



Assessment Report for
Exploration Trail Establishment, Surveying,
Surface Sampling, and Overburden Evaluation
on the
Goalie Claims
Between June 2 and July 19, 2006

List of claims and Grant Numbers

Grant Number	Claim
YC24998-YC29440	GOALIE 21-306
YB16726-YB51951	MONEY 1-46
YB55979-YB56058	PUCK 1-80
YC31888-YC31891	PUCK 81-84
YB61756	FOOT 575
YB61762-YB61767	FOOT 581-586
YB87695-YB87718	CUP 1-24

NTS Map sheet number

105G/08 and 105H/05, Wolverine Lake

In the

Watson Lake Mining District, Yukon Territory

Prepared by:

Jason K. Dunning, M.Sc., P.Geo; Vice President Exploration, Yukon Zinc Corporation

Supervised in Field by:

Gilles R. Dessureau, M.Sc.; Project Geologist, Yukon Zinc Corporation

Submitted: January 31, 2007

Table of Contents

Introduction	3
Exploration History	6
Property Location and Access	7
Regional Geology	8
Geology of the Money Property	9
Methods	10
Implications for Exploration and Recommendations	10
<u>Statement of Expenditures</u>	<u>9</u>
<u>References</u>	<u>11</u>

List of Tables

Table 1. List of claims, grant numbers, and expiry date.....	4
Table 2. Statement of Expenditures for Goalie Claims 2006.....	9
Table 3. List of Claims Covering the Road Route.....	9

List of Figures

Figure 1. Map of the Finlayson District showing the location of the Wolverine Deposit and Surrounding deposits	3
Figure 2. Map of the Wolverine area showing the location of the FOOT and ARCH claims, the Wolverine deposit, and the Wolverine Camp	8
Figure 3. Location of the Wolverine Deposit (in the Wolverine Succession), and other VHMS deposits with respect to the Yukon-Tanana Terrane, Yukon, Canada (modified from Piercey, 2001; Wheeler and McFeely, 1991 and Hunt, 1998)	9

Appendices (found after the report)

I – Author’s statement of qualifications	
II – EBA Report – Geotechnical evaluation Wolverine Lake Mine Access Road km 198.5 Robert Campbell Highway, Yukon	

Introduction

Yukon Zinc Corporation (formerly Expatriate Resources Ltd.) holds a 100% interest in the Goalie claims covering approximately 20 kilometres of thin sequences of maroon to green shales and cherty sediments hosted within thick pillowed basaltic flows and associated volcanoclastic rocks known as the Campbell Range. The Campbell Range lies in the Western portion of the Yukon Tanana Terrain and is host to the Money Property mineralization represents a VMS (volcanogenic massive sulphide) containing primarily copper and lesser amounts of zinc, silver and gold. The Goalie Claims were staked to gain access to the Wolverine deposit from the Robert Campbell as well as gain access to the Money Property for further exploration for Copper mineralization similar to the Money showing. A geotechnical evaluation of the overburden and, where present, bedrock was undertaken to determine the exploration potential of the Campbell range between the Wolverine deposit and the Robert Campbell highway, and to determine potential sources for borrow material for construction on the Wolverine Site.

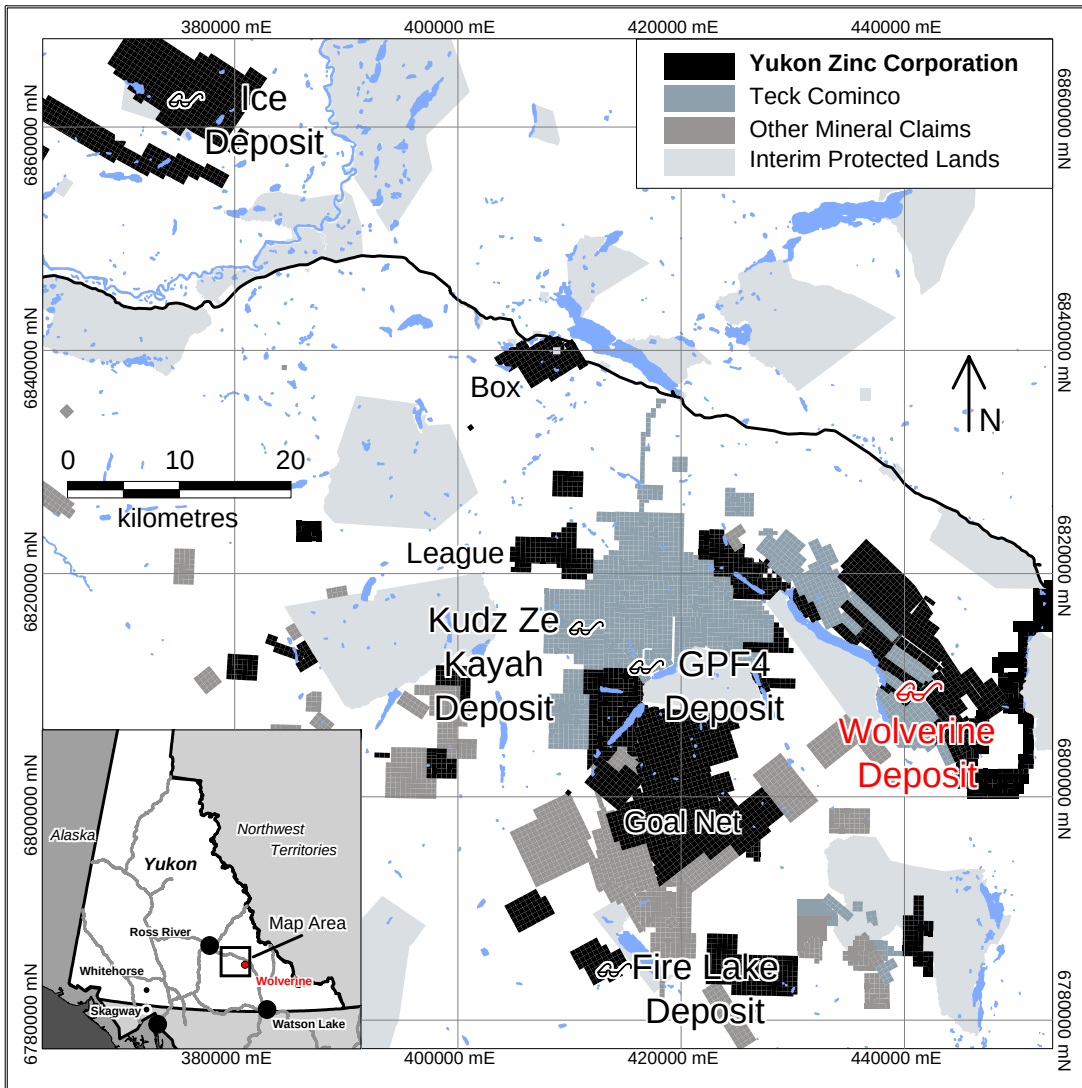


Figure 1. Map of the Finlayson District showing the location of the Goalie Claims, the Money Showing, the Wolverine deposit, and other deposits within the district.

Table 1. A list of the claims, grant numbers, and expiry date.

Grant Number	Claim Name	Expiry Date	Renewal Yrs	New Date
YB16726	MONEY 1	3/20/2011	4	3/20/2015
YB16727	MONEY 2	3/20/2011	4	3/20/2015
YB16728	MONEY 3	3/20/2011	4	3/20/2015
YB16729	MONEY 4	3/20/2011	4	3/20/2015
YB16730	MONEY 5	3/20/2011	4	3/20/2015
YB16731	MONEY 6	3/20/2011	4	3/20/2015
YB16732	MONEY 7	3/20/2011	4	3/20/2015
YB16733	MONEY 8	3/20/2011	4	3/20/2015
YB16734	MONEY 9	3/20/2011	4	3/20/2015
YB16735	MONEY 10	3/20/2011	4	3/20/2015
YB16736	MONEY 11	3/20/2011	4	3/20/2015
YB16737	MONEY 12	3/20/2011	4	3/20/2015
YB16738	MONEY 13	3/20/2011	4	3/20/2015
YB16739	MONEY 14	3/20/2011	4	3/20/2015
YB16740	MONEY 15	3/20/2011	4	3/20/2015
YB16741	MONEY 16	3/20/2011	4	3/20/2015
YB16742	MONEY 17	3/20/2011	4	3/20/2015
YB16743	MONEY 18	3/20/2011	4	3/20/2015
YB16744	MONEY 19	3/20/2011	4	3/20/2015
YB16745	MONEY 20	3/20/2011	4	3/20/2015
YB51926	MONEY 21	2/28/2011	4	2/28/2015
YB51927	MONEY 22	2/28/2011	4	2/28/2015
YB51928	MONEY 23	2/28/2011	4	2/28/2015
YB51929	MONEY 24	2/28/2011	4	2/28/2015
YB51930	MONEY 25	2/28/2011	4	2/28/2015
YB51931	MONEY 26	2/28/2011	4	2/28/2015
YB51932	MONEY 27	2/28/2011	4	2/28/2015
YB51933	MONEY 28	2/28/2011	4	2/28/2015
YB51934	MONEY 29	2/28/2011	4	2/28/2015
YB51935	MONEY 30	2/28/2011	4	2/28/2015
YB51936	MONEY 31	2/28/2011	4	2/28/2015
YB51937	MONEY 32	2/28/2011	4	2/28/2015
YB51938	MONEY 33	2/28/2011	4	2/28/2015
YB51939	MONEY 34	2/28/2011	4	2/28/2015
YB51940	MONEY 35	2/28/2011	4	2/28/2015
YB51941	MONEY 36	2/28/2011	4	2/28/2015
YB51942	MONEY 37	2/28/2011	4	2/28/2015
YB51943	MONEY 38	2/28/2011	4	2/28/2015
YB51944	MONEY 39	2/28/2011	4	2/28/2015
YB51945	MONEY 40	2/28/2011	4	2/28/2015
YB51946	MONEY 41	2/28/2011	4	2/28/2015
YB51947	MONEY 42	2/28/2011	4	2/28/2015
YB51948	MONEY 43	2/28/2011	4	2/28/2015
YB51949	MONEY 44	2/28/2011	4	2/28/2015
YB51950	MONEY 45	2/28/2011	4	2/28/2015
YB51951	MONEY 46	2/28/2011	4	2/28/2015
YB55979	PUCK 1	3/17/2018	4	3/17/2022
YB55980	PUCK 2	3/17/2018	4	3/17/2022
YB55981	PUCK 3	3/17/2018	4	3/17/2022
YB55982	PUCK 4	3/17/2018	4	3/17/2022
YB55983	PUCK 5	3/17/2018	4	3/17/2022
YB55984	PUCK 6	3/17/2018	4	3/17/2022
YB55985	PUCK 7	3/17/2018	4	3/17/2022
YB55986	PUCK 8	3/17/2018	4	3/17/2022
YB55987	PUCK 9	3/17/2018	4	3/17/2022
YB55988	PUCK 10	3/17/2018	4	3/17/2022
YB55989	PUCK 11	3/17/2018	4	3/17/2022
YB55990	PUCK 12	3/17/2018	4	3/17/2022
YB55991	PUCK 13	3/17/2018	4	3/17/2022
YB55992	PUCK 14	3/17/2018	4	3/17/2022
YB55993	PUCK 15	3/17/2018	4	3/17/2022

YB55994	PUCK 16	3/17/2018	4	3/17/2022
YB55995	PUCK 17	3/17/2018	4	3/17/2022
YB55996	PUCK 18	3/17/2018	4	3/17/2022
YB55997	PUCK 19	3/17/2018	4	3/17/2022
YB55998	PUCK 20	3/17/2018	4	3/17/2022
YB55999	PUCK 21	3/17/2018	4	3/17/2022
YB56000	PUCK 22	3/17/2018	4	3/17/2022
YB56001	PUCK 23	3/17/2018	4	3/17/2022
YB56002	PUCK 24	3/17/2018	4	3/17/2022
YB56003	PUCK 25	3/17/2018	4	3/17/2022
YB56004	PUCK 26	3/17/2018	4	3/17/2022
YB56005	PUCK 27	3/17/2018	4	3/17/2022
YB56006	PUCK 28	3/17/2018	4	3/17/2022
YB56007	PUCK 29	3/17/2018	4	3/17/2022
YB56008	PUCK 30	3/17/2018	4	3/17/2022
YB56009	PUCK 31	3/17/2018	4	3/17/2022
YB56010	PUCK 32	3/17/2018	4	3/17/2022
YB56011	PUCK 33	3/17/2018	4	3/17/2022
YB56012	PUCK 34	3/17/2018	4	3/17/2022
YB56013	PUCK 35	3/17/2018	4	3/17/2022
YB56014	PUCK 36	3/17/2018	4	3/17/2022
YB56015	PUCK 37	3/17/2018	4	3/17/2022
YB56016	PUCK 38	3/17/2018	4	3/17/2022
YB56017	PUCK 39	3/17/2018	4	3/17/2022
YB56018	PUCK 40	3/17/2018	4	3/17/2022
YB56019	PUCK 41	3/17/2018	4	3/17/2022
YB56020	PUCK 42	3/17/2018	4	3/17/2022
YB56021	PUCK 43	3/17/2018	4	3/17/2022
YB56022	PUCK 44	3/17/2018	4	3/17/2022
YB56023	PUCK 45	3/17/2018	4	3/17/2022
YB56024	PUCK 46	3/17/2018	4	3/17/2022
YB56025	PUCK 47	3/17/2018	4	3/17/2022
YB56026	PUCK 48	3/17/2018	4	3/17/2022
YB56027	PUCK 49	3/17/2018	4	3/17/2022
YB56028	PUCK 50	3/17/2018	4	3/17/2022
YB56029	PUCK 51	3/17/2018	4	3/17/2022
YB56030	PUCK 52	3/17/2018	4	3/17/2022
YB56031	PUCK 53	3/17/2018	4	3/17/2022
YB56032	PUCK 54	3/17/2018	4	3/17/2022
YB56033	PUCK 55	3/17/2018	4	3/17/2022
YB56034	PUCK 56	3/17/2018	4	3/17/2022
YB56035	PUCK 57	3/17/2018	4	3/17/2022
YB56036	PUCK 58	3/17/2018	4	3/17/2022
YB56037	PUCK 59	3/17/2018	4	3/17/2022
YB56038	PUCK 60	3/17/2018	4	3/17/2022
YB56039	PUCK 61	3/17/2018	4	3/17/2022
YB56040	PUCK 62	3/17/2018	4	3/17/2022
YB56041	PUCK 63	3/17/2018	4	3/17/2022
YB56042	PUCK 64	3/17/2018	4	3/17/2022
YB56043	PUCK 65	3/17/2018	4	3/17/2022
YB56044	PUCK 66	3/17/2018	4	3/17/2022
YB56045	PUCK 67	3/17/2018	4	3/17/2022
YB56046	PUCK 68	3/17/2018	4	3/17/2022
YB56047	PUCK 69	3/17/2018	4	3/17/2022
YB56048	PUCK 70	3/17/2018	4	3/17/2022
YB56049	PUCK 71	3/17/2018	4	3/17/2022
YB56050	PUCK 72	3/17/2018	4	3/17/2022
YB56051	PUCK 73	3/17/2018	4	3/17/2022
YB56052	PUCK 74	3/17/2018	4	3/17/2022
YB56053	PUCK 75	3/17/2018	4	3/17/2022
YB56054	PUCK 76	3/17/2018	4	3/17/2022
YB56055	PUCK 77	3/17/2018	4	3/17/2022
YB56056	PUCK 78	3/17/2018	4	3/17/2022

YC25176	GOALIE 199	8/3/2007	5	8/3/2012
YC25177	GOALIE 200	8/3/2007	5	8/3/2012
YC25178	GOALIE 201	8/3/2007	5	8/3/2012
YC25179	GOALIE 202	8/3/2007	5	8/3/2012
YC25180	GOALIE 203	8/3/2007	5	8/3/2012
YC25181	GOALIE 204	8/3/2007	5	8/3/2012
YC25182	GOALIE 205	8/3/2007	5	8/3/2012
YC25183	GOALIE 206	8/3/2007	5	8/3/2012
YC25184	GOALIE 207	8/3/2007	5	8/3/2012
YC25185	GOALIE 208	8/3/2007	5	8/3/2012
YC25186	GOALIE 209	8/3/2007	5	8/3/2012
YC25187	GOALIE 210	8/3/2007	5	8/3/2012
YC25297	GOALIE 211	9/23/2007	5	9/23/2012
YC25298	GOALIE 212	9/23/2007	5	9/23/2012
YC25299	GOALIE 213	9/23/2007	5	9/23/2012
YC25300	GOALIE 214	9/23/2007	5	9/23/2012
YC25301	GOALIE 215	9/23/2007	5	9/23/2012
YC25302	GOALIE 216	9/23/2007	5	9/23/2012
YC25303	GOALIE 217	9/23/2007	5	9/23/2012
YC25304	GOALIE 218	9/23/2007	5	9/23/2012
YC25305	GOALIE 219	9/23/2007	5	9/23/2012
YC25306	GOALIE 220	9/23/2007	5	9/23/2012
YC25307	GOALIE 221	9/23/2007	5	9/23/2012
YC25308	GOALIE 222	9/23/2007	5	9/23/2012
YC25309	GOALIE 223	9/23/2007	5	9/23/2012
YC25310	GOALIE 224	9/23/2007	5	9/23/2012
YC25311	GOALIE 225	9/23/2007	5	9/23/2012
YC25312	GOALIE 226	9/23/2007	5	9/23/2012
YC25313	GOALIE 227	9/23/2007	5	9/23/2012
YC25314	GOALIE 228	9/23/2007	5	9/23/2012
YC25315	GOALIE 229	9/23/2007	5	9/23/2012
YC25316	GOALIE 230	9/23/2007	5	9/23/2012
YC25317	GOALIE 231	9/23/2007	5	9/23/2012
YC25318	GOALIE 232	9/23/2007	5	9/23/2012
YC25319	GOALIE 233	9/23/2007	5	9/23/2012
YC25320	GOALIE 234	9/23/2007	5	9/23/2012
YC25321	GOALIE 235	9/23/2007	5	9/23/2012
YC25322	GOALIE 236	9/23/2007	5	9/23/2012
YC25323	GOALIE 237	9/23/2007	5	9/23/2012
YC25324	GOALIE 238	9/23/2007	5	9/23/2012
YC25325	GOALIE 239	9/23/2007	5	9/23/2012
YC25326	GOALIE 240	9/23/2007	5	9/23/2012
YC25327	GOALIE 241	9/23/2007	5	9/23/2012
YC25328	GOALIE 242	9/23/2007	5	9/23/2012

YC25329	GOALIE 243	9/23/2007	5	9/23/2012
YC25330	GOALIE 244	9/23/2007	5	9/23/2012
YC25331	GOALIE 245	9/23/2007	5	9/23/2012
YC25332	GOALIE 246	9/23/2007	5	9/23/2012
YC25333	GOALIE 247	9/23/2007	5	9/23/2012
YC25334	GOALIE 248	9/23/2007	5	9/23/2012
YC25335	GOALIE 249	9/23/2007	5	9/23/2012
YC25336	GOALIE 250	9/23/2007	5	9/23/2012
YC25337	GOALIE 251	9/23/2007	5	9/23/2012
YC25338	GOALIE 252	9/23/2007	5	9/23/2012
YC25339	GOALIE 253	9/23/2007	5	9/23/2012
YC25340	GOALIE 254	9/23/2007	5	9/23/2012
YC25341	GOALIE 255	9/23/2007	5	9/23/2012
YC25342	GOALIE 256	9/23/2007	5	9/23/2012
YC25343	GOALIE 257	9/23/2007	5	9/23/2012
YC25344	GOALIE 258	9/23/2007	5	9/23/2012
YC25345	GOALIE 259	9/23/2007	5	9/23/2012
YC25346	GOALIE 260	9/23/2007	5	9/23/2012
YC25347	GOALIE 261	9/23/2007	5	9/23/2012
YC25348	GOALIE 262	9/23/2007	5	9/23/2012
YC25349	GOALIE 263	9/23/2007	5	9/23/2012
YC25350	GOALIE 264	9/23/2007	5	9/23/2012
YC25351	GOALIE 265	9/23/2007	5	9/23/2012
YC25352	GOALIE 266	9/23/2007	5	9/23/2012
YC25353	GOALIE 267	9/23/2007	5	9/23/2012
YC25354	GOALIE 268	9/23/2007	5	9/23/2012
YC25355	GOALIE 269	9/23/2007	5	9/23/2012
YC25356	GOALIE 270	9/23/2007	5	9/23/2012
YC25357	GOALIE 271	9/23/2007	5	9/23/2012
YC25358	GOALIE 272	9/23/2007	5	9/23/2012
YC29140	GOALIE 289	8/4/2007	5	8/4/2012
YC29141	GOALIE 290	8/4/2007	5	8/4/2012
YC29142	GOALIE 291	8/4/2007	5	8/4/2012
YC29143	GOALIE 292	8/4/2007	5	8/4/2012
YC29437	GOALIE 303	11/23/2006	5	11/23/2011
YC29438	GOALIE 304	11/23/2006	5	11/23/2011
YC29439	GOALIE 305	11/23/2006	5	11/23/2011
YC29440	GOALIE 306	11/23/2006	5	11/23/2011
YC31888	PUCK 81	8/18/2007	5	8/18/2012
YC31889	PUCK 82	8/18/2007	5	8/18/2012
YC31890	PUCK 83	8/18/2007	5	8/18/2012
YC31891	PUCK 84	8/18/2007	5	8/18/2012

Exploration History

The Goalie claims were staked in 2005 to cover a potential, permanent, all-season access route for the Wolverine deposit. The route was chosen based on several criterions including, but not limited to, environmental and socioeconomic considerations, overburden characteristics in search of potential borrow sources, topographic considerations and access to the Money claims for future exploration.

The original discovery on the Money Property was made by Welcome North Mines Ltd. and Esperanza Exploration Ltd. in 1980. The property was immediately optioned to Arbor Resources Inc. which carried out electromagnetic and geochemical surveys in the same year. In 1981, electromagnetic, magnetic, and additional geochemical surveys were followed up with three diamond drill holes totalling 329m funded by a joint venture with Esso Resources Canada Limited. After the Property was allowed to lapse, YGC Resources Ltd. re-staked the property in 1990 (Money 1-20), and added additional claims in 1994 (Money 21-46). In 1994 the property was optioned to Atna Resources, who, in 1995 and 1996, conducted several programs consisting of geological mapping, rock and soil sampling, hand trenching, horizontal loop EM geophysics, and diamond drilling. Seven diamond drill holes were drilled in 1996 for a total of 965.6m. All core from the 1996 drill program was stored at the Money creek camp site (UTM co-ordinates 446400E, 6810200N). In 1997 Atna Resources conducted a program consisting of GPS surveying, geological mapping, geo-electric and geophysical surveying, and diamond drilling. Four diamond drill holes were drilled in 1997 for a total of 827.8m. The best drill intersection in 1996 was 1.0 metre of massive sulphide grading 1.75 % copper, 21 g/t silver and 0.4 g/t gold. In 2005 Yukon Zinc entered into a Joint Venture agreement between with YGC Resources. In 2005, Yukon Zinc Corporation conducted a survey on the Money Property to verify claim post locations.

Property Location and Access

The Goalie Claims are located approximately 280 kilometres north-east of Whitehorse, and intersect the Robert Campbell Highway approximately halfway between Ross River and Watson Lake (Kilometre 198 on Robert Campbell). The claims straddle the boundary between map sheet 105G/08 Wolverine Lake and 105H/05 Money Creek. The property is approximately 10 kilometres east of the Wolverine deposit and another 3 km east of the Wolverine Camp, where crews were based while they worked on the claims. Access to the claims is gained from the Wolverine Camp or the Robert Campbell Highway by trail. The Wolverine Camp can be accessed by plane or helicopter.

