral	b S	amp	le				
BACK	FILL 7	「YPE ☑ Bentonite Chips 🎘 Bentonite Gr	out Sentonite Pellets	Cen	nen	t Gro	out 🔯 Drill Cuttings	s 🚉 San	d	Slou	ugh
DЕРТН (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	OT C	HER TESTS OMMENTS	5,		ELEVATION (m)
- - - - - - - - - - -	09 09 09 09 09 09 09 09 09 09 09 09 09 0	GRAVEL Cobbly,trace boulders to 600 mm diameter, sandorange, damp to moist, approximately half of the and break easily with a rock hammer, and the of and competent, approximately 50% > 25 mm. (Waste Rock)	e rock pieces are highly weatl	hered ce	GS	RD-01	Coordinates taken with 2012 LiDAR survey Test pit completed with excavator. Bucket is 1 m	n a tracked Ca	terpillar 324D		- - - - - -1214 - - -
- - - - - - - 2 -	29 29 29 29 29 29 29 29 29 29 29 29 29 2	At 2.2 m: Plastic sample bag encontered.				ARD-02 GS2	•				- - -1213 - - - -
- - - - -	25 25 25 25 25 25 25 25 25 25 25 25 25 2										- - - -1212 - -
-	AVAV AVAV	at 3.1 m: Pieces of organics/top soil with rooth BEDROCK Weathered to cobbles, boulders, gravel and san red to orange to brown, moist, bedrock is variab fractures, some pieces are intact 1 m boulders, highly weathered parts consist of sand, some sill approximately 60% > 25 mm. (In Situ)	nd pieces, to 1 m diameter, de ly oxidized with numerous and some crumble in your ha	ense,		RD-03 GS3	Weathered bedrock te approximate. Taken with sample surface, retrieved Below 3.2 m: Hard dig wall.	a probe therm in the excava	ometer 10 cm tor bucket.	into the	_ - - - - -1211
A		From 4.0 to 4.7 m: Matrix soil between rock is permafrost?	s hard and clumps together,			GS4	Weathered bedrock te approximate. Taken with sample surface, retrieved Below 4.0 m: Test pit s abouve 4.0 m.	a probe therm in the excava	ometer 10 cm tor bucket.	into the	- - - - -
		END OF TEST PIT at 4.7 m Test pit hit refusal. No free water observed. Test pit sloughed to 7 m long and 5.5 m wide. To	est pit backfilled with excaval	ted							1210
			<u> </u>		e: 2	2013-0	09-09 10:50:00 AM	Logged By:	S. Magnusso	n	<u> </u>
			AL PERSPECTIVE.				2013-09-09 1:00:00 PM	Reviewed B			
		Engineering LOCAL	FOCUS.	Completi	on [Depth	: 4.70 m			Page	1 of 2

	Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area - South Pile			T	Test Pit No: TP-WA-13-08			
	Client:	Gov	vernment of Yukon - AAM	Northing (UTM Zone 8, NAD83): 6881356			Project No: VM00605E				
İ	Contra	ctor	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83): 38	8922	E	levation (m): 1215			
Ì	SAMF			SPT (N)	Grab S	Sample					
	BACK	FILL	TYPE Bentonite Chips Bentonite Gro		Cemer	nt Grou	it Drill Cutting	s 👸 Sand	Slough		
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPT		SAMPLE TYPE	SAMPLE NO	01	THER TESTS, COMMENTS	ELEVATION (m)		
	- - - - - - - - - - -		material.						- - - - - 1209 - - - -		
	- - - - - - - -7								- - 1208 - - - - -		
	- - - - - - -8 -								- - - 1207 - - - - -		
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PIT LOG)	- - - - - - - -								- - - 1206 - - - - -		
05 MT NANSEN GEOTECH.GPJ 1	-		nec Associated GLOBAL LOCAL FO				-09 10:50:00 AM	Logged By: S. Magnu			
9001	A	N	Associated Engineering LOCAL FI	PERSPECTIVE. OCUS.	Completion Completion		013-09-09 1:00:00 PM	Reviewed By: R. Woo	Page 2 of 2		
۶I					Completion	սե բև1: 4	+. / U III		rage 2 of 2		