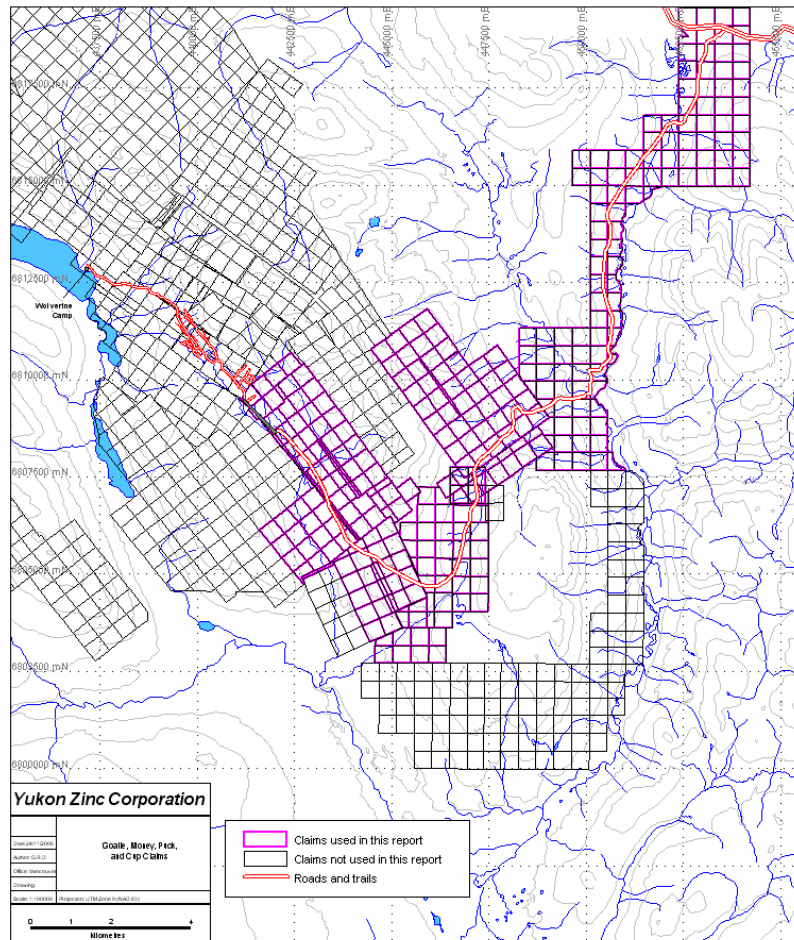


Figure 2. Map of the Wolverine area showing the location of the Goalie, Money, Puck, Foot, and Cup claims, the Wolverine deposit, and the Wolverine Camp.

Regional Geology

The Yukon-Tanana Terrane is a large autochthonous geological province extending from Alaska, through The Yukon Territory and into north-central British Columbia (Figure 3). It consists of mid-late Paleozoic volcanic, plutonic, and sedimentary rocks. The volcanic-hosted massive sulphide deposits of the Finlayson Lake District are located in the eastern most section of the Yukon Tanana Terrane, which has been displaced to the south-east by the Tintina Fault Zone (Figure 1). The Finlayson Lake District has been divided into 3 distinct successions separated by regional unconformities (Murphy, 1998; Piercey and Murphy, 2000). The lower most unit (called the Grass Lakes Succession) consists of mafic and felsic metavolcanic rocks, carbonaceous metaclastic rocks, marbles, and granitic orthogneiss. The Fyre Lake (Cu-rich, massive sulphide) deposit is located near the base of this succession, while the Kudzu Ze Kayah and GP4F (polymetallic, massive sulphide) deposits are located within the upper portion of this succession. The middle unit (called the Wolverine Succession) consists of carbonaceous argillite, felsic volcanics and high level intrusions, and as well as exhalative carbonate and/or iron oxides. The Wolverine (polymetallic, sediment hosted, massive sulphide) deposit occurs near the base of Wolverine Succession. The upper most unit (called the Campbell Range Succession) consists of mafic metavolcanic rocks and wackes, and is host to the Ice (Cu-rich massive sulphide) deposit. The Money Property covers approximately 1030ha of the Campbell Range Succession, and contains known massive sulphide mineralization.

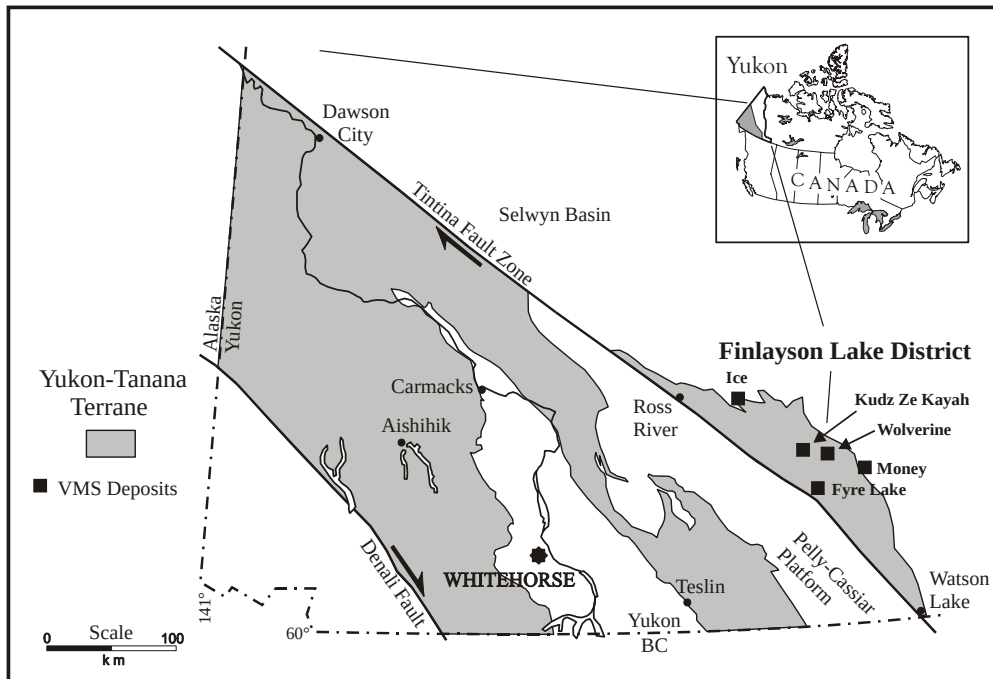


Figure 3. Location of the Wolverine, Kudz Ze Kayah, Fyre Lake, and Ice Deposits, as well as the location of the Money occurrence with respect to the Yukon-Tanana Terrane, Yukon, Canada (modified from Piercey, 2001; Wheeler and McFeely, 1991 and Hunt, 1998).

Geology of the Money Property

Mapping (Plint, 1996) has suggested that the Money claims cover a portion of the Slide Mountain Terrane in the Campbell Range which consists of the north-west trending irregular lens of mafic volcanics. These mafic volcanics include a thick sequence of dark green, fine grained pillowed basalts. Locally minor amounts of inter-pillow breccias, hyaloclastites, and lapilli tuffs, have been altered to chlorite-quartz-epidote, and have developed and heterogeneous foliation. Within the basalts on the Money property at least one and possibly three horizons of fine to medium grained interflow sediments and/or tuffs occur associated with hematite and jasper as a pervasive maroon alteration or exhalative sediment. The most well defined sedimentary unit host the massive sulphide mineralization. Mineralization on the Money Property has been subdivided into two distinct types: discordant, quartz-pyrite-chlorite+sericite stockwork and conformable, massive to moderately-well banded pyrite. It has been described in detail in two locations: Welcome North Creek and Boulder Creek. In Welcome North Creek, massive, moderately well banded pyrite with a siliceous matrix is exposed as boulder float.

Methods

Yukon Engineering Services (and EBA Engineering Consultants Ltd), was retained to conduct a geotechnical evaluation of the proposed road route during the pioneering, blazing and surveying of the initial road, and a report was produced (Appendix II). During the evaluation, seventy-six excavator supported test pits were dug approximately every 300m along the road route and soil samples were taken. The test pits were logged and the results are provided in Appendix II. The soils were tested at EBA geotechnical laboratory in Whitehorse for moisture and grain-size. A helicopter supported ground survey was conducted ahead of the geotechnical test pitting to ensure accuracy of the road location and a map of the surveyed road route is given in Appendix II.

Implications for Exploration and Recommendations

The Money Property hosts a significant mineral occurrence with the best drill intersection in 1996 of 1.0 metre of massive sulphide grading 1.75 % copper, 21 g/t silver and 0.4 g/t gold. The property has the potential for other mineralized zone and requires more exploration to evaluate its true potential. The Goalie Claims and the access road have opened up the area for further exploration. Soil sampling and detailed mapping should be carried out on the road route to evaluate any possible targets in the favourable geology to follow-up with additional work.

Statement of Expenditures

Table 4. shows the breakdown for expenses for the work performed on the Goalie Claims during the period between June 2 and July 19th, 2006. The money spent on the road route is distributed evenly between the 76 Claims listed below which cover the road route (Table 5).

Table 4. Statement of Expenditures for Goalie Claims 2006.

Expenditure Type	Description	Cost
Helicopter	Trans North 206 helicopter (\$1200 per hour at 37 hours)	\$57,709.77
Jet-B	Fuel for helicopter (18 Barrels @ \$1.64/L)	\$5,035
Diesel	Fuel for heavy equipment (18 Barrels @ \$1.12/L)	\$3,438
CAT costs	Heavy equipment costs (\$90/hr)(48 days)	\$34,560
Staff	Operator cost for heavy equipment (48 Days)	\$16,800
Yukon Engineering	Test pitting and surveying including geologist	\$98,923.08
Total		\$216,465.77

Table 5. List of Claims covering the road route.

Grant Number	Claim Number				
YB16726	MONEY 1	YB56046	PUCK 68	YC25025	GOALIE 48
YB16727	MONEY 2	YB56047	PUCK 69	YC25027	GOALIE 50
YB16736	MONEY 11	YB56048	PUCK 70	YC25028	GOALIE 51
YB16737	MONEY 12	YB56049	PUCK 71	YC25029	GOALIE 52
YB16738	MONEY 13	YB87705	CUP 11	YC25037	GOALIE 60
YB16739	MONEY 14	YB87707	CUP 13	YC25039	GOALIE 62
YB51934	MONEY 29	YB87708	CUP 14	YC25040	GOALIE 63
YB51935	MONEY 30	YC25007	GOALIE 30	YC25042	GOALIE 65
YB56004	PUCK 26	YC25008	GOALIE 31	YC25066	GOALIE 89
YB56006	PUCK 28	YC25009	GOALIE 32	YC25070	GOALIE 93
YB56008	PUCK 30	YC25010	GOALIE 33	YC25072	GOALIE 95
YB56010	PUCK 32	YC25011	GOALIE 34	YC25073	GOALIE 96
YB56012	PUCK 34	YC25012	GOALIE 35	YC25074	GOALIE 97
YB56021	PUCK 43	YC25013	GOALIE 36	YC25075	GOALIE 98
YB56023	PUCK 45	YC25015	GOALIE 38	YC25077	GOALIE 100
YB56025	PUCK 47	YC25017	GOALIE 40	YC25079	GOALIE 102
YB56037	PUCK 59	YC25018	GOALIE 41	YC25182	GOALIE 205
YB56039	PUCK 61	YC25020	GOALIE 43	YC25183	GOALIE 206
YB56040	PUCK 62	YC25022	GOALIE 45	YC25299	GOALIE 213
YB56045	PUCK 67	YC25023	GOALIE 46	YC25301	GOALIE 215
		YC25024	GOALIE 47	YC25303	GOALIE 217

YC25305	GOALIE 219
YC25308	GOALIE 222
YC25316	GOALIE 230
YC25317	GOALIE 231
YC25319	GOALIE 233

YC25343	GOALIE 257
YC25344	GOALIE 258
YC25345	GOALIE 259
YC25346	GOALIE 260
YC29140	GOALIE 289

YC29141	GOALIE 290
YC29143	GOALIE 292
YC29439	GOALIE 305
YC29440	GOALIE 306

References

Bradshaw, G.D., Tucker, T.L., Peter, J.M., Paradis, S., and Rowins, S.M., 2001. Geology of the Wolverine polymetallic volcanic hosted massive sulphide deposit, Finlayson Lake district, Yukon Territory, Canada. Yukon Exploration and Geology, 2001. D.S. Emond and L.H. Weston (eds), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 269-287.

Hunt, J.A., 1998. Recent discoveries of volcanic-associated massive sulphide deposits in the Yukon:

Canadian Institute of Mining and Metallurgy Bulletin, v. 90, p. 56-65.

Piercey, S.J. 2001. Petrology and tectonic setting of the felsic and mafic volcanic and intrusive rocks in the Finlayson Lake Volcanic-hosted massive sulphide (VHMS) District, Yukon, Canada: A record of Mid-Paleozoic Arc and Back Arc Magmatism and Metallogeny. PhD. Thesis, University of British Columbia, Canada.

Wheeler, J.O., and McFeely, P., 1991. Tectonic Assemblage Map of the Canadian Cordillera and

Adjacent Parts of the United States of America: Geological Survey of Canada, Map 1712A, Scale 1: 2000 000.

Respectfully Submitted,
YUKON ZINC CORPORATION

Jason Dunning, M.Sc., P.Geo.
Vice President Exploration
Yukon Zinc Corporation

APPENDIX 1 – STATEMENT OF QUALIFICATIONS

1. I, Jason King Dunning, of 208 East 5th Street, North Vancouver, British Columbia, V7L 1L7, Canada, hereby state –that I am Vice President, Exploration with Yukon Zinc Corporation, with offices at Suite 701, 475 Howe Street, Vancouver, British Columbia, Canada, and that:
2. I hold a B.Sc. (Honors Geology) from Carleton University, Ontario (1994) and a M.Sc. (Geology) from the Mineral Exploration Research Centre at Laurentian University, Ontario (1998).
3. I have 7 years experience with various research institutions and mining companies in Canada and the United States, not including my summer field season work during my undergraduate degree. My primary employment since 1994 has been in the field of mineral exploration.

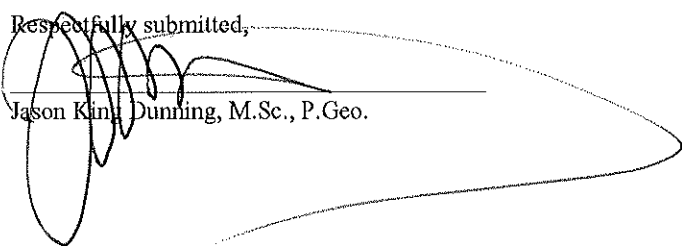
2003-Present	Vice President	Yukon Zinc Corporation**
2001-2003	Project Geologist	Anglo American Canada Exploration Ltd.*
1999-2001	Project Geologist	Hudson Bay Expl. & Dev. Co. Ltd.*
1996-1999	Geologist	Pamicon Developments Ltd.
1994-1996	Geologist	Teck Exploration Ltd./Laurentian University

* denotes same organization except for a change in formal business name
 ** denotes formerly Expatriate Resources Ltd.
4. I am a Professional Geoscientist (0725) with the Association of Professional Geoscientists of Ontario in good standing. I am a Professional Geologist (29312) with the Association of Professional Engineers and Geologists of British Columbia in good standing.
5. I am also a Member in good standing with the Society of Economic Geologists (222555), as well as a Fellow of the Geological Association of Canada (F6819).
6. I hold a valid Manitoba Prospector License (4077) and Free Miner Certificate in British Columbia.
7. I have specialized training in the areas of volcanology, ore deposit geology and hydrothermal alteration through academic training, numerous short-courses, and exploration project experience. My experience has allowed me to become familiar with the evaluation of both regional and property geology, prospecting, geophysical surveys, geochemical analysis, diamond core drilling, and the various facets of the permitting process in Ontario, Manitoba, Saskatchewan, and British Columbia.
8. This report is based upon data collected from observations collected in June and July 2006 during exploration work supervised by Mr. G. Dessureau, Project Geologist for Yukon Zinc Corporation, whose office was in Vancouver, British Columbia, Canada.

DATED at Vancouver, B.C., January 31, 2007

Respectfully submitted,

Jason King Dunning, M.Sc., P.Geo.



APPENDIX 2 – EBA REPORT: Geotechnical evaluation Wolverine Lake Mine Access Road km 198.5 Robert
Campbell Highway, Yukon



Assessment Report for
Exploration Trail Establishment, Surveying,
Surface Sampling, and Overburden Evaluation
on the
Goalie Claims
Between June 2 and July 19, 2006

List of claims and Grant Numbers

Grant Number	Claim
YC24998-YC29440	GOALIE 21-306
YB16726-YB51951	MONEY 1-46
YB55979-YB56058	PUCK 1-80
YC31888-YC31891	PUCK 81-84
YB61756	FOOT 575
YB61762-YB61767	FOOT 581-586
YB87695-YB87718	CUP 1-24

NTS Map sheet number

105G/08 and 105H/05, Wolverine Lake

In the

Watson Lake Mining District, Yukon Territory

Prepared by:

Jason K. Dunning, M.Sc., P.Geo; Vice President Exploration, Yukon Zinc Corporation

Supervised in Field by:

Gilles R. Dessureau, M.Sc.; Project Geologist, Yukon Zinc Corporation

Submitted: January 31, 2007

Table of Contents

Introduction	3
Exploration History	6
Property Location and Access	7
Regional Geology	8
Geology of the Money Property	9
Methods	10
Implications for Exploration and Recommendations	10
<u>Statement of Expenditures</u>	<u>9</u>
<u>References</u>	<u>11</u>

List of Tables

Table 1. List of claims, grant numbers, and expiry date.....	4
Table 2. Statement of Expenditures for Goalie Claims 2006.....	9
Table 3. List of Claims Covering the Road Route.....	9

List of Figures

Figure 1. Map of the Finlayson District showing the location of the Wolverine Deposit and Surrounding deposits	4
Figure 2. Map of the Wolverine area showing the location of the FOOT and ARCH claims, the Wolverine deposit, and the Wolverine Camp	7
Figure 3. Location of the Wolverine Deposit (in the Wolverine Succession), and other VHMS deposits with respect to the Yukon-Tanana Terrane, Yukon, Canada (modified from Piercey, 2001; Wheeler and McFeely, 1991 and Hunt, 1998)	8
Figure 4. Diamond drill Collar locations for the 2005 drilling in red with all historical drilling in black	8

Appendices (found after the report)

I – Author’s statement of qualifications

II – EBA Report – Geotechnical evaluation Wolverine Lake Mine Access Road km 198.5 Robert Campbell Highway, Yukon

Introduction

Yukon Zinc Corporation (formerly Expatriate Resources Ltd.) holds a 100% interest in the Goalie claims covering approximately 20 kilometres of thin sequences of maroon to green shales and cherty sediments hosted within thick pillowed basaltic flows and associated volcanoclastic rocks known as the Campbell Range. The Campbell Range lies in the Western portion of the Yukon Tanana Terrain and is host to the Money Property mineralization represents a VMS (volcanogenic massive sulphide) containing primarily copper and lesser amounts of zinc, silver and gold. The Goalie Claims were staked to gain access to the Wolverine deposit from the Robert Campbell as well as gain access to the Money Property for further exploration for Copper mineralization similar to the Money showing. A geotechnical evaluation of the overburden and, where present, bedrock was undertaken to determine the exploration potential of the Campbell range between the Wolverine deposit and the Robert Campbell highway, and to determine potential sources for borrow material for construction on the Wolverine Site.

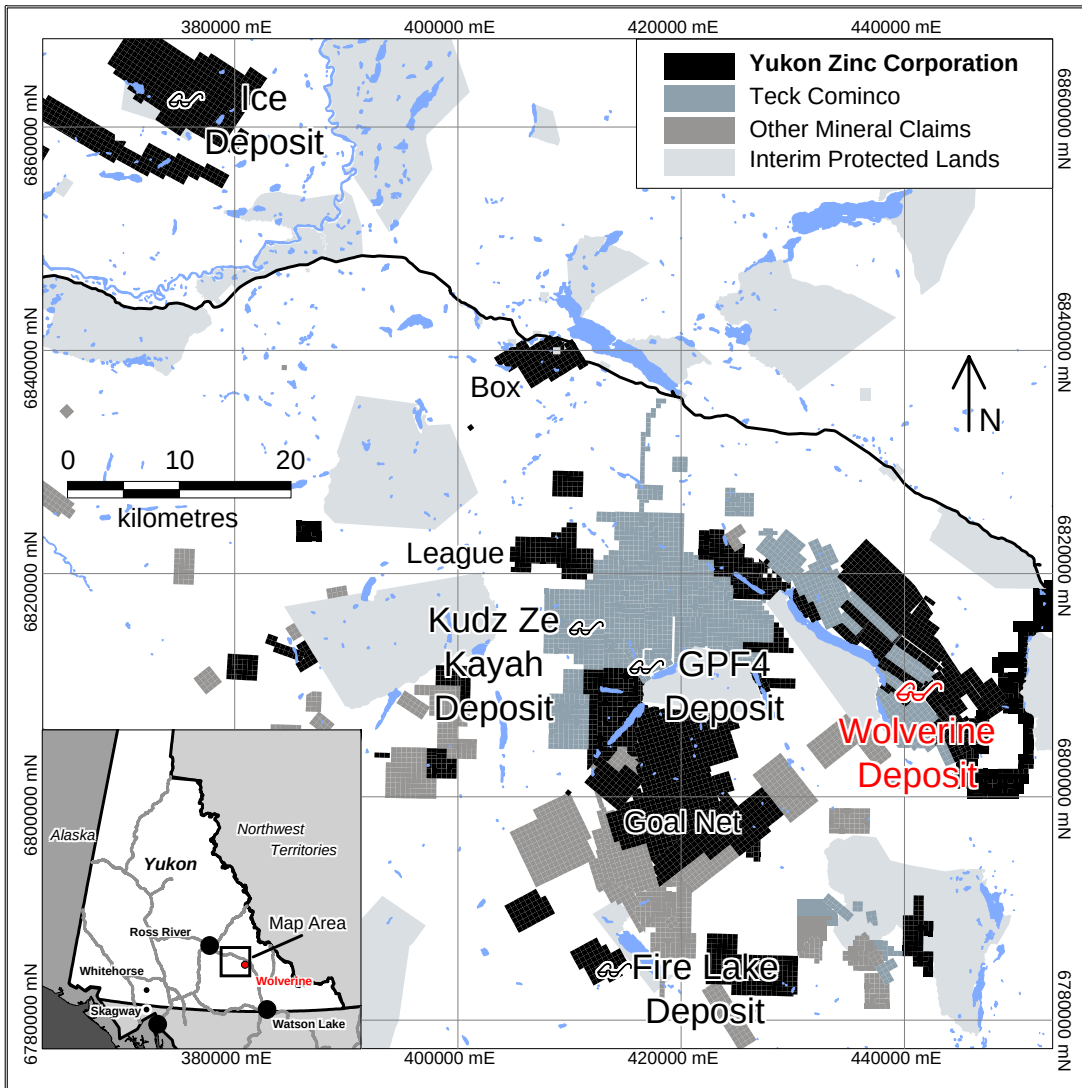


Figure 1. Map of the Finlayson District showing the location of the Goalie Claims, the Money Showing, the Wolverine deposit, and other deposits within the district.

Table 1. A list of the claims, grant numbers, and expiry date.

Grant Number	Claim Name	Expiry Date	Renewal Yrs	New Date
YB16726	MONEY 1	3/20/2011	4	3/20/2015
YB16727	MONEY 2	3/20/2011	4	3/20/2015
YB16728	MONEY 3	3/20/2011	4	3/20/2015
YB16729	MONEY 4	3/20/2011	4	3/20/2015
YB16730	MONEY 5	3/20/2011	4	3/20/2015
YB16731	MONEY 6	3/20/2011	4	3/20/2015
YB16732	MONEY 7	3/20/2011	4	3/20/2015
YB16733	MONEY 8	3/20/2011	4	3/20/2015
YB16734	MONEY 9	3/20/2011	4	3/20/2015
YB16735	MONEY 10	3/20/2011	4	3/20/2015
YB16736	MONEY 11	3/20/2011	4	3/20/2015
YB16737	MONEY 12	3/20/2011	4	3/20/2015
YB16738	MONEY 13	3/20/2011	4	3/20/2015
YB16739	MONEY 14	3/20/2011	4	3/20/2015
YB16740	MONEY 15	3/20/2011	4	3/20/2015
YB16741	MONEY 16	3/20/2011	4	3/20/2015
YB16742	MONEY 17	3/20/2011	4	3/20/2015
YB16743	MONEY 18	3/20/2011	4	3/20/2015
YB16744	MONEY 19	3/20/2011	4	3/20/2015
YB16745	MONEY 20	3/20/2011	4	3/20/2015
YB51926	MONEY 21	2/28/2011	4	2/28/2015
YB51927	MONEY 22	2/28/2011	4	2/28/2015
YB51928	MONEY 23	2/28/2011	4	2/28/2015
YB51929	MONEY 24	2/28/2011	4	2/28/2015
YB51930	MONEY 25	2/28/2011	4	2/28/2015
YB51931	MONEY 26	2/28/2011	4	2/28/2015
YB51932	MONEY 27	2/28/2011	4	2/28/2015
YB51933	MONEY 28	2/28/2011	4	2/28/2015
YB51934	MONEY 29	2/28/2011	4	2/28/2015
YB51935	MONEY 30	2/28/2011	4	2/28/2015
YB51936	MONEY 31	2/28/2011	4	2/28/2015
YB51937	MONEY 32	2/28/2011	4	2/28/2015
YB51938	MONEY 33	2/28/2011	4	2/28/2015
YB51939	MONEY 34	2/28/2011	4	2/28/2015
YB51940	MONEY 35	2/28/2011	4	2/28/2015
YB51941	MONEY 36	2/28/2011	4	2/28/2015
YB51942	MONEY 37	2/28/2011	4	2/28/2015
YB51943	MONEY 38	2/28/2011	4	2/28/2015
YB51944	MONEY 39	2/28/2011	4	2/28/2015
YB51945	MONEY 40	2/28/2011	4	2/28/2015
YB51946	MONEY 41	2/28/2011	4	2/28/2015
YB51947	MONEY 42	2/28/2011	4	2/28/2015
YB51948	MONEY 43	2/28/2011	4	2/28/2015
YB51949	MONEY 44	2/28/2011	4	2/28/2015
YB51950	MONEY 45	2/28/2011	4	2/28/2015
YB51951	MONEY 46	2/28/2011	4	2/28/2015
YB55979	PUCK 1	3/17/2018	4	3/17/2022
YB55980	PUCK 2	3/17/2014	4	3/17/2018
YB55981	PUCK 3	3/17/2018	4	3/17/2022
YB55982	PUCK 4	3/17/2018	4	3/17/2022
YB55983	PUCK 5	3/17/2018	4	3/17/2022
YB55984	PUCK 6	3/17/2018	4	3/17/2022
YB55985	PUCK 7	3/17/2018	4	3/17/2022
YB55986	PUCK 8	3/17/2018	4	3/17/2022
YB55987	PUCK 9	3/17/2018	4	3/17/2022
YB55988	PUCK 10	3/17/2018	4	3/17/2022
YB55989	PUCK 11	3/17/2018	4	3/17/2022
YB55990	PUCK 12	3/17/2018	4	3/17/2022
YB55991	PUCK 13	3/17/2018	4	3/17/2022
YB55992	PUCK 14	3/17/2018	4	3/17/2022
YB55993	PUCK 15	3/17/2014	4	3/17/2018

YB55994	PUCK 16	3/17/2014	4	3/17/2018
YB55995	PUCK 17	3/17/2014	4	3/17/2018
YB55996	PUCK 18	3/17/2014	4	3/17/2018
YB55997	PUCK 19	3/17/2018	4	3/17/2022
YB55998	PUCK 20	3/17/2018	4	3/17/2022
YB55999	PUCK 21	3/17/2018	4	3/17/2022
YB56000	PUCK 22	3/17/2018	4	3/17/2022
YB56001	PUCK 23	3/17/2018	4	3/17/2022
YB56002	PUCK 24	3/17/2018	4	3/17/2022
YB56003	PUCK 25	3/17/2018	4	3/17/2022
YB56004	PUCK 26	3/17/2018	4	3/17/2022
YB56005	PUCK 27	3/17/2018	4	3/17/2022
YB56006	PUCK 28	3/17/2018	4	3/17/2022
YB56007	PUCK 29	3/17/2018	4	3/17/2022
YB56008	PUCK 30	3/17/2018	4	3/17/2022
YB56009	PUCK 31	3/17/2014	4	3/17/2018
YB56010	PUCK 32	3/17/2014	4	3/17/2018
YB56011	PUCK 33	3/17/2014	4	3/17/2018
YB56012	PUCK 34	3/17/2014	4	3/17/2018
YB56013	PUCK 35	3/17/2018	4	3/17/2022
YB56014	PUCK 36	3/17/2018	4	3/17/2022
YB56015	PUCK 37	3/17/2018	4	3/17/2022
YB56016	PUCK 38	3/17/2018	4	3/17/2022
YB56017	PUCK 39	3/17/2018	4	3/17/2022
YB56018	PUCK 40	3/17/2018	4	3/17/2022
YB56019	PUCK 41	3/17/2018	4	3/17/2022
YB56020	PUCK 42	3/17/2018	4	3/17/2022
YB56021	PUCK 43	3/17/2018	4	3/17/2022
YB56022	PUCK 44	3/17/2018	4	3/17/2022
YB56023	PUCK 45	3/17/2014	4	3/17/2018
YB56024	PUCK 46	3/17/2014	4	3/17/2018
YB56025	PUCK 47	3/17/2014	4	3/17/2018
YB56026	PUCK 48	3/17/2014	4	3/17/2018
YB56027	PUCK 49	3/17/2014	4	3/17/2018
YB56028	PUCK 50	3/17/2014	4	3/17/2018
YB56029	PUCK 51	3/17/2014	4	3/17/2018
YB56030	PUCK 52	3/17/2014	4	3/17/2018
YB56031	PUCK 53	3/17/2014	4	3/17/2018
YB56032	PUCK 54	3/17/2014	4	3/17/2018
YB56033	PUCK 55	3/17/2014	4	3/17/2018
YB56034	PUCK 56	3/17/2014	4	3/17/2018
YB56035	PUCK 57	3/17/2014	4	3/17/2018
YB56036	PUCK 58	3/17/2014	4	3/17/2018
YB56037	PUCK 59	3/17/2014	4	3/17/2018
YB56038	PUCK 60	3/17/2014	4	3/17/2018
YB56039	PUCK 61	3/17/2014	4	3/17/2018
YB56040	PUCK 62	3/17/2014	4	3/17/2018
YB56041	PUCK 63	3/17/2014	4	3/17/2018
YB56042	PUCK 64	3/17/2014	4	3/17/2018
YB56043	PUCK 65	3/17/2014	4	3/17/2018
YB56044	PUCK 66	3/17/2014	4	3/17/2018
YB56045	PUCK 67	3/17/2014	4	3/17/2018
YB56046	PUCK 68	3/17/2014	4	3/17/2018
YB56047	PUCK 69	3/17/2014	4	3/17/2018
YB56048	PUCK 70	3/17/2014	4	3/17/2018
YB56049	PUCK 71	3/17/2014	4	3/17/2018
YB56050	PUCK 72	3/17/2014	4	3/17/2018
YB56051	PUCK 73	3/17/2014	4	3/17/2018
YB56052	PUCK 74	3/17/2014	4	3/17/2018
YB56053	PUCK 75	3/17/2014	4	3/17/2018
YB56054	PUCK 76	3/17/2014	4	3/17/2018
YB56055	PUCK 77	3/17/2014	4	3/17/2018
YB56056	PUCK 78	3/17/2014	4	3/17/2018

YC25176	GOALIE 199	8/3/2007	5	8/3/2012
YC25177	GOALIE 200	8/3/2007	5	8/3/2012
YC25178	GOALIE 201	8/3/2007	5	8/3/2012
YC25179	GOALIE 202	8/3/2007	5	8/3/2012
YC25180	GOALIE 203	8/3/2007	5	8/3/2012
YC25181	GOALIE 204	8/3/2007	5	8/3/2012
YC25182	GOALIE 205	8/3/2007	5	8/3/2012
YC25183	GOALIE 206	8/3/2007	5	8/3/2012
YC25184	GOALIE 207	8/3/2007	5	8/3/2012
YC25185	GOALIE 208	8/3/2007	5	8/3/2012
YC25186	GOALIE 209	8/3/2007	5	8/3/2012
YC25187	GOALIE 210	8/3/2007	5	8/3/2012
YC25297	GOALIE 211	9/23/2007	5	9/23/2012
YC25298	GOALIE 212	9/23/2007	5	9/23/2012
YC25299	GOALIE 213	9/23/2007	5	9/23/2012
YC25300	GOALIE 214	9/23/2007	5	9/23/2012
YC25301	GOALIE 215	9/23/2007	5	9/23/2012
YC25302	GOALIE 216	9/23/2007	5	9/23/2012
YC25303	GOALIE 217	9/23/2007	5	9/23/2012
YC25304	GOALIE 218	9/23/2007	5	9/23/2012
YC25305	GOALIE 219	9/23/2007	5	9/23/2012
YC25306	GOALIE 220	9/23/2007	5	9/23/2012
YC25307	GOALIE 221	9/23/2007	5	9/23/2012
YC25308	GOALIE 222	9/23/2007	5	9/23/2012
YC25309	GOALIE 223	9/23/2007	5	9/23/2012
YC25310	GOALIE 224	9/23/2007	5	9/23/2012
YC25311	GOALIE 225	9/23/2007	5	9/23/2012
YC25312	GOALIE 226	9/23/2007	5	9/23/2012
YC25313	GOALIE 227	9/23/2007	5	9/23/2012
YC25314	GOALIE 228	9/23/2007	5	9/23/2012
YC25315	GOALIE 229	9/23/2007	5	9/23/2012
YC25316	GOALIE 230	9/23/2007	5	9/23/2012
YC25317	GOALIE 231	9/23/2007	5	9/23/2012
YC25318	GOALIE 232	9/23/2007	5	9/23/2012
YC25319	GOALIE 233	9/23/2007	5	9/23/2012
YC25320	GOALIE 234	9/23/2007	5	9/23/2012
YC25321	GOALIE 235	9/23/2007	5	9/23/2012
YC25322	GOALIE 236	9/23/2007	5	9/23/2012
YC25323	GOALIE 237	9/23/2007	5	9/23/2012
YC25324	GOALIE 238	9/23/2007	5	9/23/2012
YC25325	GOALIE 239	9/23/2007	5	9/23/2012
YC25326	GOALIE 240	9/23/2007	5	9/23/2012
YC25327	GOALIE 241	9/23/2007	5	9/23/2012
YC25328	GOALIE 242	9/23/2007	5	9/23/2012

YC25329	GOALIE 243	9/23/2007	5	9/23/2012
YC25330	GOALIE 244	9/23/2007	5	9/23/2012
YC25331	GOALIE 245	9/23/2007	5	9/23/2012
YC25332	GOALIE 246	9/23/2007	5	9/23/2012
YC25333	GOALIE 247	9/23/2007	5	9/23/2012
YC25334	GOALIE 248	9/23/2007	5	9/23/2012
YC25335	GOALIE 249	9/23/2007	5	9/23/2012
YC25336	GOALIE 250	9/23/2007	5	9/23/2012
YC25337	GOALIE 251	9/23/2007	5	9/23/2012
YC25338	GOALIE 252	9/23/2007	5	9/23/2012
YC25339	GOALIE 253	9/23/2007	5	9/23/2012
YC25340	GOALIE 254	9/23/2007	5	9/23/2012
YC25341	GOALIE 255	9/23/2007	5	9/23/2012
YC25342	GOALIE 256	9/23/2007	5	9/23/2012
YC25343	GOALIE 257	9/23/2007	5	9/23/2012
YC25344	GOALIE 258	9/23/2007	5	9/23/2012
YC25345	GOALIE 259	9/23/2007	5	9/23/2012
YC25346	GOALIE 260	9/23/2007	5	9/23/2012
YC25347	GOALIE 261	9/23/2007	5	9/23/2012
YC25348	GOALIE 262	9/23/2007	5	9/23/2012
YC25349	GOALIE 263	9/23/2007	5	9/23/2012
YC25350	GOALIE 264	9/23/2007	5	9/23/2012
YC25351	GOALIE 265	9/23/2007	5	9/23/2012
YC25352	GOALIE 266	9/23/2007	5	9/23/2012
YC25353	GOALIE 267	9/23/2007	5	9/23/2012
YC25354	GOALIE 268	9/23/2007	5	9/23/2012
YC25355	GOALIE 269	9/23/2007	5	9/23/2012
YC25356	GOALIE 270	9/23/2007	5	9/23/2012
YC25357	GOALIE 271	9/23/2007	5	9/23/2012
YC25358	GOALIE 272	9/23/2007	5	9/23/2012
YC29140	GOALIE 289	8/4/2007	5	8/4/2012
YC29141	GOALIE 290	8/4/2007	5	8/4/2012
YC29142	GOALIE 291	8/4/2007	5	8/4/2012
YC29143	GOALIE 292	8/4/2007	5	8/4/2012
YC29437	GOALIE 303	11/23/2006	5	11/23/2011
YC29438	GOALIE 304	11/23/2006	5	11/23/2011
YC29439	GOALIE 305	11/23/2006	5	11/23/2011
YC29440	GOALIE 306	11/23/2006	5	11/23/2011
YC31888	PUCK 81	8/18/2007	5	8/18/2012
YC31889	PUCK 82	8/18/2007	5	8/18/2012
YC31890	PUCK 83	8/18/2007	5	8/18/2012
YC31891	PUCK 84	8/18/2007	5	8/18/2012

Exploration History

The Goalie claims were staked in 2005 to cover a potential, permanent, all-season access route for the Wolverine deposit. The route was chosen based on several criterions including, but not limited to, environmental and socioeconomic considerations, overburden characteristics in search of potential borrow sources, topographic considerations and access to the Money claims for future exploration.

The original discovery on the Money Property was made by Welcome North Mines Ltd. and Esperanza Exploration Ltd. in 1980. The property was immediately optioned to Arbor Resources Inc. which carried out electromagnetic and geochemical surveys in the same year. In 1981, electromagnetic, magnetic, and additional geochemical surveys were followed up with three diamond drill holes totalling 329m funded by a joint venture with Esso Resources Canada Limited. After the Property was allowed to lapse, YGC Resources Ltd. re-staked the property in 1990 (Money 1-20), and added additional claims in 1994 (Money 21-46). In 1994 the property was optioned to Atna Resources, who, in 1995 and 1996, conducted several programs consisting of geological mapping, rock and soil sampling, hand trenching, horizontal loop EM geophysics, and diamond drilling. Seven diamond drill holes were drilled in 1996 for a total of 965.6m. All core from the 1996 drill program was stored at the Money creek camp site (UTM co-ordinates 446400E, 6810200N). In 1997 Atna Resources conducted a program consisting of GPS surveying, geological mapping, geo-electric and geophysical surveying, and diamond drilling. Four diamond drill holes were drilled in 1997 for a total of 827.8m. The best drill intersection in 1996 was 1.0 metre of massive sulphide grading 1.75 % copper, 21 g/t silver and 0.4 g/t gold. In 2005 Yukon Zinc entered into a Joint Venture agreement with YGC Resources. In 2005, Yukon Zinc Corporation conducted a survey on the Money Property to verify claim post locations.

Property Location and Access

The Goalie Claims are located approximately 280 kilometres north-east of Whitehorse, and intersect the Robert Campbell Highway approximately halfway between Ross River and Watson Lake (Kilometre 198 on Robert Campbell). The claims straddle the boundary between map sheet 105G/08 Wolverine Lake and 105H/05 Money Creek. The property is approximately 10 kilometres east of the Wolverine deposit and another 3 km east of the Wolverine Camp, where crews were based while they worked on the claims. Access to the claims is gained from the Wolverine Camp or the Robert Campbell Highway by trail. The Wolverine Camp can be accessed by plane or helicopter.

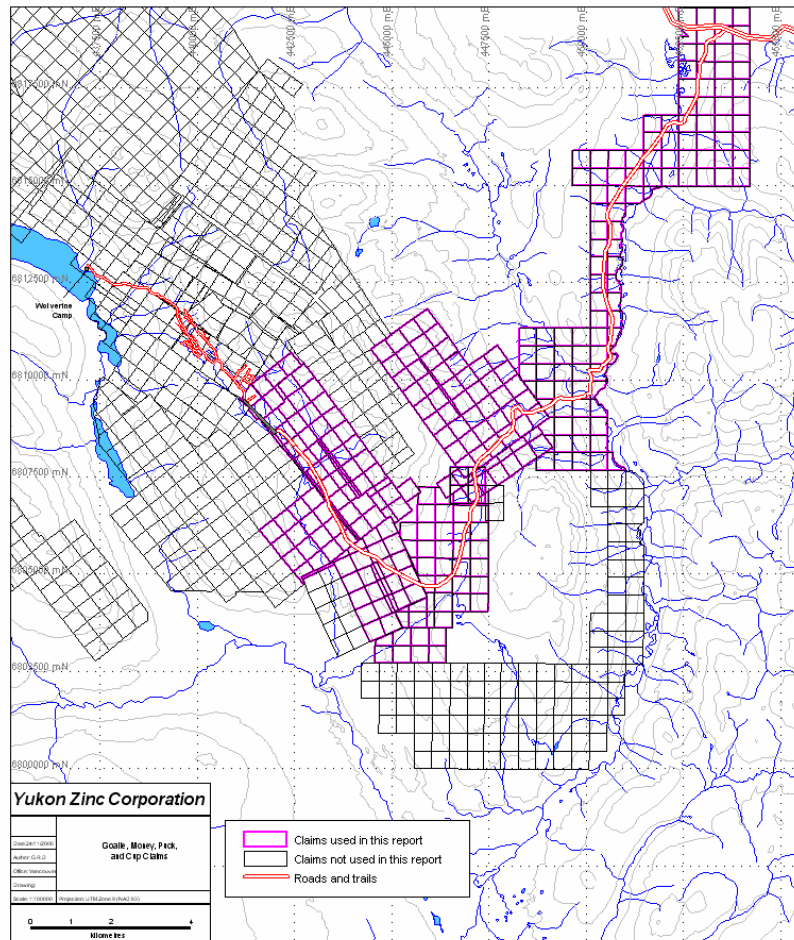


Figure 2. Map of the Wolverine area showing the location of the Goalie, Money, Puck, Foot, and Cup claims, the Wolverine deposit, and the Wolverine Camp.

Regional Geology

The Yukon-Tanana Terrane is a large autochthonous geological province extending from Alaska, through The Yukon Territory and into north-central British Columbia (Figure 3). It consists of mid-late Paleozoic volcanic, plutonic, and sedimentary rocks. The volcanic-hosted massive sulphide deposits of the Finlayson Lake District are located in the eastern most section of the Yukon Tanana Terrane, which has been displaced to the south-east by the Tintina Fault Zone (Figure 1). The Finlayson Lake District has been divided into 3 distinct successions separated by regional unconformities (Murphy, 1998; Piercey and Murphy, 2000). The lower most unit (called the Grass Lakes Succession) consists of mafic and felsic metavolcanic rocks, carbonaceous metaclastic rocks, marbles, and granitic orthogneiss. The Fyre Lake (Cu-rich, massive sulphide) deposit is located near the base of this succession, while the Kudzu Ze Kayah and GP4F (polymetallic, massive sulphide) deposits are located within the upper portion of this succession. The middle unit (called the Wolverine Succession) consists of carbonaceous argillite, felsic volcanics and high level intrusions, and as well as exhalative carbonate and/or iron oxides. The Wolverine (polymetallic, sediment hosted, massive sulphide) deposit occurs near the base of Wolverine Succession. The upper most unit (called the Campbell Range Succession) consists of mafic metavolcanic rocks and wackes, and is host to the Ice (Cu-rich massive sulphide) deposit. The Money Property covers approximately 1030ha of the Campbell Range Succession, and contains known massive sulphide mineralization.

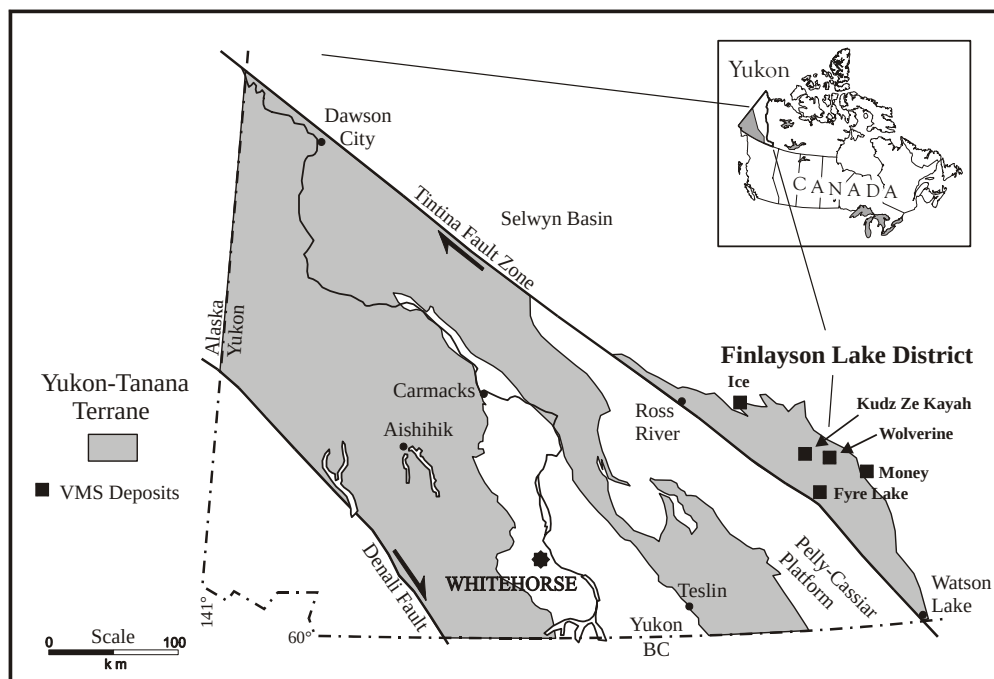


Figure 3. Location of the Wolverine, Kudz Ze Kayah, Fyre Lake, and Ice Deposits, as well as the location of the Money occurrence with respect to the Yukon-Tanana Terrane, Yukon, Canada (modified from Piercey, 2001; Wheeler and McFeely, 1991 and Hunt, 1998).

Geology of the Money Property

Mapping (Plint, 1996) has suggested that the Money claims cover a portion of the Slide Mountain Terrane in the Campbell Range which consists of the north-west trending irregular lens of mafic volcanics. These mafic volcanics include a thick sequence of dark green, fine grained pillowed basalts. Locally minor amounts of inter-pillow breccias, hyaloclastites, and lapilli tuffs, have been altered to chlorite-quartz-epidote, and have developed and heterogeneous foliation. Within the basalts on the Money property at least one and possibly three horizons of fine to medium grained interflow sediments and/or tuffs occur associated with hematite and jasper as a pervasive maroon alteration or exhalative sediment. The most well defined sedimentary unit host the massive sulphide mineralization. Mineralization on the Money Property has been subdivided into two distinct types: discordant, quartz-pyrite-chlorite+sericite stockwork and conformable, massive to moderately-well banded pyrite. It has been described in detail in two locations: Welcome North Creek and Boulder Creek. In Welcome North Creek, massive, moderately well banded pyrite with a siliceous matrix is exposed as boulder float.

Methods

Yukon Engineering Services (and EBA Engineering Consultants Ltd), was retained to conduct a geotechnical evaluation of the proposed road route during the pioneering, blazing and surveying of the initial road, and a report was produced (Appendix II). During the evaluation, seventy-six excavator supported test pits were dug approximately every 300m along the road route and soil samples were taken. The test pits were logged and the results are provided in Appendix II. The soils were tested at EBA geotechnical laboratory in Whitehorse for moisture and grain-size. A helicopter supported ground survey was conducted ahead of the geotechnical test pitting to ensure accuracy of the road location and a map of the surveyed road route is given in Appendix II.