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	a - West	Low	er P	Pile Te	est Pit No:	TP-WA-13-0	9	
Client: Government of Yukon - AAM Northing (UTM Zone 8, N			NAD83): 6881319 Project No: VM00				VM00605E	100605E			
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	388	3834	EI EI	evation (m	n): 1205		
SAMI	PLE T			Gral							
BACK	FILL	TYPE / Bentonite Chips 🔀 Bentonite G	rout Bentonite Pellets	Cen	ent	Gro	out 🔯 Drill Cuttings	s 🟥 Sa	and	Slou	ıgh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	OT C	HER TES OMMENT	TS, 'S		ELEVATION (m)
- - - - - - - - - - -	0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	GRAVEL Cobbly, sandy, some boulders to 1 m diameter, to brown, damp to moist, rock is highly weather have weathered to a powder, while meta-sedim and competent, matrix soil is highly weathered, (Waste Rock) From 0.9 to 2.2 m: Some to trace silt, trace to moist, less weathering, approximately 50% > 25	ed and fractured, granitic rock entary rock is stained on surfa approximately 60% > 25 mm or some boulders, dense, grey	ace	A	RD-01 GS1 RD-02 GS2	Coordinates taken with 2012 LiDAR survey Test pit completed with excavator. Bucket is 1 m. Difficult access to test temporary access route, around site Below 0.9 m: Hard dig	h a tracked (wide, 1 yd³ (pit site, exca lots of large	Caterpillar 324D capacity, 5 teeth. avator constructed weathered boulde	l a ers	- - - - - - - - - - - - - - - - - - -
	24 24 24 24 24 24 24 24 24 24	COBBLES AND BOULDERS Approximately 40% boulders to 1 m diameter, a and silt, angular, dense, grey, moist, slightly we approximately 80% ? 25 mm, possible frozen c based on temperature measurement. (Waste Rock)	athered and rocks are compe	etent,		RD-03 GS3	3				- -1203 - - - - - -
- -3 - - - -	24 24 24 24 24 24 24 24 24 24 24 24 24 2					RD-04 GS4	Soil temperature: -1°C	c. Value cons	sidered approxima	ıte.	- 1202 - - - - -
WMU0000 MI NANDEN GEOTECHIGTS 14-02-27 02:39 FM (TEST FIT LOG)	24 29 29 29 29 29 29 29 29 29 29 29 29					RD-05 GS5	Taken with a probe therm surface, retrieved in the e	nometer 10 c excavator bu excavator bu excavator bu excavator bu excavator bu excavator bu excavator bu excavator bu excavator bu excavator bu	em into the samplicket.	e re.	- - - - - - - - - - - - - - - - - - -
<u> </u>	المتما			Start Dat	e. 2	013 <u>-</u> 0	09-10 8:30:00 AM	I naned R	y: S. Magnusson		<u> </u>
2000		16C Associated Engineering LOCA	AL PERSPECTIVE.				2013-09-10 11:00:00 AM		By: R. Wood		
	"	Engineering LOCA	L FOCUS.	Completi					-	Page	1 of 2

	Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	- West I	Low	er P	ile	Test Pit	No: TP-W	/A-13-09		
	Client:	lient: Government of Yukon - AAM Northing (UTM Zone 8, NAD83				AD83): 6881319				Project No: VM00605E			
İ	Contra	actor 8	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	388	3834	1	Elevatio	on (m): 120)5		
	SAMF	LE T	YPE Shelby Tube Core	SPT (N)	Gral	b Sa	ampl	e					
	BACK	FILL	TYPE 🛮 Bentonite Chips 🔀 Bentonite Gr	out Bentonite Pellets	Cen	nent	t Gro	out 🔯 Drill Cuttin	gs 🚉	Sand		Slou	ıgh
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO		OTHER COMM	TESTS, ENTS			ELEVATION (m)
	- - - - - - - - - - - -	ANA	END OF TEST PIT at 5.2 m Maximum reach of excavator. No free water observed. Test pit sloughed a bit below 2.2 m. Test pit backfilled with excavated material.				GS6	Soil temperature: 0° Taken with a probe the surface, retrieved in the	ermomete	r 10 cm into th	pproximate. ne sample		
	- 7 - - - - - -												- 1198 - - - - - -
(TEST PIT LOG)	- -8 - - - - - -												
VM00605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PIT LOG)	- -9 - - - - - - -												
05 M	_		Associated GLOBA LOCAL					9-10 8:30:00 AM	_	ged By: S. Ma			
M006	a	M	Associated Engineering LOCAL	L PERSPECTIVE. FOCUS.	Completi			2013-09-10 11:00:00 AI 5 20 m	M Revi	ewed By: R. \	vvood	Paga	2 of 2
ゔし					Loombieli	OII L	opui.	V.20 III				, aye	- UI -

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	- South	Pile)	Te	est Pit No: TP-WA-1	3-10	
			Northing (UTM Zone 8, 1	, NAD83): 6881272				Project No: VM00605E		
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	389	9001	El	evation (m): 1214		
SAM	PLE T	YPE Shelby Tube Core	SPT (N)	Gra	b Sa	ampl	le			
BACK	FILL T	「YPE ☑ Bentonite Chips 🔯 Bentonite G	rout Bentonite Pellets	Cen	nent	Gro	out 🔯 Drill Cuttings	s 🕄 Sand	Slou	ıgh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	ОТ	HER TESTS, OMMENTS		ELEVATION (m)
	3 43 43 43 43 43 43 43 43 43 43 43 43 43	COBBLES Some boulders to 1 m diameter, some gravel, a loose to compact, brown, damp to moist, rock p weathered, approximately 70% > 25 mm. (Waste Rock) From 1.8 to 4.1 m: Some to trace boulders, s approximately 20% of the rock pieces are weath hammer, 80% of the rock pieces are intact with 60% > 25 mm.	ieces and soil moderately andy, compact to dense, hered and break easily with a	rock	A.F.	RD-01 GS1 RD-02 GS2	2012 LiDAR survey Test pit completed with excavator. Bucket is 1 m	n a handheld GPS. Elevati h a tracked Caterpillar 324 wide, 1 yd ³ capacity, 5 tee	D	- - - - - - - - - - - - - - - - - - -
MM00605 MT NANSEN GEOTECH GPU 14-02-27 02:35 PM (TEST PIT LOG)	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	END OF TEST PIT at 4.1 m Test pit sloughed. No free water observed. Test pit backfilled with excavated material.				RD-03 GS3 RD-04 GS4	Soil temperature: 4°C. Taken with a probe therm surface, retrieved in the e	nometer 10 cm into the sai excavator bucket. It pit is approximatel y 7.5 r	mple n long and	- 1211
Z				Start Dat	e: 20	013-0	09-09 8:15:00 AM	Logged By: S. Magnus	son	
20000			AL PERSPECTIVE.				2013-09-09 10:30:00 AM	Reviewed By: R. Wood		
		Engineering LOCAL	L FOCUS.	Complet	ion D	epth:	: 4.10 m		Page	1 of 1