Implications for Exploration and Recommendations

The Money Property hosts a significant mineral occurrence with the best drill intersection in 1996 of 1.0 metre of massive sulphide grading 1.75 % copper, 21 g/t silver and 0.4 g/t gold. The property has the potential for other mineralized zone and requires more exploration to evaluate its true potential. The Goalie Claims and the access road have opened up the area for further exploration. Soil sampling and detailed mapping should be carried out on the road route to evaluate any possible

Statement of Expenditures

Table 4. shows the breakdown for expenses for the work performed on the Goalie Claims during the period between June 2 and July 19th, 2006. The money spent on the road route is distributed evenly between the 76 Claims listed below which cover the road route (Table 5).

Table 4. Statement of Expenditures for Goalie Claims 2006.

Expenditure Type	Description	Cost
Helicopter	Trans North 206 helicopter (\$1200 per hour at 37 hours)	\$57,709.77
Jet-B	Fuel for helicopter (18 Barrels @ \$1.64/L)	\$5,035
Diesel	Fuel for heavy equipment (18 Barrels @ \$1.12/L)	\$3,438
CAT costs	Heavy equipment costs (\$90/hr)(48 days)	\$34,560
Staff	Operator cost for heavy equipment (48 Days)	\$16,800
Yukon Engineering	Test pitting and surveying including geologist	\$98,923.08
Total		\$216,465.77

Table 5. List of Claims covering the road route.

Grant Number	Claim Number				
YB16726	MONEY 1	YB56046	PUCK 68	YC25025	GOALIE 48
YB16727	MONEY 2	YB56047	PUCK 69	YC25027	GOALIE 50
YB16736	MONEY 11	YB56048	PUCK 70	YC25028	GOALIE 51
YB16737	MONEY 12	YB56049	PUCK 71	YC25029	GOALIE 52
YB16738	MONEY 13	YB87705	CUP 11	YC25037	GOALIE 60
YB16739	MONEY 14	YB87707	CUP 13	YC25039	GOALIE 62
YB51934	MONEY 29	YB87708	CUP 14	YC25040	GOALIE 63
YB51935	MONEY 30	YC25007	GOALIE 30	YC25042	GOALIE 65
YB56004	PUCK 26	YC25008	GOALIE 31	YC25066	GOALIE 89
YB56006	PUCK 28	YC25009	GOALIE 32	YC25070	GOALIE 93
YB56008	PUCK 30	YC25010	GOALIE 33	YC25072	GOALIE 95
YB56010	PUCK 32	YC25011	GOALIE 34	YC25073	GOALIE 96
YB56012	PUCK 34	YC25012	GOALIE 35	YC25074	GOALIE 97
YB56021	PUCK 43	YC25013	GOALIE 36	YC25075	GOALIE 98
YB56023	PUCK 45	YC25015	GOALIE 38	YC25077	GOALIE 100
YB56025	PUCK 47	YC25017	GOALIE 40	YC25079	GOALIE 102
YB56037	PUCK 59	YC25018	GOALIE 41	YC25182	GOALIE 205
YB56039	PUCK 61	YC25020	GOALIE 43	YC25183	GOALIE 206
YB56040	PUCK 62	YC25022	GOALIE 45	YC25299	GOALIE 213
YB56045	PUCK 67	YC25023	GOALIE 46	YC25301	GOALIE 215
		YC25024	GOALIE 47	YC25303	GOALIE 217

YC25305	GOALIE 219
YC25308	GOALIE 222
YC25316	GOALIE 230
YC25317	GOALIE 231
YC25319	GOALIE 233

YC25343	GOALIE 257
YC25344	GOALIE 258
YC25345	GOALIE 259
YC25346	GOALIE 260
YC29140	GOALIE 289

YC29141	GOALIE 290
YC29143	GOALIE 292
YC29439	GOALIE 305
YC29440	GOALIE 306

References

Bradshaw, G.D., Tucker, T.L., Peter, J.M., Paradis, S., and Rowins, S.M., 2001. Geology of the Wolverine polymetallic volcanic hosted massive sulphide deposit, Finlayson Lake district, Yukon Territory, Canada. Yukon Exploration and Geology, 2001. D.S. Emond and L.H. Weston (eds), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 269-287.

Hunt, J.A., 1998. Recent discoveries of volcanic-associated massive sulphide deposits in the Yukon:

Canadian Institute of Mining and Metallurgy Bulletin, v. 90, p. 56-65.

Piercey, S.J. 2001. Petrology and tectonic setting of the felsic and mafic volcanic and intrusive rocks in the Finlayson Lake Volcanic-hosted massive sulphide (VHMS) District, Yukon, Canada: A record of Mid-Paleozoic Arc and Back Arc Magmatism and Metallogeny. PhD. Thesis, University of British Columbia, Canada.

Wheeler, J.O., and McFeely, P., 1991. Tectonic Assemblage Map of the Canadian Cordillera and

Adjacent Parts of the United States of America: Geological Survey of Canada, Map 1712A, Scale 1: 2000 000.

Respectfully Submitted,
YUKON ZINC CORPORATION

Jason Dunning, M.Sc., P.Geo.
Vice President Exploration
Yukon Zinc Corporation

APPENDIX 1 – STATEMENT OF QUALIFICATIONS

1. I, Jason King Dunning, of 208 East 5th Street, North Vancouver, British Columbia, V7L 1L7, Canada, hereby state –that I am Vice President, Exploration with Yukon Zinc Corporation, with offices at Suite 701, 475 Howe Street, Vancouver, British Columbia, Canada, and that:
2. I hold a B.Sc. (Honors Geology) from Carleton University, Ontario (1994) and a M.Sc. (Geology) from the Mineral Exploration Research Centre at Laurentian University, Ontario (1998).
3. I have 7 years experience with various research institutions and mining companies in Canada and the United States, not including my summer field season work during my undergraduate degree. My primary employment since 1994 has been in the field of mineral exploration.

2003-Present	Vice President	Yukon Zinc Corporation**
2001-2003	Project Geologist	Anglo American Canada Exploration Ltd.*
1999-2001	Project Geologist	Hudson Bay Expl. & Dev. Co. Ltd.*
1996-1999	Geologist	Pamicon Developments Ltd.
1994-1996	Geologist	Teck Exploration Ltd./Laurentian University

* denotes same organization except for a change in formal business name
 ** denotes formerly Expatriate Resources Ltd.
4. I am a Professional Geoscientist (0725) with the Association of Professional Geoscientists of Ontario in good standing. I am a Professional Geologist (29312) with the Association of Professional Engineers and Geologists of British Columbia in good standing.
5. I am also a Member in good standing with the Society of Economic Geologists (222555), as well as a Fellow of the Geological Association of Canada (F6819).
6. I hold a valid Manitoba Prospector License (4077) and Free Miner Certificate in British Columbia.
7. I have specialized training in the areas of volcanology, ore deposit geology and hydrothermal alteration through academic training, numerous short-courses, and exploration project experience. My experience has allowed me to become familiar with the evaluation of both regional and property geology, prospecting, geophysical surveys, geochemical analysis, diamond core drilling, and the various facets of the permitting process in Ontario, Manitoba, Saskatchewan, and British Columbia.
8. This report is based upon data collected from observations collected in June and July 2006 during exploration work supervised by Mr. G. Dessureau, Project Geologist for Yukon Zinc Corporation, whose office was in Vancouver, British Columbia, Canada.

DATED at Vancouver, B.C., January 31, 2007

Respectfully submitted,

Jason King Dunning, M.Sc., P.Geo.

APPENDIX 2 – EBA REPORT: Geotechnical evaluation Wolverine Lake Mine Access Road km 198.5 Robert
Campbell Highway, Yukon

YUKON ENGINEERING SERVICES LTD.
YUKON ZINC CORP.

GEOTECHNICAL EVALUATION
WOLVERINE LAKE MINE ACCESS ROAD
km 189.5 ROBERT CAMPBELL HIGHWAY
YUKON

EBA File: 1200197

August 2006

TABLE OF CONTENTS

	PAGE
1.0 INTRODUCTION.....	2
2.0 SCOPE OF WORK	2
3.0 PROJECT BACKGROUND	2
4.0 METHODOLOGY	3
5.0 RESULTS AND DISCUSSION	3
Subsurface conditions	3
Permafrost	4
6.0 BORROW SOURCES.....	4
7.0 RECOMMENDATIONS.....	5
Road Design and Construction	5
Site Grading, Surface Conditions, Groundwater and Drainage.....	5
8.0 CLOSURE.....	7

FIGURES

TEST PIT LOGS

APPENDICES

1.0 INTRODUCTION

EBA Engineering Consultants Ltd. (EBA) was retained to conduct a geotechnical evaluation of the proposed access road to the Yukon Zinc mining property at Wolverine Lake, Yukon. The work was requested by Yukon Engineering Services Ltd. (YES) of Whitehorse on behalf of Yukon Zinc Corp (YZC). The objective of the evaluation is to provide geotechnical recommendations for the construction of the access road.

The scope of work for this project was presented in a proposal and budget prepared by EBA and submitted to Robert Harvey, P.Eng. of YES in June 2006.

2.0 SCOPE OF WORK

The main tasks of the study included a review of background reports, geology, and previous terrain mapping; a hand-excavated testpit program between km 0 to km 5 to field-check terrain and soil conditions, and an excavator supported testpitting program from km 5 to km 24. The scope of work for this project consisted of the following:

- Review area geology, previous terrain mapping and air photo interpretation to examine and reassess previous mapping, slope stability and potential borrow sources
- Conduct a field program to evaluate terrain and shallow soil conditions from km 0 to km 5 using hand testpits. There is presently no access to this section of the proposed route.
- Conduct a field program to evaluate soil conditions and collect samples for laboratory testing from km 5 to km 24 using an excavator provided by YZC to dig testpits.
- Conduct geotechnical laboratory testing on soil samples collected. Tests include moisture determination on all samples and grain size analysis on select samples.
- Prepare base maps to locate all testpit locations
- Prepare interim reports and a final report to present a description of the work completed, including the results of all evaluation work, testpit logs, laboratory analysis results and geotechnical recommendations for road construction.

3.0 PROJECT BACKGROUND

The study area includes 24 km of a proposed access road that starts at km 189.5 on the Robert Campbell Highway (Yukon Highway 4) and is initially aligned south and southwest, following the valley of Light Creek past the divide at km 8 and across Bunker Creek at km 10. The alignment follows Chip Creek to km 19, where it turns northwest to eventually cross the Hawkowl Creek tributary of Money Creek, maintaining a northwest bearing to Wolverine Lake. The access road route is covered on NTS map sheets 105H/5 and 105G/8.

Part of the access road, from about km 24.5 to the Wolverine Lake Mine Site and camp at approximately km 27.5 and km 28.5 respectively, is developed as an access road to the airstrip and was not evaluated as part of this study.

4.0 METHODOLOGY

Geology and previous terrain mapping were reviewed and air photo interpretation was carried out to aid in the design of the field program. Available air photographs were of small scale, which precluded detailed terrain mapping and limited the interpretation of expected soil conditions.

Terrain field checking and hand testpitting was carried out on June 26 and June 27, 2006 using a motorhome provided by YES as a field camp based at km 190 on the Robert Campbell Highway. An excavator-supported testpitting program, based at the Wolverine Mine Site camp, was carried out from July 10 to July 13, 2006. Seventy-six testpits were excavated at about 300 m intervals and soil samples were taken within the testpits at depth intervals of 1 m and/or at changes in stratigraphy.

Moisture and grain size analysis was carried out at EBA's Whitehorse geotechnical laboratory on samples recovered during the excavator-supported test-pitting program. The results of testpit logs and lab analysis are compiled on ESEbase logs and used to provide recommendations for construction.

5.0 RESULTS AND DISCUSSION

Subsurface conditions

Seventy-six excavator testpits (km 5 to km 24) and 19 hand testpits (km 0 to km 5) were located along the road alignment to define its subsurface soil profile. Much of the alignment is underlain by shallow bedrock. A hard metavolcanic unit underlies km 0 to km 2 with a few outcrops forming low relief ridges. A veneer of peat-rich organics and/or gravelly sand colluvium typically overlies the bedrock in this section. Shallow bedrock, a soft fissile phyllite, was intersected throughout the latter half of the proposed alignment from km 14 to km 24. Surficial materials in this section were mostly colluvium with sections of till and pockets of fluvial gravels. Soil textures were variable and are described in the detailed logs of each testpit log (appended).

Near km 0 of the Wolverine Lake Access Road, at the Robert Campbell Highway, terraces of glaciofluvial gravel and sand are common and may provide convenient sources of granular fill. At km 0, however, bedrock is exposed on the shallow cutslope of the highway (Station 26JD24, Figure 1). Shallow bedrock conditions appear to continue to about km 2 of the proposed access road. Except where narrow, east-west trending outcrops occur, a thin veneer of gravelly sand colluvium or a thin, frozen organic veneer at sidehill meadow bog areas typically overlies bedrock in this area.

From about km 2.0 through km 3.2, including the crossings of Pitch Creek (km 2.90) and Light Creek (km 3.03), the terrain appears to be underlain by glaciofluvial sand and gravel. Alluvium (sand, some silt, some gravel) was observed at a low relief terrace on the west side of Light Creek (Station 26JD18, Figure 1).

Soil textures and conditions on the proposed road alignment are summarized on Table 1.

In some sections the reliability of the geotechnical testing is insufficient to provide reliable evaluation of subsurface conditions. Testpit depths were less than 0.5 m at km 0 to km 0.5 and excavator testpits are recommended to provide deeper access from km 2 to km 5. Many excavator testpits were less than 0.5 m deep because the excavator provided was insufficient to penetrate frozen or dense soils.

Permafrost

The project area is within the zone of discontinuous permafrost. The active zone of seasonally thawed soil is estimated to be 0.5 to 2.0 m in undisturbed soils. Excess ice was present in a minority of samples and moisture contents are typically low ($< 10\%$), although some localized high-ice content areas were observed and should be expected, usually near the base of the active layer (and typically on north-facing slopes with thick organic soil cover).

At eight of the 19 hand testpits and 25 of the 76 excavator testpits, frozen soil conditions were encountered. Depth to frozen ground ranged from about 0.3 m to 2.0 m. Frozen soil conditions were associated with thick organic cover, most of which are characterized as open, shallow gradient sideslope bog areas with black spruce/moss/larch vegetation. Testpitting with heavy equipment to depths greater than 0.5 m is required to characterize the ice content of these frozen soils—the excavator supplied for this program was not capable of these excavation requirements.

Permafrost conditions from about km 7 to km 14 may require thick fill (minimum 1500 mm) in localized sections to minimize the potential for permafrost degradation. Recommendations for construction in permafrost sections are provided in Section 7 and summarized in Table 7.1.

6.0 BORROW SOURCES

Nine potential borrow sources were selected for evaluation, including 3 primary sites and 6 secondary sites. Primary 1 at about km 0.5 and Secondary 1 at km 1 presently have no access for equipment and were not tested. However, granular glaciofluvial terraces of sand and gravel were identified at the Robert Campbell Highway near the access road. Further assessment and regulatory permitting would be required prior to acquiring borrow material from these sources.

Secondary 2 and Secondary 3 sites at km 3 also have no access for equipment. However, hand testpits indicated good quality gravelly sand granular material at glaciofluvial terraces at the confluence of Light Creek and Pitch Creek. Air photo interpretation of the terrain indicates that the features hosting this material appear to cover about 15 ha and may be at least 4 m thick. However, only a fraction of the deposit may be exploitable, as the deposit is incised by both Pitch Creek and Light Creek and riparian protection zones will be required.

Testpits on the road alignment at a potential borrow source at km 5 (Secondary 4) indicate soils with favourable textures. Testpits up to 3.5 m deep intersected sandy gravels and gravelly sand with trace to some silt. Testpit TP03 intersected 0.6 m of poorly graded fine sand between 1.2 m of sandy gravel and > 1.7 m of gravelly sand (some silt).

Favourable coarse textured soil was intersected from km 14.4 to km 18.4; however, shallow bedrock in this section may limit quantities. The maximum proven soil depth was 2.5 m.

Testpits to evaluate the potential for favourable granular borrow are recommended at Primary 2 (km 11) and Primary 3 (km 24).

Borrow source target locations are shown on YES Figure 3 following EBA Figures 1-7.

7.0 RECOMMENDATIONS

Road Design and Construction

General recommendations for construction of the road include placement of uniform 300 mm granular fill in areas of shallow bedrock and unfrozen soils. Embankments of fill slopes should be constructed with slopes of 2:1. In primarily granular areas, the imported fill may be eliminated, but adequate ditches for road drainage must be provided.

In areas of frozen soil (permafrost), a uniform minimum fill of 1500 mm, including a cap of 300 mm granular fill, is recommended. Ground should be prepared by hand-clearing the vegetation at the site. Non-woven heavy highway-grade geotextile will be overlain on undisturbed ground over cut vegetation on an area equivalent to the footprint of the access road. Overlap of geotextile segments will be 1 m. Assuming a road surface width of 4.5 m, the average width of the access road footprint is approximately 10.5 m.

Twelve sections with unique ground conditions and accompanying recommendations for construction are described in Table 7.1 (following page). The ground conditions characterized are extrapolated from test pit results at typical spacing of about 300 m. During road construction, actual ground conditions may differ from that described. The recommendations in Table 7 are intended as a guide for those sections with the conditions in the accompanying description. If conditions encountered during construction are different from that described, EBA should be consulted to provide suitable recommendations.

After stripping, the subgrade must be compacted to at least 98% Standard Proctor maximum dry density (ASTM D698). All imported fill must be compacted in maximum lift thickness of 300 mm, with each lift compacted to at least 98% Standard Proctor maximum dry density (ASTM D698).

Site Grading, Surface Conditions, Groundwater and Drainage

Permafrost and shallow bedrock presents a barrier to vertical percolation of groundwater. In most sections, much of the run-off is transported downslope as shallow groundwater “sheet” drainage (e.g., km 0 to km 2, km 7 to km 22.5 and km 23.5 to km 24). In these areas, collecting drainage in ditches and concentrating drainage flow to culverts can be problematic where culvert outflows scour sensitive slopes (e.g., fine-textured soil, permafrost). In these sections, care should be taken to place culverts at all existing watercourses, with emphasis on small ephemeral or intermittent watercourses that may not be immediately visible to the untrained eye. Where culverts are required between natural watercourses, they should be placed at the ground surface and outflows should be armoured with rip rap to disperse energy during high flow periods. Construction of sub-grade with a permeable course of large boulders is preferred on wet slopes where natural watercourses have not developed.

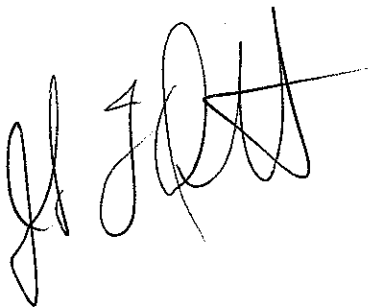
Table 7.1 SITE DESCRIPTION and CONSTRUCTION PRESCRIPTION

KP	TESTPITS	DESCRIPTION	RECOMMENDATIONS for CONSTRUCTION
0 - 2.0	JD1 to JD6	Peat organic veneer and/or colluvium overlying competent bedrock (rock not confirmed at JD6)	strip organic layer and stockpile for future rehabilitation; minimum 300 mm granular fill; good granular borrow material available at glaciofluvial terraces observed at Robert Campbell Highway.
2.0 - 2.5	JD7 and JD23	Peat organic veneer overlying fluvial gravel and sand – permafrost	hand cut trees and leave ground vegetation undisturbed; cover with heavy highway grade geotextile with minimum 1500 mm fill, including 300 mm granular cap; borrow material available at glaciofluvial terraces observed at Robert Campbell Highway.
2.5 - 4	JD22 to JD14	Fluvial gravel and sand; unfrozen at shallow depths;	strip organic layer and stockpile for future rehabilitation; good granular borrow material in this area, but access limited by streams;
4.0 - 4.7	JD13 and JD11	Gravelly sand colluvium overlying till; unfrozen;	strip organic layer and stockpile for future rehabilitation; cap with minimum 300 mm granular fill; build embankments at a slope of 2:1; good borrow material at km 5;
4.7 - 4.9	JD8	Gravelly silty sand colluvium [overlying till?]; permafrost	hand cut trees and leave ground vegetation undisturbed; cover with unwoven heavy highway grade geotextile with minimum 1500 mm granular fill; use 1 m overlap with adjacent geotextile lengths.
4.9 - 7.1	JD9; TP01 to TP09	Mainly sand and gravel, trace to some silt; some sections of sandy silt with some gravel; unfrozen [frozen soil at 0.4m, TP04 assumed to be within seasonally active zone]; km 6.2 and 6.4: depth to bedrock 1.5 m and 1.8 m, but deeper in other sections (> 3.5 m at km 5.2 and 6.9).	strip organic layer and stockpile for future rehabilitation; minimum 300 mm granular fill over bedrock and silty till with embankments at a slope of 2:1; good borrow material at km 5;
7.1 – 9.9	TP10 to TP 20	Variable texture: fine to coarse grained; permafrost.	hand cut trees and leave ground vegetation undisturbed; cover with unwoven heavy highway grade geotextile with minimum 1500 mm granular fill, build embankments at a slope of 2:1;
9.9 – 13.9	TP21 TO TP35	Permafrost is encountered at depth (1.6 to 2.8 m) [frozen soil at 0.3 m in TP31 is assumed to be due to seasonal frozen conditions]; some sections have moderate gradient (27-49%) sideslopes;	fill construction is preferred in this section; however, cut and fill may be acceptable depending upon specific foundation conditions encountered during construction (field decision);
13.9 - 19.7	TP36 to TP57	Variable texture: mostly sandy silty gravel to gravelly sandy silt; some sections of gravelly silty sand; bedrock was intersected at depths of 1.5 m to 2.5 m; unfrozen.	strip organic layer, stockpile for future rehabilitation; minimum 300 mm granular fill with embankments at slope of 2:1
19.7 - 22.5	TP58 to TP70	Variable texture: sandy silty gravel to gravelly silty sand; some sections of gravelly sandy silt; shallow, soft, fissile bedrock; unfrozen.	strip organic layer, stockpile for future rehabilitation; minimum 300 mm granular fill with embankments at slope of 2:1;
22.5 - 23.5	TP71 to TP73	Variable texture; silty sand, sandy gravel, sandy silt; unfrozen; bedrock not intersected; pit depth ranged from 2.5 m to 4.0 m;	strip organic layer, stockpile for future rehabilitation; minimum 300 mm granular fill with embankments at slope of 2:1;
23.5 - 23.9	TP74 to TP76	Variable texture: sandy silty gravel to gravelly silty sand; some sections of gravelly sandy silt; shallow, soft, fissile bedrock [phyllite]; unfrozen.	strip organic layer, stockpile for future rehabilitation; minimum 300 mm granular fill with embankments at slope of 2:1;

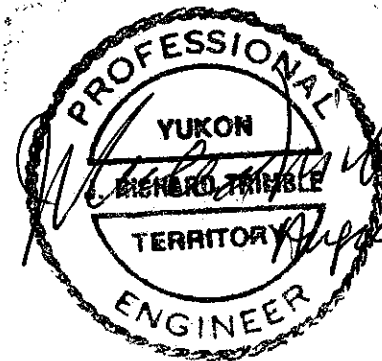
8.0 CLOSURE

Conclusions and recommendations presented herein are based on observations of land-surface and shallow soil conditions, current understanding of slope processes and the review of previous geology and terrain mapping. This report has been prepared for use by Yukon Engineering Services and Yukon Zinc Corp., which includes distribution as required for purposes for which this investigation was commissioned. This evaluation has been carried out in accordance with generally accepted engineering and geoscience practice, and engineering/geoscience judgement has been applied in developing the recommendations in this report. The report incorporates and is subject to the General Conditions attached as Appendix A.

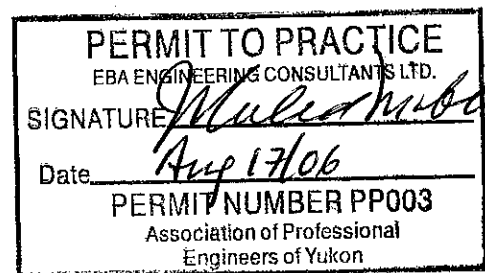
Respectfully submitted,
EBA Engineering Consultants Ltd.



Jack T. Dennett, P.Geo.(BC)
Senior Project Geoscientist
direct line: (867) 668-2071, ext. 30
e-mail: jdennett@eba.ca

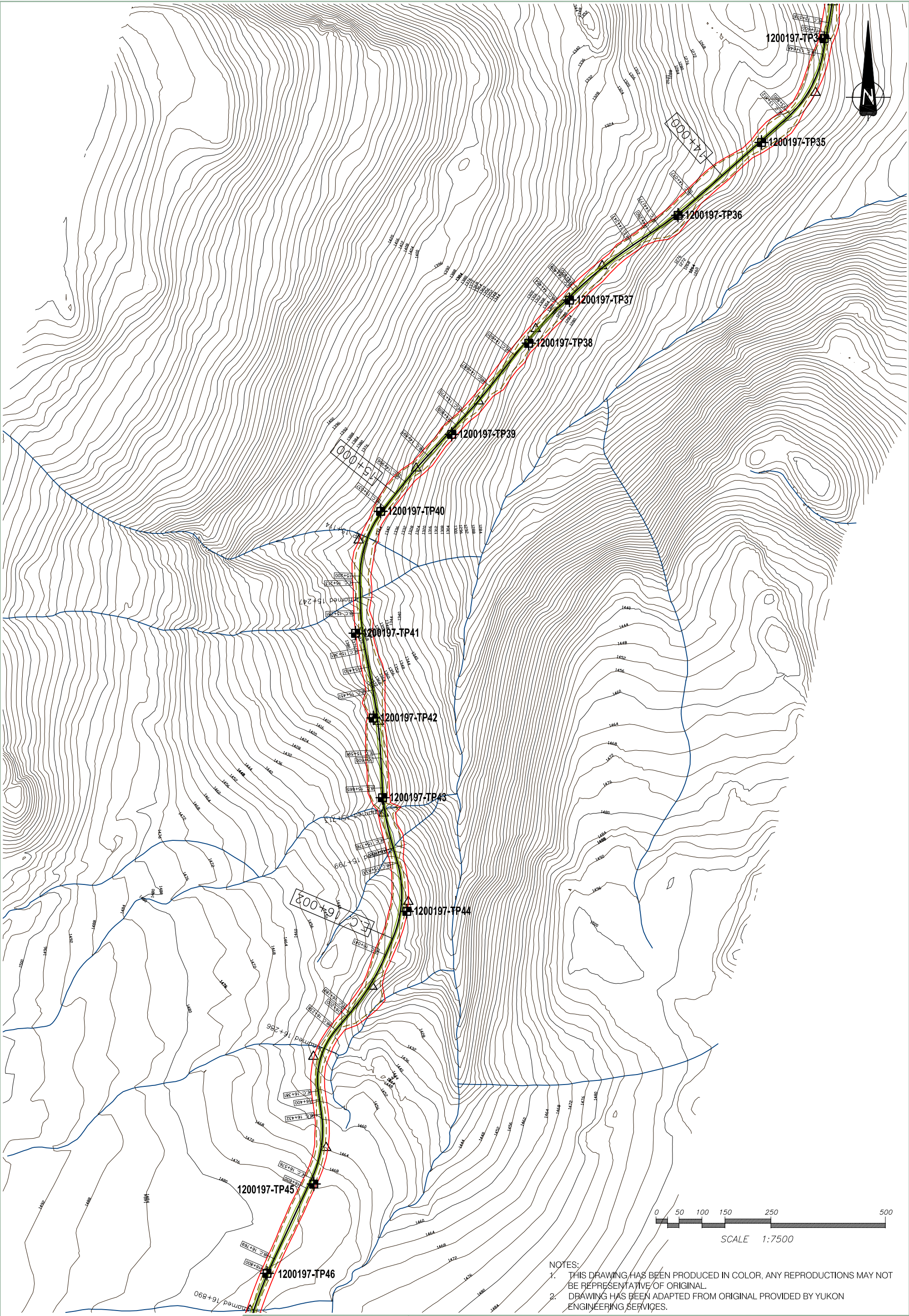


J. Richard Trimble, P.Eng.,
Project Director, Yukon Region
direct line: (867) 668-2071, ext. 22
e-mail: rtrimble@eba.ca



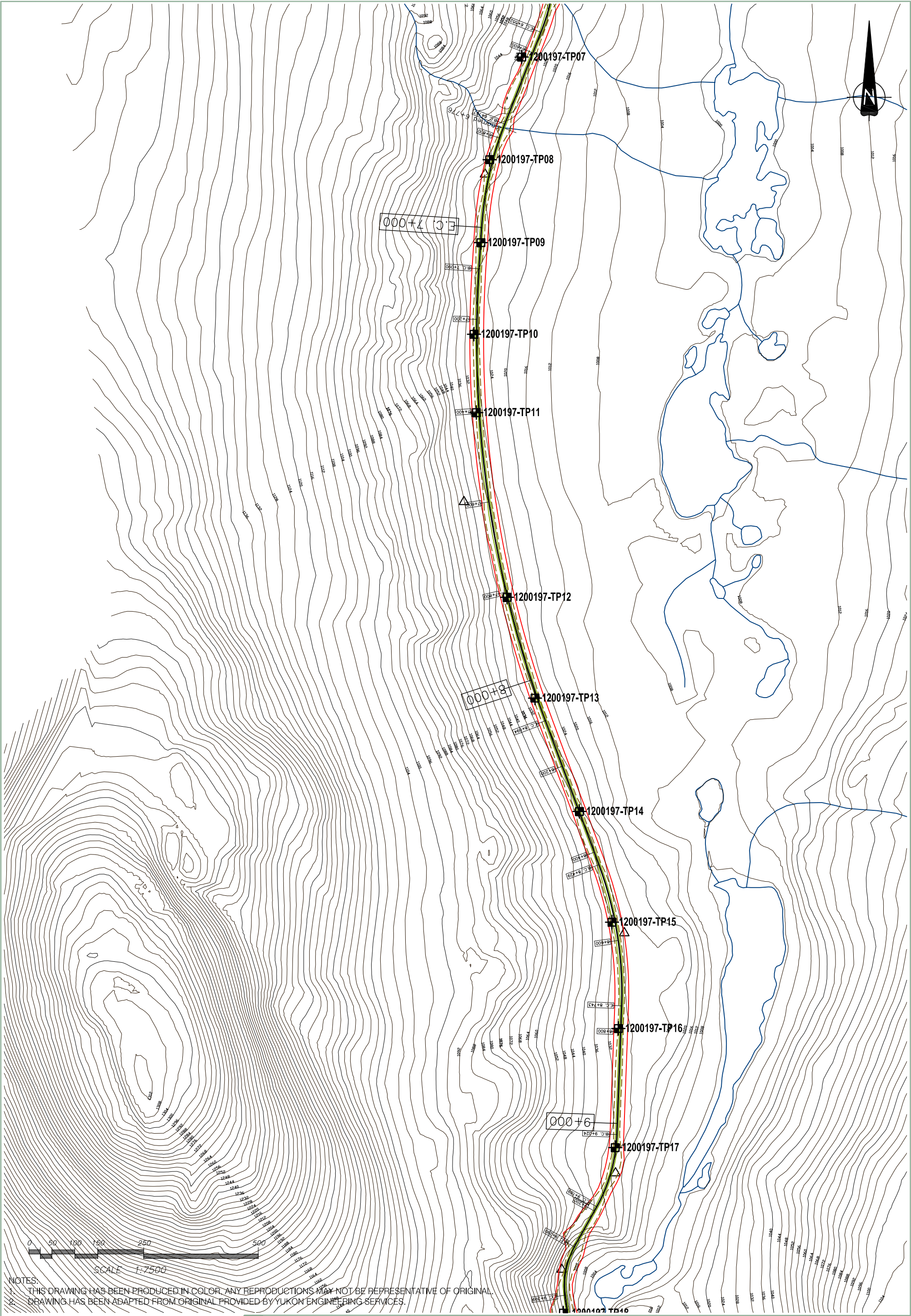


FIGURES



LEGEND:
[Symbol] HAND DUG TESTPITS (JUNE 2006)
[Symbol] TESTPITS (JULY 2006)

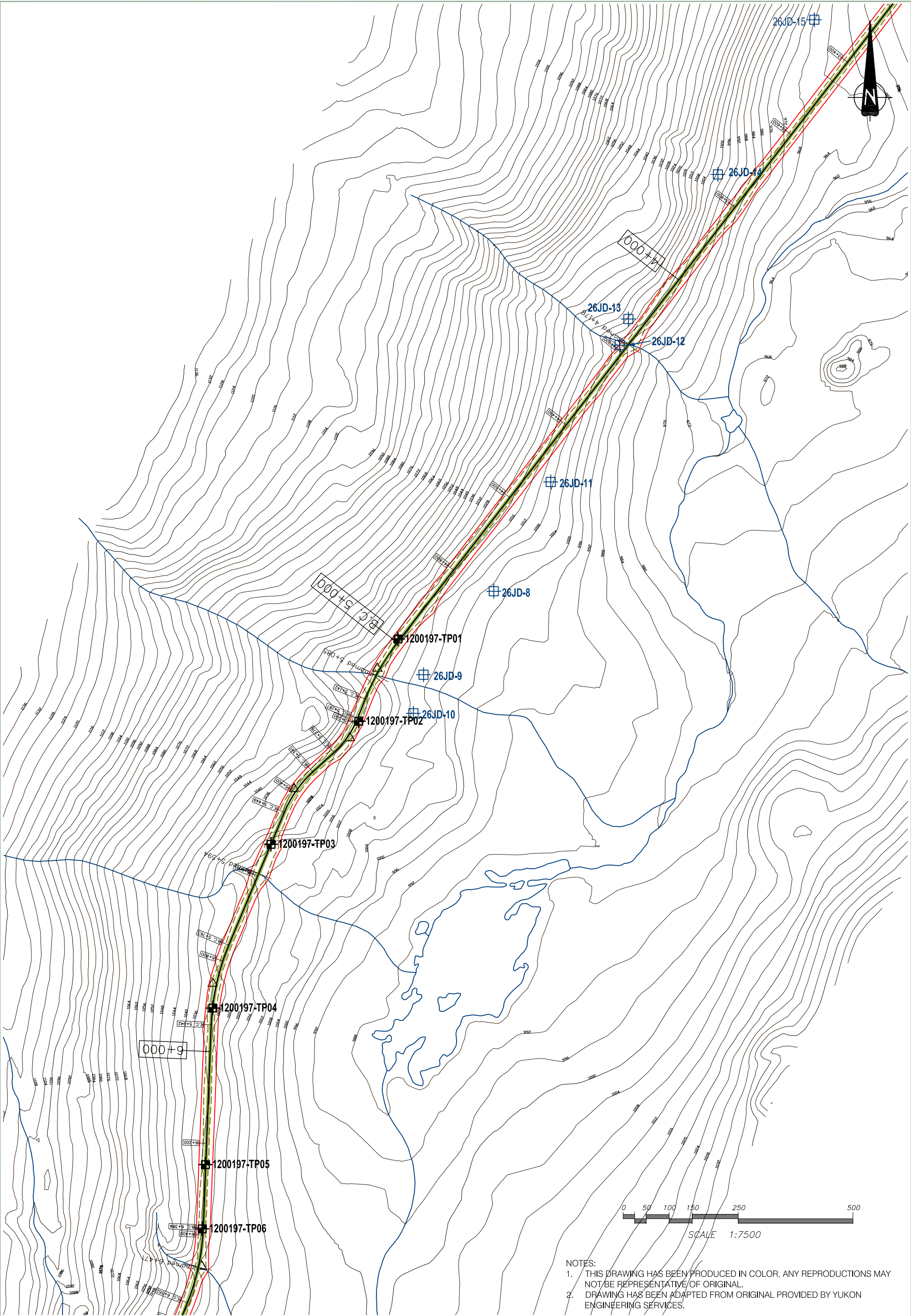
EBA Engineering Consultants Ltd. 			CLIENT 		PROJECT GEOTECHNICAL ASSESSMENT WOLVERINE LAKE ACCESS ROAD	
DWN. JSB CHKD. JTD/JRT					TITLE SITE PLAN SHOWING TESTHOLE LOCATIONS	
EBA JOB NO. 1200197			FILE: 1200197 EBA TP.dwg	REVISION NO.: 1	DATE: Aug. 2006	Figure 5



NOTES:
1. THIS DRAWING HAS BEEN PRODUCED IN COLOR. ANY REPRODUCTIONS MAY NOT BE REPRESENTATIVE OF ORIGINAL.
2. DRAWING HAS BEEN ADAPTED FROM ORIGINAL PROVIDED BY YUKON ENGINEERING SERVICES.

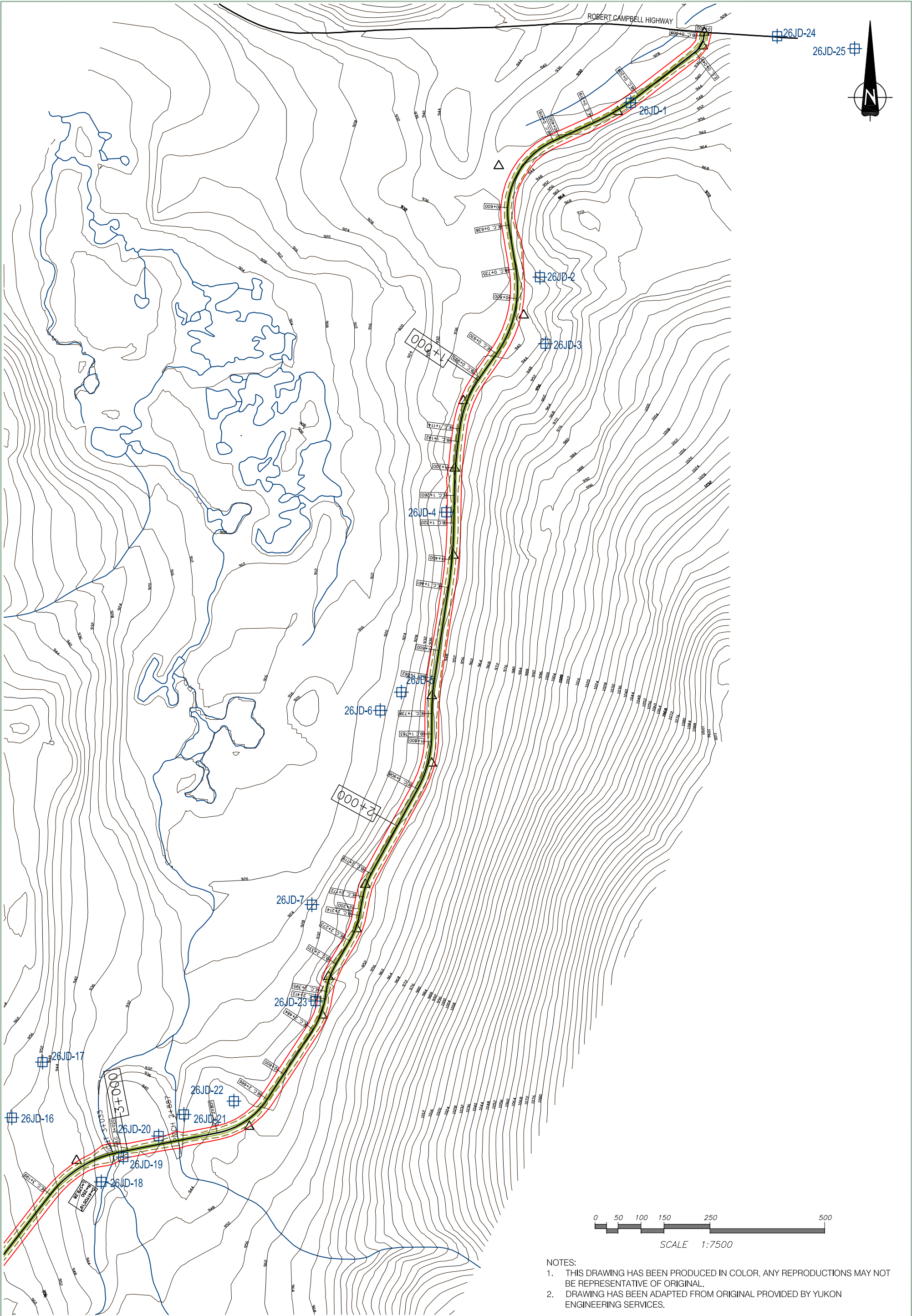
LEGEND:
[Symbol] HAND DUG TESTPITS (JUNE 2006)
[Symbol] TESTPITS (JULY 2006)

EBA Engineering Consultants Ltd. 					PROJECT GEOTECHNICAL ASSESSMENT WOLVERINE LAKE ACCESS ROAD	
					TITLE SITE PLAN SHOWING TESTHOLE LOCATIONS	
DWN. JSB		CHKD. JTD/JRT	FILE: 1200197 EBA TP.dwg	REVISION NO.: 1	DATE: Aug. 2006	Figure 3



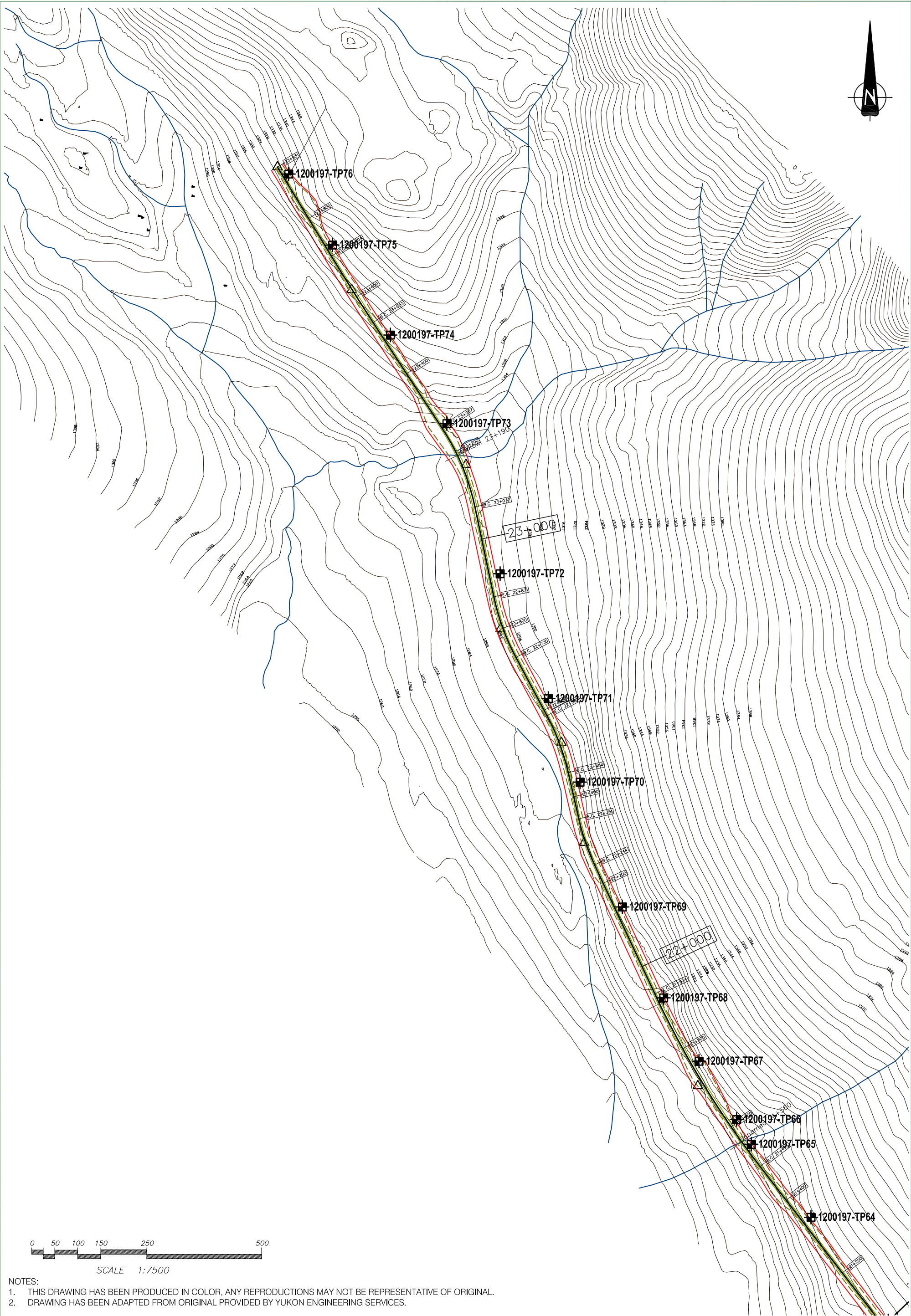
LEGEND:
[Symbol] HAND DUG TESTPITS (JUNE 2006)
[Symbol] TESTPITS (JULY 2006)

EBA Engineering Consultants Ltd. 			CLIENT 		PROJECT GEOTECHNICAL ASSESSMENT WOLVERINE LAKE ACCESS ROAD								
DWN.	JSB	CHKD.	JTD/JRT	TITLE SITE PLAN SHOWING TESTHOLE LOCATIONS									
EBA JOB NO.		1200197		FILE:	1200197 Fig 2.dwg		REVISION NO.:	1	DATE:	Aug. 2006		Figure 2	



LEGEND:
[Symbol] HAND DUG TESTPITS (JUNE 2006)
[Symbol] TESTPITS (JULY 2006)

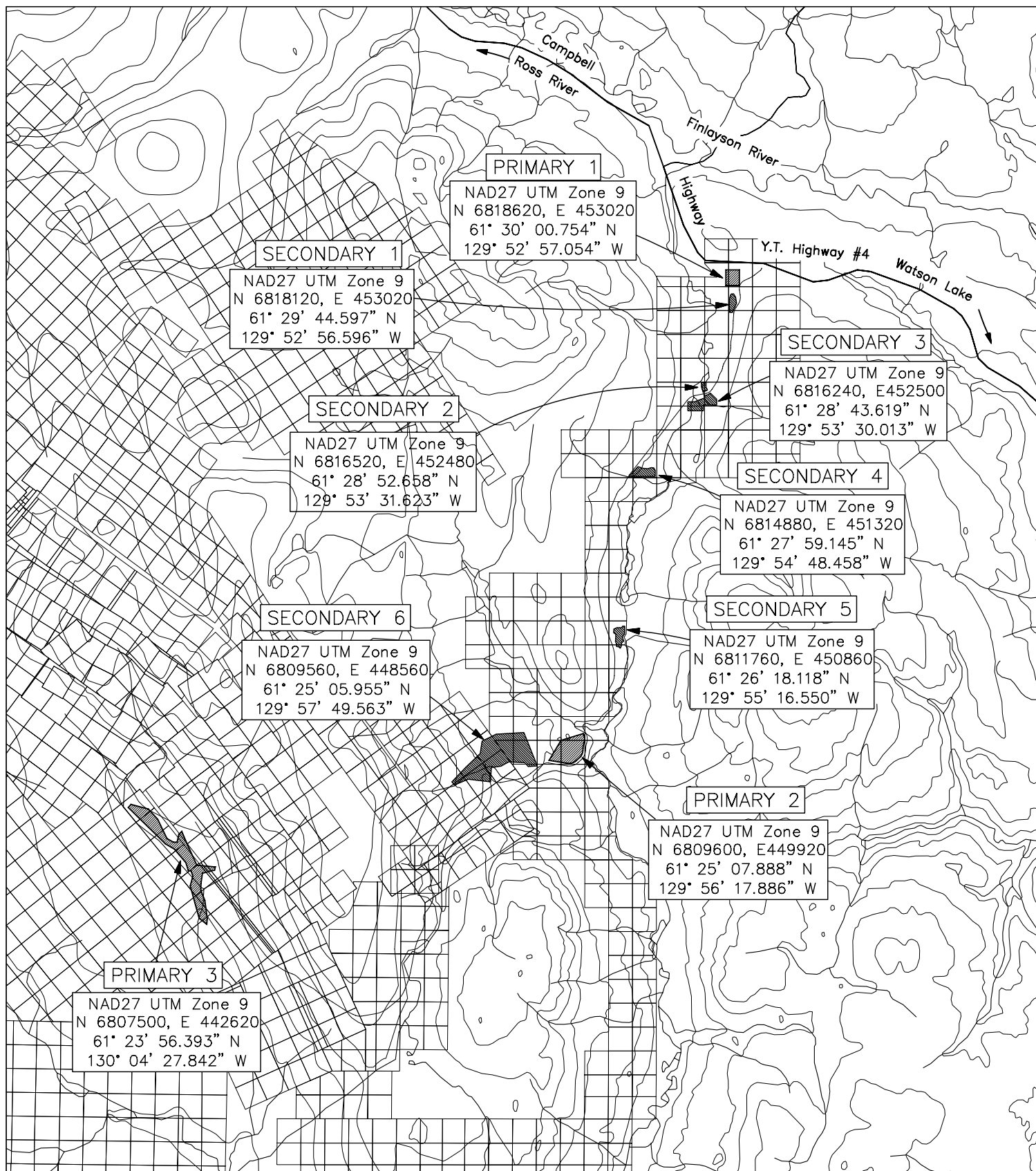
EBA Engineering Consultants Ltd. eba			CLIENT Yukon Zinc CORPORATION Yukon Engineering Services		PROJECT GEOTECHNICAL ASSESSMENT WOLVERINE LAKE ACCESS ROAD		
DWN. JSB CHKD. JTD/JRT			Yukon Zinc CORPORATION		TITLE SITE PLAN SHOWING TESTHOLE LOCATIONS		
EBA JOB NO. 1200197					FILE: 1200197 Fig 1.dwg REVISION NO.: 1		DATE: Aug. 2006 Figure 1



- NOTES:
1. THIS DRAWING HAS BEEN PRODUCED IN COLOR, ANY REPRODUCTIONS MAY NOT BE REPRESENTATIVE OF ORIGINAL.
 2. DRAWING HAS BEEN ADAPTED FROM ORIGINAL PROVIDED BY YUKON ENGINEERING SERVICES.