Projec	ct: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	- South	we	st Lo	wer Pile	Test	Pit No: TP-WA-13-	11	
Client	Client: Government of Yukon - AAM Northing (UTM Zone								pject No: VM00605E		
Contra	actor 8	Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	AD83):	38	9001	1	Eleva	ation (m): 1202		
SAMI	PLE T	YPE Shelby Tube Core	SPT (N)	Gra	b S	amp	le				
BACK	FILL T	「YPE ☐ Bentonite Chips ☒ Bentonite G	out Bentonite Pellets	Cer	nen	it Gro	out Drill Cuttin	gs	∛ Sand	Slou	ugh
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP			SAMPLE TYPE	SAMPLE NO	С)THE COM	ER TESTS, MMENTS		ELEVATION (m)
1	09 09 09 09 09 09 09 09 09 09 09 09 09 0	COBBLES Sandy, some gravel, some boulders to 600 mm to compact, brown, dry, approximately 70% > 2 medium grained sand, some silt, some gravel, (Waste Rock)	5 mm, the matrix material is fi	loose ine to		ARD-0° GS1	2012 LiDAR survey Test pit completed v	with a t	handheld GPS. Elevatior tracked Caterpillar 324D le, 1 yd ³ capacity, 5 teeth		- - - - - - - - - 1201
- - - - - - - - -	09 02 02 02 02 03 04 04 05 05 05 05 05 05 05 05 05 05 05 05 05	GRAVEL AND SAND Some cobbles, trace boulders to 600 mm diame grey, moist, slighly weathered, approximately 4 (Waste Rock) From 2.2 to 2.6 m: Oversize approximately 5	0% > 25 mm.	n to		ARD-02 GS2	2				- - - - - - 1200
MM006605 MT NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PIT LOG)	: 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	From 3.8 to 5.0 m: orange to brown, highly w mm.	eathered, approximately 30%	> 25		ARD-0: GS3 ARD-04 GS4	Soil temperature: 5° Taken with a probe the surface, retrieved in the	°C. Val	it standing up nearly verti ilue considered approxim neter 10 cm into the samp avator bucket.	ate.	- - - - - - - - - - - - - - - - - - -
100605 MT NANSEN GEOT	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		AL PERSPECTIVE. FOCUS.	Comple	ite: 2	Date:	09-08 3:45:00 PM 2013-09-08 5:50:00 PM	_	.ogged By: S. Magnusso Reviewed By: R. Wood		-
}		Engineering Local		Comple	tion I	Depth	: 5.00 m			Page	1 of 2

F	Projec	t: Mo	ount Nansen 2013 Site Investigation	Area: Waste Rock Area	a - Southw	est Low	er Pile 1	Test Pit No: TP-WA-13-11			
(Client:	Gov	vernment of Yukon - AAM	NAD83):	688120	8 F	Project No: VM00605E				
(Contra	actor a	& Method: Boreal Engineering, Test Pit	Easting (UTM Zone 8, N	IAD83): 3	89001	E	Elevation (m): 1202			
	SAMF	PLE T	YPE Shelby Tube Core	SPT (N)	Grab	Sample	•				
E	BACK	FILL	TYPE 🛮 Bentonite Chips 🔀 Bentonite Gr	rout Bentonite Pellets	Ceme	ent Grou	ut 🔯 Drill Cutting	gs 🟥 Sand	Slou	igh	
	DEPTH (m)	SOIL SYMBOL	SOIL DESCRIP		SAMPI F TYPE		(THER TESTS, COMMENTS		ELEVATION (m)	
NANSEN GEOTECH.GPJ 14-02-27 02:35 PM (TEST PIT LOG)	6 8 9		END OF TEST PIT at 5.0 m. Test pit sloughed and is unstable. No free water observed. Test pit backfilled with excavated material.			2013-09	0-08 3:45:00 PM	Logged By: S. Magnuss	On		
3605			Associated Engineering LOCAL	AL PERSPECTIVE.			013-09-08 5:50:00 PM	Reviewed By: R. Wood			
VMO	d		Associated Engineering LOCAL	L FOCUS.	Completion			, , , , , ,	Page	2 of 2	