- LEGEND:
- HAND DUG TESTPITS (JUNE 2006)
 - TESTPITS (JULY 2006)

EBA Engineering Consultants Ltd. 		CLIENT 		PROJECT GEOTECHNICAL ASSESSMENT WOLVERINE LAKE ACCESS ROAD	
DWN. JSB CHKD. JTD/JRT				TITLE SITE PLAN SHOWING TESTHOLE LOCATIONS	
EBA JOB NO. 1200197		FILE: 1200197 EBA TP.dwg	REVISION NO.: 1	DATE: Aug. 2006	Figure 7



Yukon Zinc Corporation Wolverine Access Road

Figure 3 - Wolverine Access Road
Proposed Borrow Sources

S:\INFO\DWG\LOGOS\YZC_Logo.jpg



SCALE: 1:100 000

DRAWN: GCC

PROJECT: E06-015

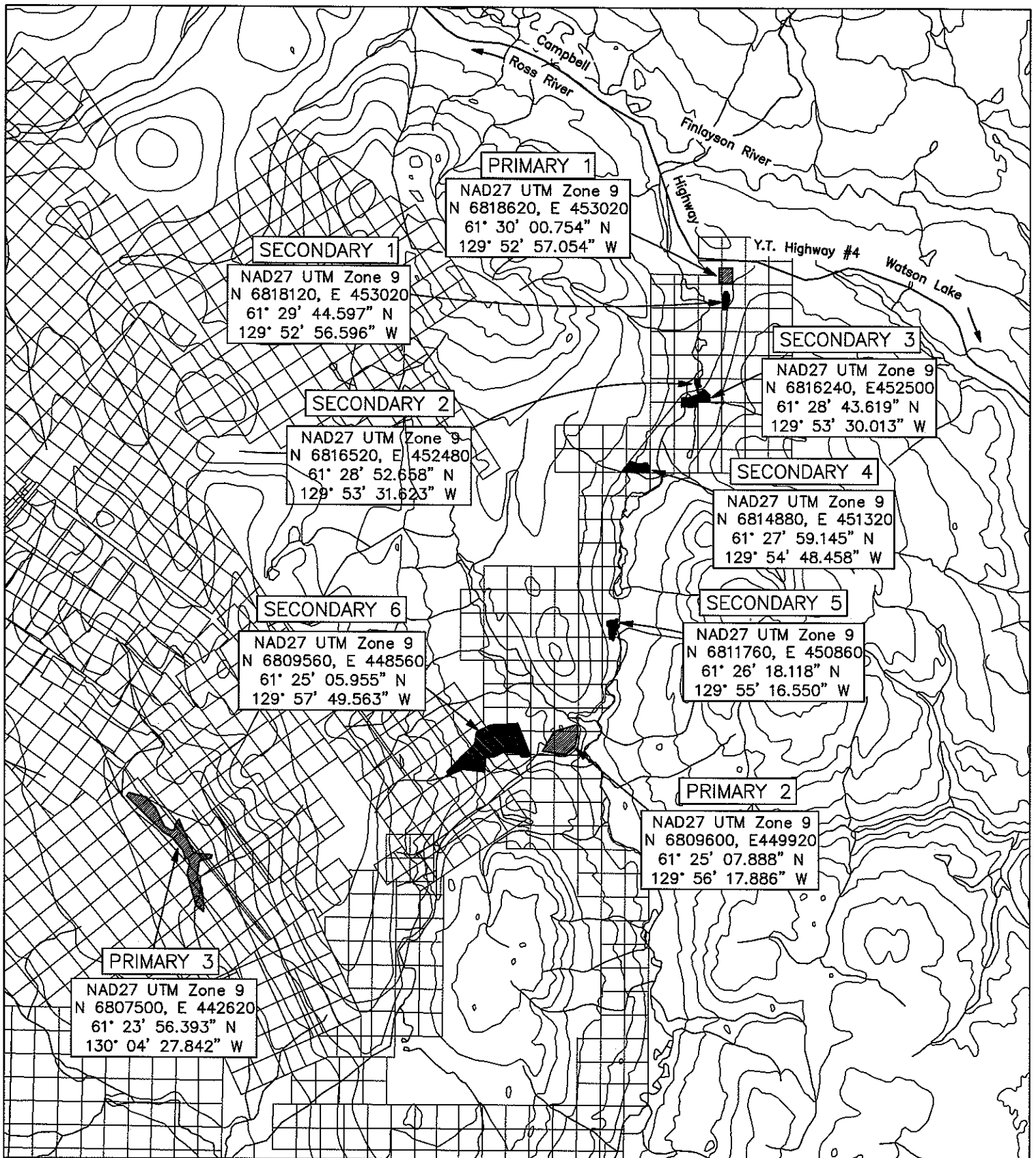
DRAWING: Borrow Targets\Figure 3

CHECKED: PK

DATE: 31/07/06



TESTPIT LOGS



Yukon Zinc Corporation Wolverine Access Road

**Figure 3 - Wolverine Access Road
Proposed Borrow Sources**

S:\INFO\DWG\LOGOS\YZC_Logo.jpg



SCALE: 1:100 000

DRAWN: GCC

PROJECT: E06-015

DRAWING: Borrow Targets\Figure 3

CHECKED: PK

DATE: 31/07/06



TESTPIT LOGS



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP01	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6814855 E451073		ELEVATION:	
SAMPLE TYPE		☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL					

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲			■ PERCENT SAND ■			Depth(ft)			
								20	40	60	80	20	40		60	80	
								PLASTIC			M.C.				LIQUID		
								10	20	30	40						
0.0						ORGANIC ROOT MAT	UNFROZEN							0.0			
						SILT - some sand, black, moist											
						SAND (TILL) - gravelly, some silt, well graded sand, fine to medium grained angular gravel, compact, damp, medium grey - coarse gravels and some cobbles throughout	FROZEN NF, Vc, 5-10%							2.0			
1.0																	
							UNFROZEN							4.0			
2.0																	
														6.0			
														8.0			
						END OF TESTPIT 2.4 m - very hard excavating								10.0			
3.0																	
														12.0			
4.0														14.0			

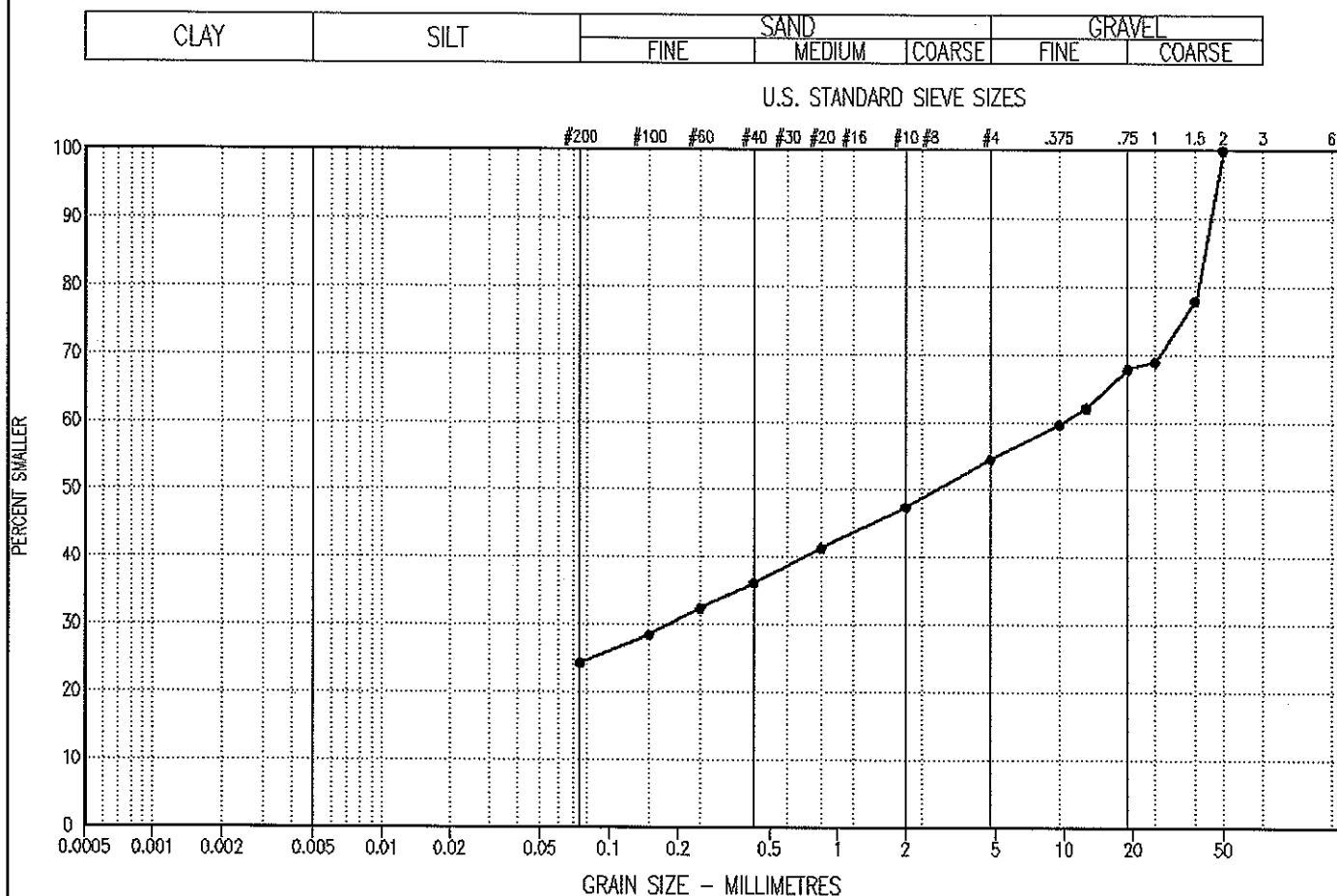
EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 2.4 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP02	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6814672 E450975		ELEVATION:	
SAMPLE TYPE		☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL					

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80			■ PERCENT SAND ■ 20 40 60 80			Depth(ft)			
								PLASTIC			M.C.				LIQUID		
								10 20 30 40			10 20 30 40				10 20 30 40		
0.0						ORGANIC ROOT MAT	UNFROZEN						0.0				
						GRAVEL (TILL) – sandy, some silt, compact, moist, brownish grey											
1.0						SAND (EOLIAN) – fine to medium grained, uniform, damp, dark grey – coarse gravel and cobbles below 1.8 m – becomes silty below 1.8 m – becomes gravel, sandy below 2.0 m – very compact below 2.5 m											
2.0																	
3.0						END OF TESTPIT 3.5 m – very hard excavating											
4.0																	

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 3.5 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP02	2.00 - 2.20	— 24 —	—	30	46	—	—	

Project: 0201-1200197

Date Tested: 06/04/08

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP03	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6814451 E450810		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲			■ PERCENT SAND ■			Depth(ft)
								20 40 60 80			20 40 60 80			
								PLASTIC	M.C.	LIQUID				
0.0						ORGANIC ROOT MAT	UNFROZEN						0.0	
						SAND (TILL) - gravelly, silty, very compact, moist, grey - coarse gravel and cobbles below 0.5 m								
1.0														
2.0														
3.0														
						END OF TESTPIT 3.0 m - very hard excavating								
4.0														

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 3 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

Proposed Access Road				CLIENT: Yukon Engineering Services				TEST PIT NO: 1200197-TP04				
Wolverine Lake, YT				EXCAVATOR: 320 C TRACKED EXCAVATOR				PROJECT NO: 1200197				
				UTM ZONE: 8 N6814047 E450657				ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL												
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲			Depth(ft)	
								■ PERCENT SAND ■				
								20	40	60		
								20	40	60		
								PLASTIC	M.C.	LIQUID		
								10 20 30 40				
0.0						ORGANIC ROOT MAT – silty, black, frozen	UNFROZEN				0.0	
						GRAVEL (TILL) – sand, silty, fine to medium grained, damp, light greyish brown	FROZEN Vc, 15-20%					
						END OF TESTPIT 0.4 m (REFUSAL)						
1.0												
2.0												
3.0												
4.0												

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 0.4 m
REVIEWED BY: JRT	COMPLETE:
	Page 1 of 1

Proposed Access Road				CLIENT: Yukon Engineering Services				TEST PIT NO: 1200197-TP05			
Wolverine Lake, YT				EXCAVATOR: 320 C TRACKED EXCAVATOR				PROJECT NO: 1200197			
				UTM ZONE: 8 N6813706 E450641				ELEVATION:			
SAMPLE TYPE				☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80			Depth(ft)
								PLASTIC M.C. LIQUID			
								10 20 30 40			
0.0						ORGANIC ROOT MAT – silty	UNFROZEN				0.0
						SILT (TILL) – sandy, trace of gravel					
						BEDROCK – highly weathered, highly fractured, fine to coarse angular particles, saturated, dark brown					2.0
1.0						– becomes competent with depth					4.0
						END OF TESTPIT 1.5 m (REFUSAL)					6.0
2.0											8.0
											10.0
3.0											12.0
											14.0

EBA Engineering Consultants Ltd.		LOGGED BY: JSB	COMPLETION DEPTH: 1.5 m
Whitehorse, Yukon		REVIEWED BY: JRT	COMPLETE:
			Page 1 of 1

Geotechnical Investigation					CLIENT: Yukon Engineering Services			TEST PIT NO: 1200197-TP06		
Proposed Access Road					EXCAVATOR: 320 C TRACKED EXCAVATOR			PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6813566 E450634			ELEVATION:		
SAMPLE TYPE					☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CORREL BARREL					

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80			■ PERCENT SAND ■ 20 40 60 80			Depth(ft)			
								PLASTIC			M.C.				LIQUID		
								10	20	30	40	10	20		30	40	10
0.0						ORGANIC ROOT MAT	UNFROZEN								0.0		
						SILT (TILL) – sandy, gravelly, well graded sand, fine to medium grained subangular gravel, compact, damp, light brownish grey – gravel content increases with depth									2.0		
1.0															4.0		
						BEDROCK (PHYLLITE) – highly weathered, coarse angular particles, grey									6.0		
2.0						END OF TESTPIT 1.8 m (REFUSAL)									8.0		
															10.0		
3.0															12.0		
															14.0		
4.0																	

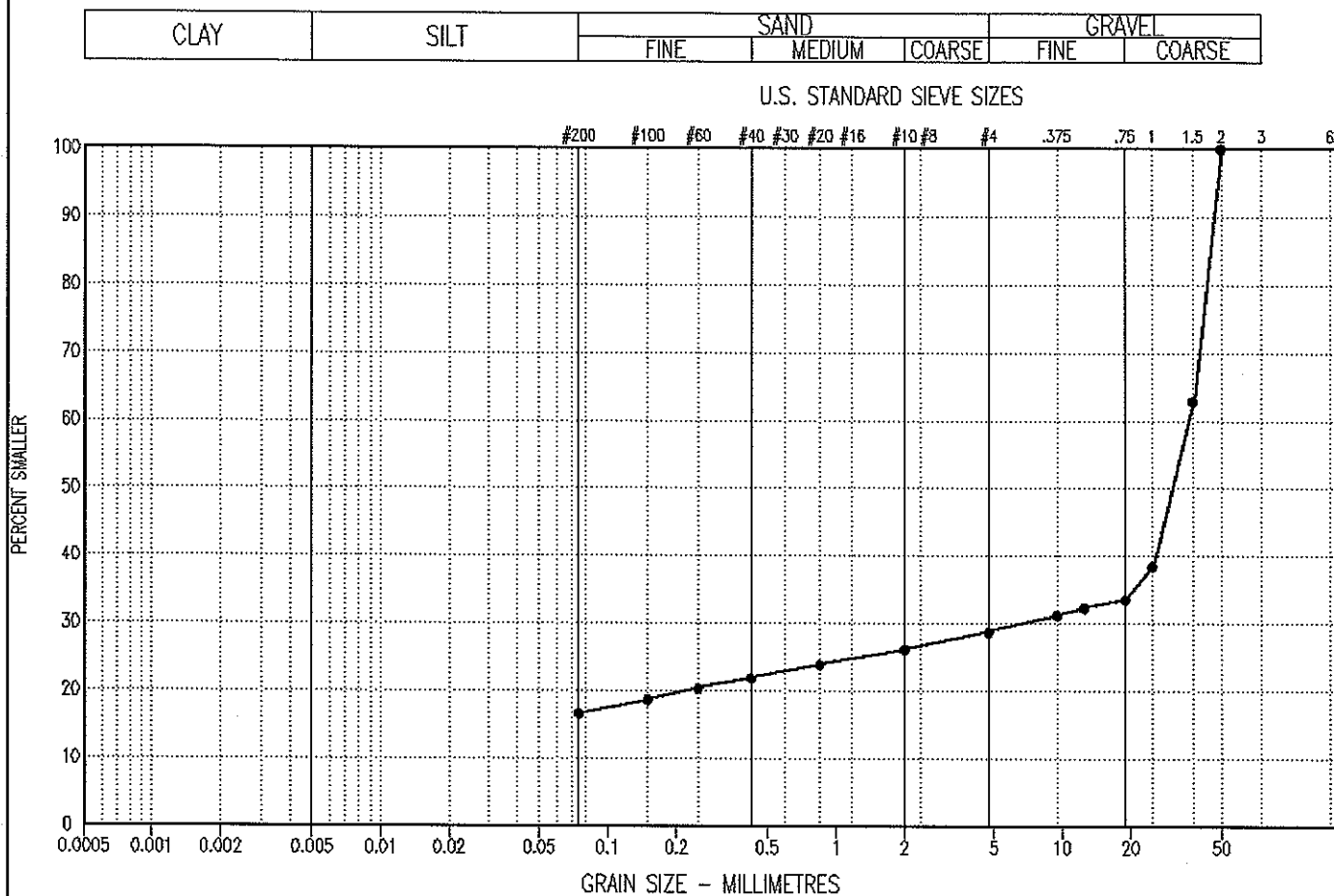
EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 1.8 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP07	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6813351 E450560		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID -----●----- 10 20 30 40	Depth(ft)
0.0					ORGANIC ROOT MAT	UNFROZEN		0.0
					GRAVEL (TILL) – silty, sandy, coarse subrounded gravel, compact, damp, grey			
1.0					– some gravel below 1.0 m			
2.0					– difficult to excavate below 2.0 m			
3.0					END OF TESTPIT 2.7 m (REFUSAL) – becomes very compact at 2.7 m			
4.0								

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 2.7 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
—●—	1200197-TP07	0.50 - 0.70	---	17	---	11	72	—	—

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP08	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6813127 E450490		ELEVATION:	
SAMPLE TYPE		☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL					

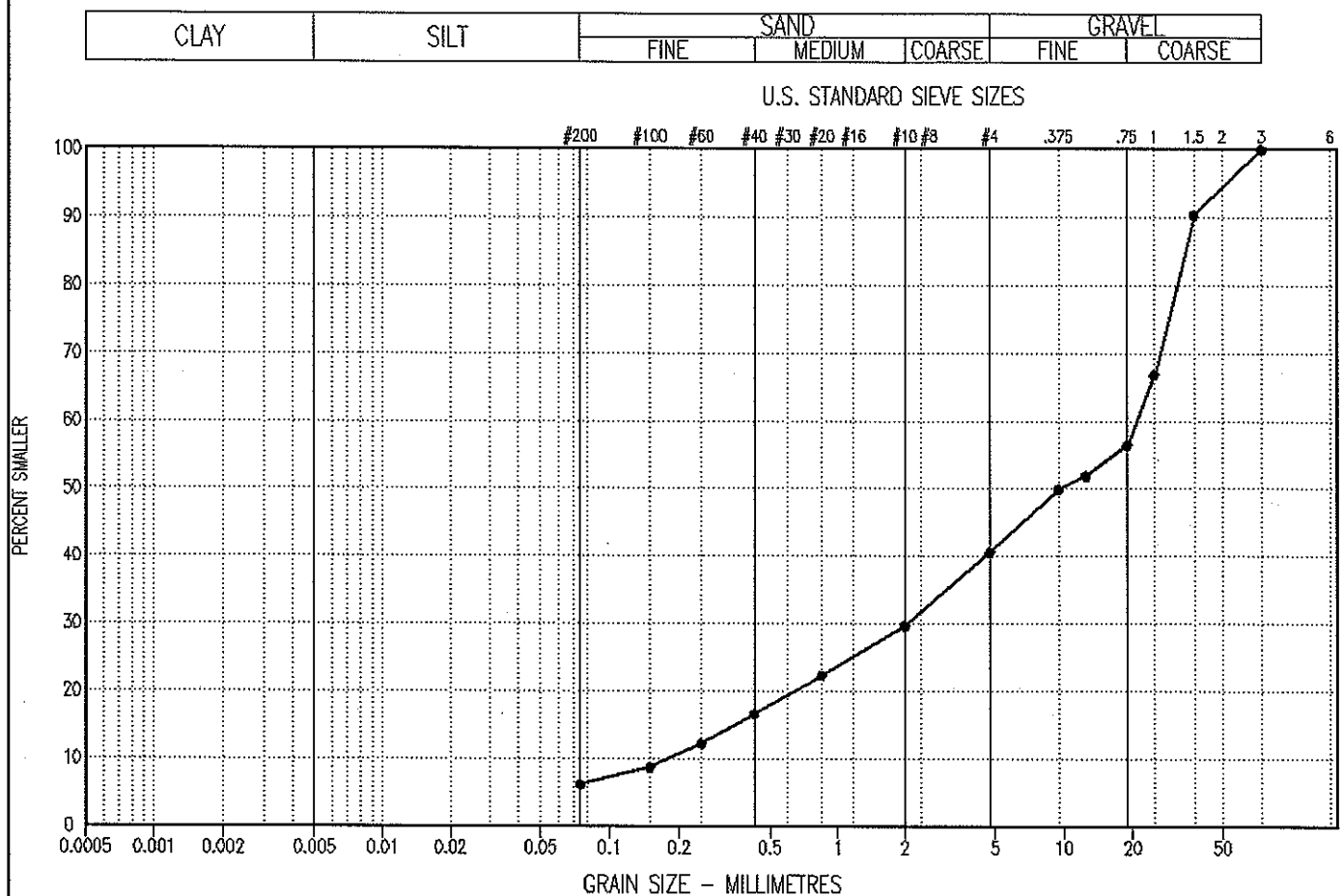
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80			■ PERCENT SAND ■ 20 40 60 80			Depth(ft)			
								PLASTIC			M.C.				LIQUID		
								10 20 30 40			10 20 30 40				10 20 30 40		
0.0						ORGANIC ROOT MAT	UNFROZEN						0.0				
						GRAVEL (FLUMIAL) – sandy, trace to some silt, well graded subrounded gravel, coarse sand, compact, dry, reddish brown											
1.0													1.0				
2.0						– colour changes to light grey around 1.8 m – major sloughing below 2.5 m – trace to no silt below 1.8 m							2.0				
3.0													3.0				
4.0						END OF TESTPIT 3.5 m – slough below 3.5 m							4.0				

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 3.5 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP10		
Proposed Access Road					EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6812746 E450456		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SILT – sandy, fine grained, blackish grey			
						GRAVEL AND SAND – (COLLUVIAL) – trace of silt, well graded subrounded gravel, coarse sand, compact, moist, dark brownish grey	FROZEN Nbe, Vc, 5-10%	▲ ● ■	2.0
						END OF TESTPIT 0.5 m (REFUSAL)			
1.0									
2.0									
3.0									
4.0									

EBA Engineering Consultants Ltd.		LOGGED BY: JSB	COMPLETION DEPTH: 0.5 m
Whitehorse, Yukon		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP10	0.30 - 0.50	---	6 ---	34	60	111.3	1.1	GW-GM

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP11	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6812575 E450461		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID ----- 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SILT – sandy, fine grained, blackish grey			
						GRAVEL (TILL) – sandy, some silt, well graded, subrounded gravel, coarse sand, mottled brown	FROZEN Vx, 20–30%		
						END OF TESTPIT 0.3 m (REFUSAL)			
1.0									
2.0									
3.0									
4.0									

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 0.3 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP12	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6812245 E450509		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☒ 75 mm SPOON ☐ CRREL BARREL							
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION
							▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40
0.0					ORGANIC ROOT MAT	UNFROZEN	
					SILT – sandy, fine grained, blackish grey		
					GRAVEL (TILL) – sandy, silty, well graded subrounded gravel, coarse sand, mottled brown	FROZEN Vc, 10–15%	
					END OF TESTPIT 0.3 m (REFUSAL)		
1.0							
2.0							
3.0							
4.0							

Geotechnical Investigation			CLIENT: Yukon Engineering Services			TEST PIT NO: 1200197-TP13			
Proposed Access Road			EXCAVATOR: 320 C TRACKED EXCAVATOR			PROJECT NO: 1200197			
Wolverine Lake, YT			UTM ZONE: 8 N6811952 E450589			ELEVATION:			
SAMPLE TYPE			☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL						
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SILT - sandy, fine grained. blackish grey			
						GRAVEL - sandy, trace to some silt, subrounded well graded gravel, coarse sand	FROZEN Vc, 30-40%		
						END OF TESTPIT 0.3 m (REFUSAL)			
1.0									
2.0									
3.0									
4.0									
EBA Engineering Consultants Ltd.						LOGGED BY: JSB		COMPLETION DEPTH: 0.3 m	
Whitehorse, Yukon						REVIEWED BY: JRT		COMPLETE: 06/07/11	
								Page 1 of 1	

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP14					
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197					
Wolverine Lake, YT				UTM ZONE: 8 N6811710 E450674		ELEVATION:					
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲			Depth(ft)
								■ PERCENT SAND ■			
								20	40	60	
								20	40	60	
								PLASTIC	M.C.	LIQUID	
								10 40 M.C. 10 40			
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						GRAVEL (TILL) – sandy, silty, subrounded well graded gravel, coarse sand, moist, grey	FROZEN Vc, 15–20%				
						END OF TESTPIT 0.3 m (REFUSAL)					
1.0											
2.0											
3.0											
4.0											

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 0.3 m
REVIEWED BY: JRT	COMPLETE:
	Page 1 of 1

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP15				
Proposed Access Road					EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197				
Wolverine Lake, YT					UTM ZONE: 8 N6811463 E450757		ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			Depth(ft)
								PERCENT SAND ■			
								PLASTIC	M.C.	LIQUID	
								10 20 30 40			
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						SILT – sandy, fine grained, medium grey – becomes gravelly below 0.2 m					
						END OF TESTPIT 0.3 m (REFUSAL)	FROZEN V _x , V _r , 10–15%				
1.0											
2.0											
3.0											
4.0											

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 0.3 m
REVIEWED BY: JRT	COMPLETE: 06/07/11
	Page 1 of 1

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP16				
Proposed Access Road					EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197				
Wolverine Lake, YT					UTM ZONE: 8 N6811231 E450771		ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ ■ PERCENT SAND ■ PLASTIC M.C. LIQUID 10 20 30 40			Depth(ft)
								20	40	60	
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						SILT – sandy, fine grained, compac, very moist to wet, dark brown					
						– gravelly below 0.2 m	FROZEN				
						END OF TESTPIT 0.3 m (REFUSAL)	Vx, Vr, 20–25%				
1.0											
2.0											
3.0											
4.0											

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB
REVIEWED BY: JRT

COMPLETION DEPTH: 0.3 m
COMPLETE: 06/07/11

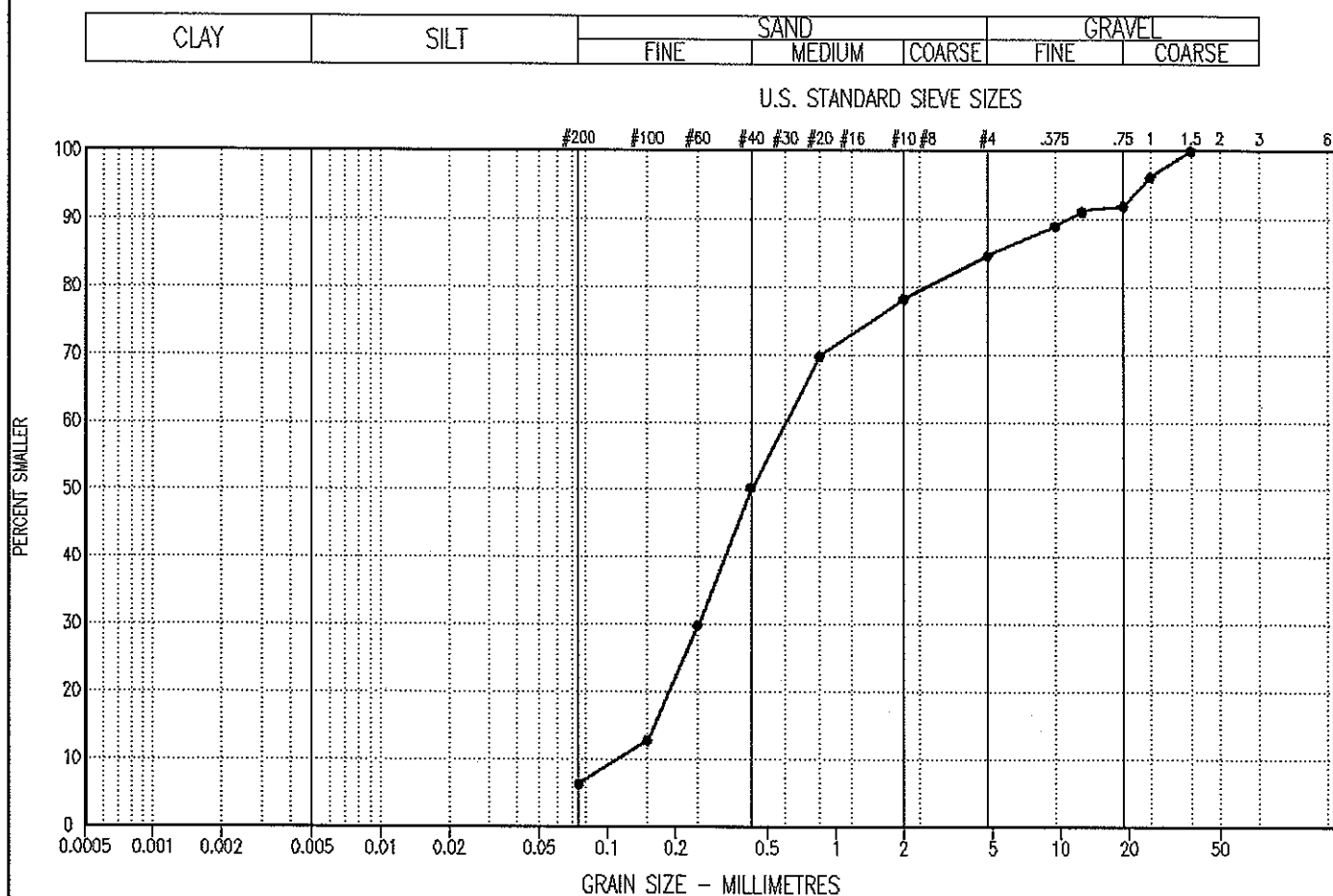
Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP17	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6810971 E450764		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			PERCENT SAND ■			Depth(ft)
								20 40 60 80			20 40 60 80			
								PLASTIC	M.C.	LIQUID				
0.0						ORGANIC ROOT MAT	UNFROZEN						0.0	
						SILT (TILL) - sandy, some gravel, some clay, well graded sand, fine to medium grained subrounded gravel, compact, damp, medium grey - becomes gravelly below 0.3 m								
						END OF TESTPIT 0.6 m (REFUSAL)	FROZEN V _x , V _r , 10-15%						2.0	
1.0													4.0	
2.0													6.0	
3.0													8.0	
4.0													10.0	
													12.0	
													14.0	

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 0.6 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

Geotechnical Investigation			CLIENT: Yukon Engineering Services			TEST PIT NO: 1200197-TP18			
Proposed Access Road			EXCAVATOR: 320 C TRACKED EXCAVATOR			PROJECT NO: 1200197			
Wolverine Lake, YT			UTM ZONE: 8 N6810610 E450651			ELEVATION:			
SAMPLE TYPE			☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL						
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SAND – some gravel, trace of silt, well graded, subangular gravel, coarse sand, wet, compact, medium grey			
1.0									2.0
						– becomes gravelly around 1.5 m			4.0
2.0						END OF TESTPIT 2.0 m			6.0
									8.0
3.0									10.0
									12.0
4.0									14.0
EBA Engineering Consultants Ltd.						LOGGED BY: JSB		COMPLETION DEPTH: 2 m	
Whitehorse, Yukon						REVIEWED BY: JRT		COMPLETE: 06/07/11	
								Page 1 of 1	

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP18	1.80 - 2.00	---	6 ---	78	16	5.4	0.8	SP-SM

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP19									
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197									
Wolverine Lake, YT				UTM ZONE: 8 N6810343 E450663		ELEVATION:									
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☒ 75 mm SPOON ☐ CRREL BARREL															
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			PERCENT SAND ■			Depth(ft)	
								20	40	60	80	20	40		60
								PLASTIC	M.C.	LIQUID					
								10	20	30	40				
0.0						ORGANIC ROOT MAT	UNFROZEN							0.0	
						SAND – silty, gravelly, well graded sand, fine to medium grained gravel, moist, compact, medium grey									
						– becomes coarser grained, gravel increasing in content around 0.5 m									
1.0														4.0	
						END OF TESTPIT 1.3 m (REFUSAL)	FROZEN Nbn, Vs, 10–15%							6.0	
2.0														8.0	
														10.0	
3.0														12.0	
														14.0	
4.0															

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 1.3 m
REVIEWED BY: JRT	COMPLETE: 06/07/11
	Page 1 of 1

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP20	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6810184 E450502		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			PERCENT SAND ■			Depth(ft)		
								20 40 60 80			20 40 60 80					
								PLASTIC			M.C.			LIQUID		
								10 20 30 40								
0.0						ORGANIC ROOT MAT	UNFROZEN								0.0	
						SILT (TILL) – sandy, trace of gravel, well graded sand, fine to medium grained subangular gravel, compact, moist, medium grey – gravel below 0.2 m, well graded, subrounded	FROZEN Vc, trace									
						END OF TESTPIT 0.3 m (REFUSAL)										
1.0																
2.0																
3.0																
4.0																

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 0.3 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

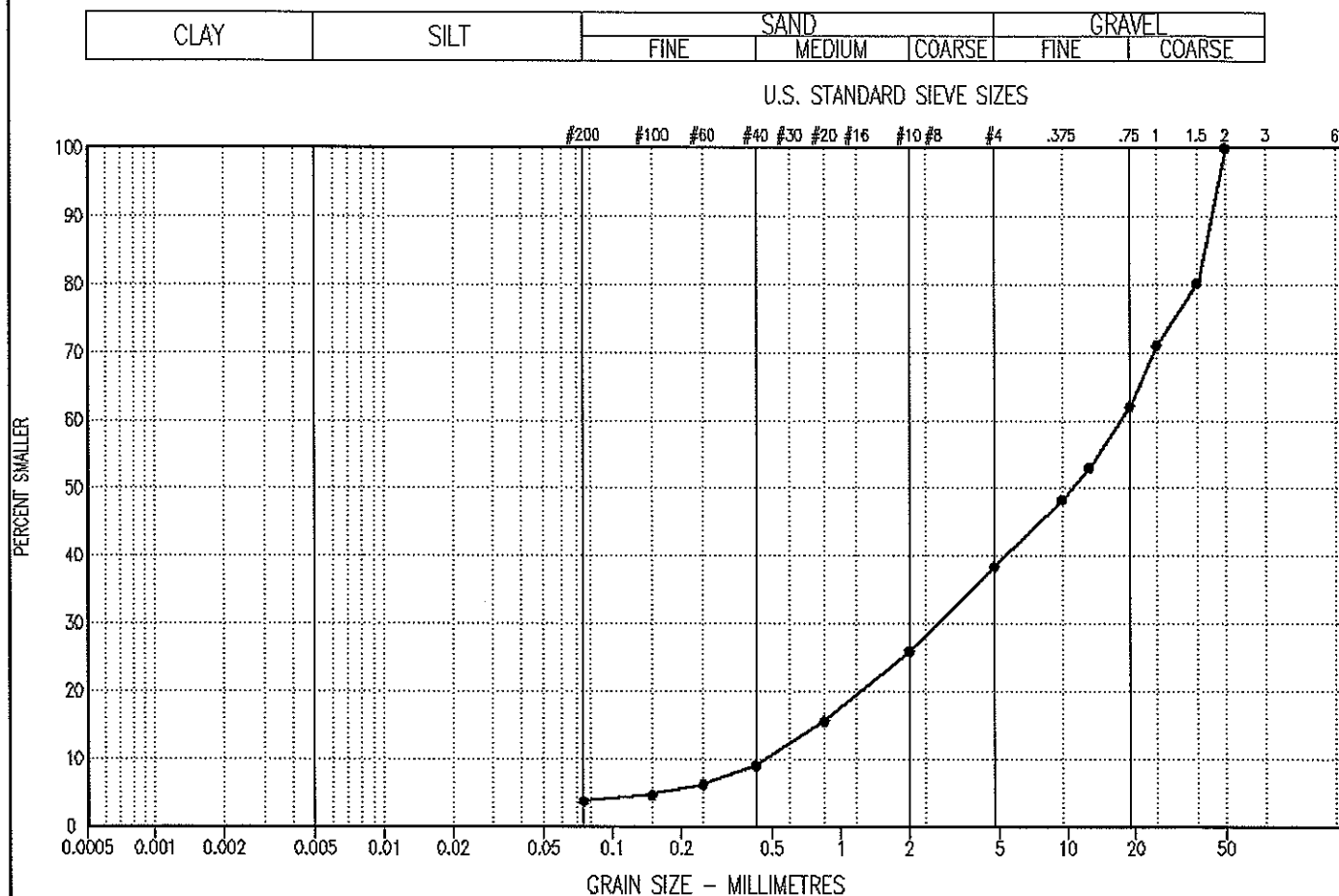
Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP21			
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197			
Wolverine Lake, YT				UTM ZONE: 8 N6810070 E450307		ELEVATION:			
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☒ 75 mm SPOON ☐ CORREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SILT (TILL) – gravelly, sandy, fine to medium grained, subrounded gravel, well graded sand			2.0
1.0						– gravel content increases and becomes coarser around 1.2 m – some silt below 1.2 m			4.0
2.0						END OF TESTPIT 2.0 m – some slough below 1.2 m			6.0
									8.0
									10.0
									12.0
									14.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 2 m
REVIEWED BY: JRT	COMPLETE: 06/07/11
	Page 1 of 1

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP22		
Proposed Access Road					EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6809913 E450203		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☒ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID -----●----- 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SAND (TILL) – silty, gravelly, well graded sand, fine to medium grained subangular gravel, compact, damp, grey – some silt around 0.4 m – becomes coarser gravel around 1.0 m			2.0
1.0						– becomes silty, some gravel around 1.0 m			4.0
						END OF TESTPIT 1.7 m (REFUSAL)			6.0
2.0									8.0
									10.0
3.0									12.0
									14.0
4.0									
EBA Engineering Consultants Ltd. Whitehorse, Yukon							LOGGED BY: JSB		COMPLETION DEPTH: 1.7 m
							REVIEWED BY: JRT		COMPLETE: 06/07/11

PARTICLE SIZE - ANALYSIS OF SOILS



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP24	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6809366 E450123		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			PERCENT SAND ■			Depth(ft)
								20 40 60 80			20 40 60 80			
								PLASTIC	M.C.	LIQUID				
0.0						ORGANIC ROOT MAT	UNFROZEN						0.0	
						SAND (COLLUVIUM) – gravelly, some silt, medium to coarse sand, well graded subangular gravel, compact, damp, light greyish brown								
1.0						– coarser gravel below 1.2 m								
2.0						SAND (TILL) – silty, gravelly, trace of clay, well graded sand, fine to medium grained subangular gravel, compact, damp, grey								
3.0						END OF TESTPIT 3.0 m (REFUSAL)	FROZEN Vr, Vx, 5-10%							

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 3 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

[illegible]

Geotechnical Investigation						CLIENT: Yukon Engineering Services						TEST PIT NO: 1200197-TP26								
Proposed Access Road						EXCAVATOR: 320 C TRACKED EXCAVATOR						PROJECT NO: 1200197								
Wolverine Lake, YT						UTM ZONE: 8 N6809312 E449628						ELEVATION:								
SAMPLE TYPE						☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL														
Depth(m)		SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION				GROUND ICE DESCRIPTION				▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 				Depth(ft)	
0.0							ORGANIC ROOT MAT				UNFROZEN								0.0	
							SILT – sandy, fine grained, compact, moist, dark brown													
							SAND – gravelly, trace to some silt, well graded sand, fine to medium grained gravel, compact, moist, reddish brown													
1.0																				
2.0							– gravel content increases becoming coarser below 1.5 m													
3.0											FROZEN Nbn, Vs trace								8.0	
4.0							END OF TESTPIT 2.5 m (REFUSAL)												10.0	
																			12.0	
																			14.0	

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB
REVIEWED BY: JRT

COMPLETION DEPTH: 2.5 m
COMPLETE: 06/07/11

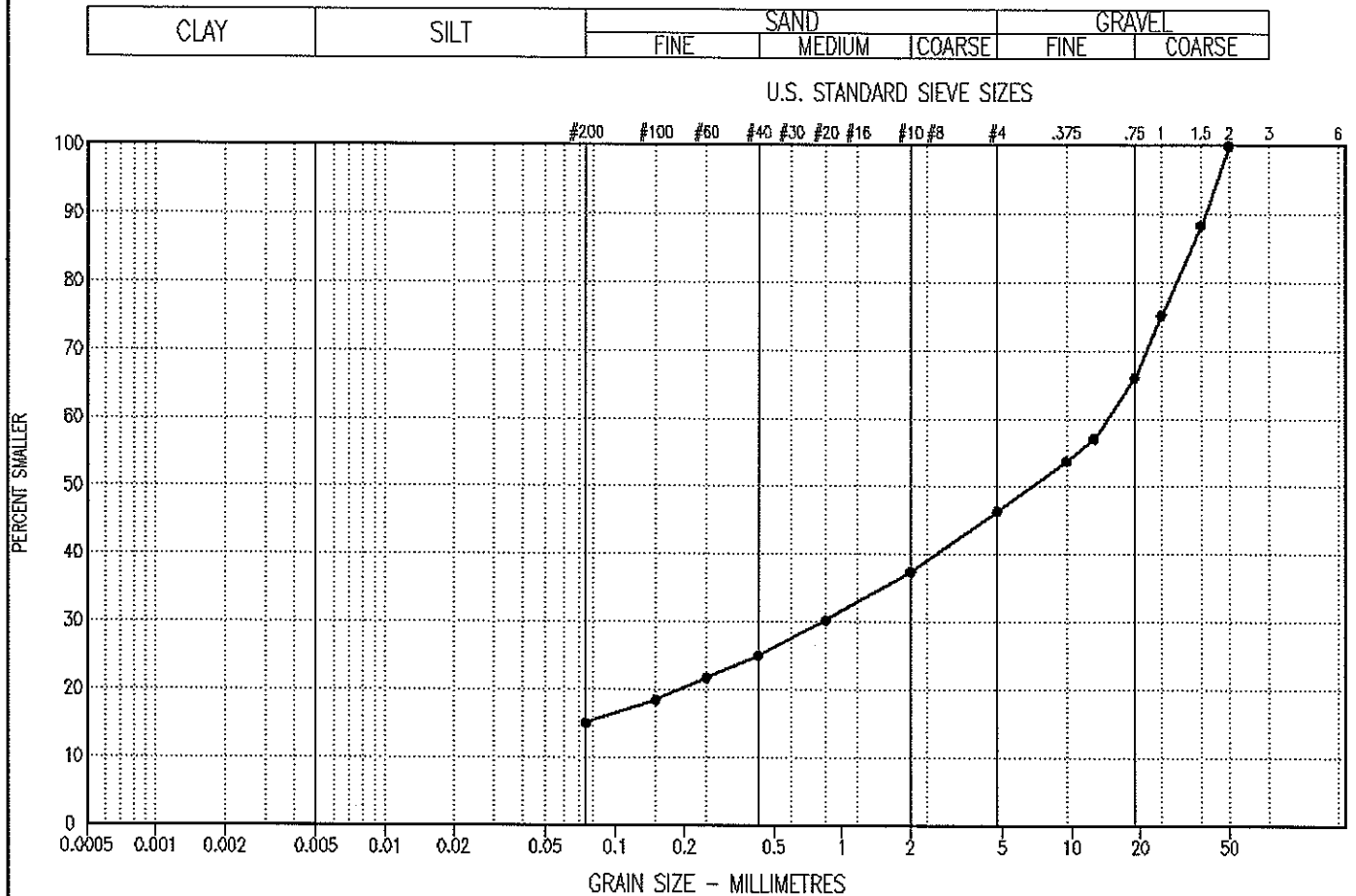
Page 1 of 1

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP27	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6809280 E449368		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☒ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			PERCENT SAND ■			Depth(ft)			
								20	40	60	80	20	40		60	80	
								PLASTIC			M.C.				LIQUID		
								10	20	30	40						
0.0						ORGANIC ROOT MAT	UNFROZEN							0.0			
						SILT – sandy, trace of fine gravel											
						GRAVEL (TILL) – sandy, some silt, trace of clay, well graded sand, subrounded gravel, light grey – coarse gravels and cobbles throughout testpit								2.0			
1.0																	
														4.0			
														6.0			
2.0						– trace to some silt below 2.0 m											
														8.0			
							FROZEN Vc, Vr, trace										
						END OF TESTPIT 2.4 m (REFUSAL)								10.0			
														12.0			
														14.0			

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 2.4 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP27	0.80 - 1.00	---	15	31	54	—	—	

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



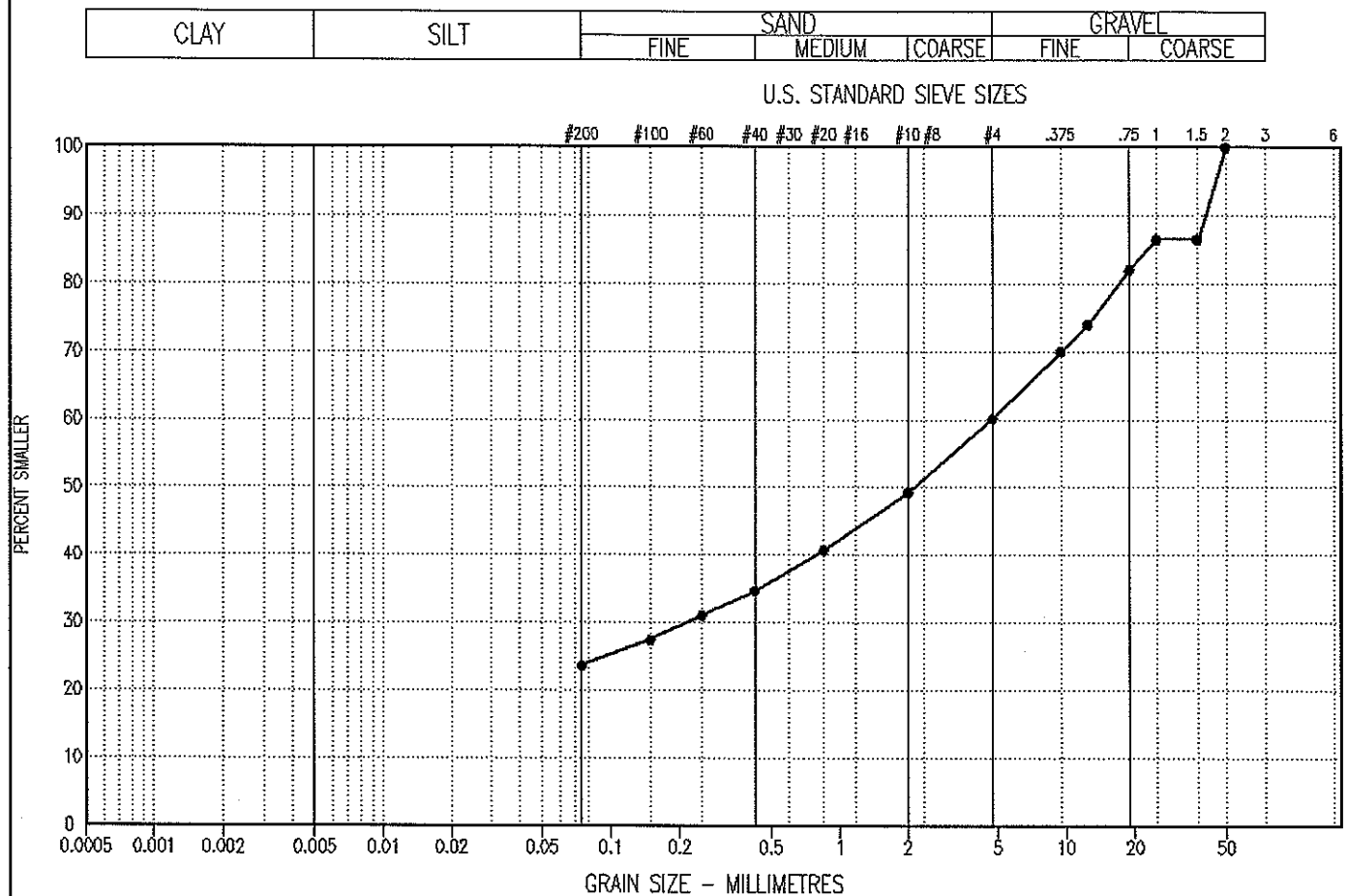
Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP28		
Proposed Access Road					EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6809186 E449222		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID ----- ----- 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL AND SAND (TILL) – silty, trace of clay, well graded sand, fine to medium grained subangular gravels, compact, damp, light greyish brown – gravel content increases with depth – becomes silty below 0.4 m			2.0
1.0									4.0
2.0									6.0
									8.0
						END OF TESTPIT 2.4 m	FROZEN V _c , 5–10%		10.0
3.0									12.0
4.0									14.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB
REVIEWED BY: JRT

COMPLETION DEPTH: 2.4 m
COMPLETE: 06/07/11

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP28	2.20 - 2.40	24	—	36	40	—	—	

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP30	
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6808965 E448792		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

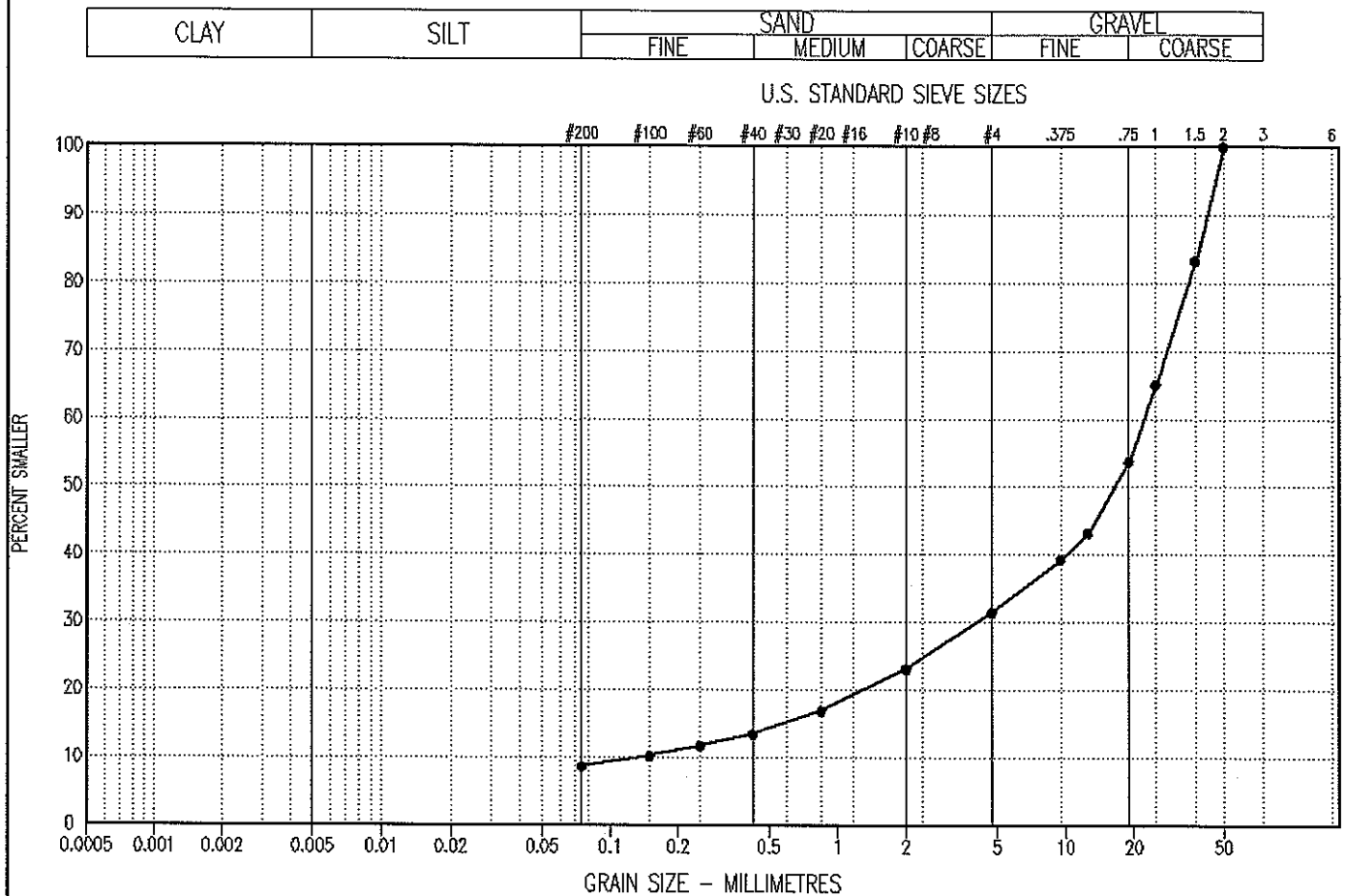
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID ----- 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SAND (TILL) – silty, trace of clay, gravelly, compact, damp, coarse angular sand and gravel, dark grey			
1.0						– coarser gravel, some cobbles below 1.2 m – colour changes to greyish brown around 1.2 m			
2.0						END OF TESTPIT 2.0 m (REFUSAL)	FROZEN Vc, Vr trace		

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 2 m
		REVIEWED BY: JRT	COMPLETE: 06/07/11
		Page 1 of 1	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP31		
Proposed Access Road					EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6808936 E448518		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CORREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SAND (TILL) – silty, gravelly, trace of clay, well graded sand and angular gravel, compact, damp, medium grey	FROZEN Vx, 10–15%		
						END OF TESTPIT 0.3 m			
1.0									
2.0									
3.0									
4.0									
EBA Engineering Consultants Ltd.						LOGGED BY: JSB		COMPLETION DEPTH: 0.3 m	
Whitehorse, Yukon						REVIEWED BY: JRT		COMPLETE: 06/07/11	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP32		
Proposed Access Road					EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6809099 E448354		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL (TILL) - sandy, trace of silt, coarse angular sand and gravel, moist, compact, grey - becomes coarser gravel with cobbles below 0.4 m			2.0
1.0									4.0
									6.0
2.0						END OF TESTPIT 1.8 m (REFUSAL)	FROZEN Vx, Vr trace		8.0
									10.0
3.0									12.0
									14.0
4.0									
EBA Engineering Consultants Ltd.						LOGGED BY: JSB		COMPLETION DEPTH: 1.8 m	
Whitehorse, Yukon						REVIEWED BY: JRT		COMPLETE: 06/07/11	

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
—●—	1200197-TP32	1.60 - 1.80	---	9 ---	22	69	153.2	5.6	GP-GM

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

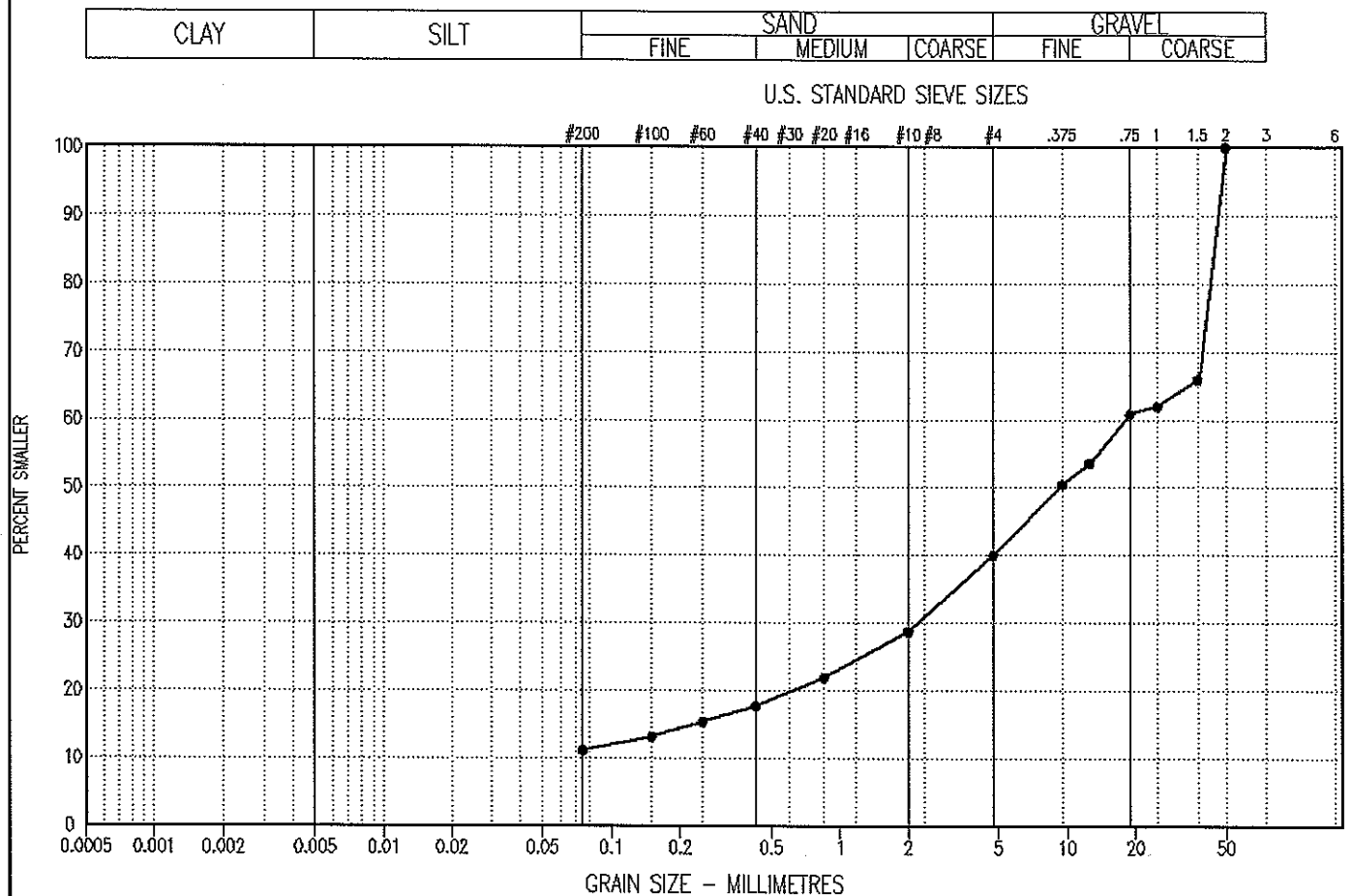
The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation				CLIENT: Yukon Engineering Services				TEST PIT NO: 1200197-TP33			
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR				PROJECT NO: 1200197			
Wolverine Lake, YT				UTM ZONE: 8 N6808902 E448255				ELEVATION:			
SAMPLE TYPE				☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CORREL BARREL							
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40			Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						SILT - sandy, fine grained, moist, compact, reddish brown					
						SAND (TILL) - silty, gravelly, trace of clay, coarse sand and gravel, subangular, compact, moist, grey					
1.0						- coarser angular gravels and cobbles below 1.2 m					
						- less sand and silt below 1.5 m					
2.0						BEDROCK (black meta-volcanic) - fairly fractured, good quality	FROZEN				6.0
						END OF TESTPIT 2.0 m (REFUSAL)	Vx, Vr trace				
3.0											10.0
4.0											14.0
EBA Engineering Consultants Ltd.							LOGGED BY: JSB		COMPLETION DEPTH: 2 m		
Whitehorse, Yukon							REVIEWED BY: JRT		COMPLETE: 06/07/11		
									Page 1 of 1		

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP34					
Proposed Access Road				EXCAVATOR: 320 C TRACKED EXCAVATOR		PROJECT NO: 1200197					
Wolverine Lake, YT				UTM ZONE: 8 N6808637 E448223		ELEVATION:					
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CORREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40			Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						GRAVEL – sandy, coarse, some silt, coarse angular gravel and sand, compact, moist, grey					2.0
1.0						- coarser gravels and cobbles below 0.8 m - less sand with depth - some silt below 1.0 m					4.0
2.0							FROZEN Vx, Vr trace				6.0
						END OF TESTPIT 2.0 m					8.0
3.0											10.0
4.0											12.0
											14.0
EBA Engineering Consultants Ltd.						LOGGED BY: JSB		COMPLETION DEPTH: 2 m			
Whitehorse, Yukon						REVIEWED BY: JRT		COMPLETE: 06/07/11			

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP34	1.80 - 2.00	---	11	28	61	—	8.4	GP-GM

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation						CLIENT: Yukon Engineering Services						TEST PIT NO: 1200197-TP35							
Proposed Access Road						EXCAVATOR: 320 C TRACKED EXCAVATOR						PROJECT NO: 1200197							
Wolverine Lake, YT						UTM ZONE: 8 N6808410 E448086						ELEVATION:							
SAMPLE TYPE						☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL													
Depth(m)		SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION		GROUND ICE DESCRIPTION		▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 				Depth(ft)				
0.0							ORGANIC ROOT MAT		UNFROZEN						0.0				
							SILT – sandy, fine grained, compact, medium brown												
							SAND (TILL) – gravelly, silty, trace of clay, well graded, angular sand and gravel, compact, moist, medium brown												
1.0							BEDROCK – sand and silt infilled, highly weathered and fractured, fair quality								2.0				
									FROZEN						4.0				
									Vc, Vr trace						6.0				
2.0							END OF TESTPIT 1.8 m (REFUSAL)								8.0				
															10.0				
															12.0				
															14.0				
EBA Engineering Consultants Ltd.												LOGGED BY: JSB				COMPLETION DEPTH: 1.8 m			
Whitehorse, Yukon												REVIEWED BY: JRT				COMPLETE: 06/07/11			
																Page 1 of 1			

Geotechnical Investigation				CLIENT: Yukon Engineering Services				TEST PIT NO: 1200197-TP36											
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR				PROJECT NO: 1200197											
Wolverine Lake, YT				UTM ZONE: 8 N6808251 E447904				ELEVATION:											
SAMPLE TYPE				☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL															
Depth(m)		SAMPLE TYPE		RUN NO		SPT(N)		USC		SOIL SYMBOL		SOIL DESCRIPTION		GROUND ICE DESCRIPTION		▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40		Depth(ft)	
0.0												ORGANIC ROOT MAT		UNFROZEN				0.0	
												SILT – sandy, fine grained, compact, moist, dark brown							
												BEDROCK (PHYLLITE) – sand and silt, infilled, angular, weathered and highly fractured – major sloughing throughout testpit						2.0	
1.0												– large cobbles with some boulder sized angular rock below 1.0 m						4.0	
												END OF TESTPIT 1.5 m – sloughing						6.0	
																		8.0	
																		10.0	
																		12.0	
																		14.0	
EBA Engineering Consultants Ltd. Whitehorse, Yukon												LOGGED BY: JSB REVIEWED BY: JRT				COMPLETION DEPTH: 1.5 m COMPLETE: 06/07/11			
																Page 1 of 1			

Geotechnical Investigation					CLIENT: Yukon Engineering Services			TEST PIT NO: 1200197-TP37			
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR			PROJECT NO: 1200197			
Wolverine Lake, YT					UTM ZONE: 8 N6808066 E447667			ELEVATION:			
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			Depth(ft)
								20	40	60	
								PERCENT SAND ■			
								20	40	60	80
								PLASTIC	M.C.		LIQUID
								10	20	30	40
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						SAND (TILL) – gravelly, coarse grained angular sand and gravel, compact, moist, grey – angular cobbles and boulders below 0.4 m – gravel content increases below 0.8 m					2.0
1.0											4.0
											6.0
2.0						END OF TESTPIT 1.8 m					8.0
											10.0
3.0											12.0
											14.0
4.0											

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 1.8 m
REVIEWED BY: JRT	COMPLETE: 06/07/12
Page 1 of 1	

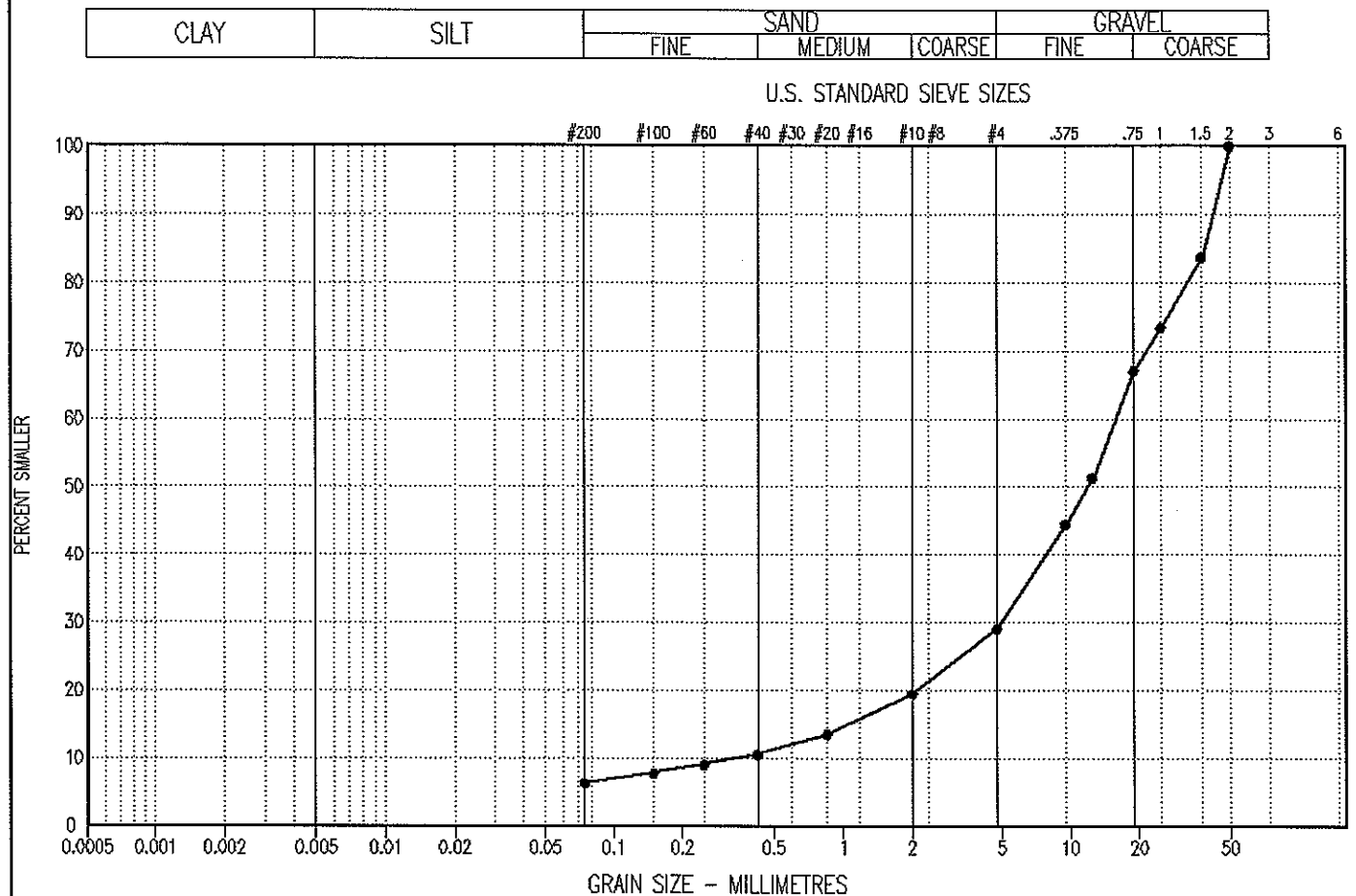
Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP38	
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6807972 E447578		ELEVATION:	
SAMPLE TYPE		☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL					

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80			Depth(ft)	
								■ PERCENT SAND ■ 20 40 60 80				
								PLASTIC	M.C.	LIQUID		
								10	20	30	40	
0.0						ORGANIC ROOT MAT	UNFROZEN					0.0
						GRAVEL (TILL) - sandy, silty, coarse grained angular gravel and sand, compact, damp, light greyish brown						
						- some silt below 0.5 m						2.0
1.0						- becomes coarser grained with cobbles throughout						4.0
												6.0
2.0						- becomes silty below 2.0 m - less gravel below 2.0 m						8.0
												10.0
												12.0
												14.0
3.0						END OF TESTPIT 2.5 m - some sloughing						

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 2.5 m
		REVIEWED BY: JRT	COMPLETE: 06/07/12
		Page 1 of 1	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP39		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6807773 E447410		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL (FLUVIAL) – sandy, some silt, well graded subrounded, subangular gravel and sand, compact, moist, light reddish grey – some cobbles throughout			2.0
1.0						– trace of silt below 1.0 m			4.0
2.0									6.0
						END OF TESTPIT 2.5 m – some sloughing throughout			8.0
3.0									10.0
									12.0
4.0									14.0
EBA Engineering Consultants Ltd. Whitehorse, Yukon							LOGGED BY: JSB REVIEWED BY: JRT		COMPLETION DEPTH: 2.5 m COMPLETE: 06/07/12

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP39	1.80 - 2.00	---	6 ---	23	71	43.5	4.3	GP-GM

Project: 0201-1200197

Date Tested: 06/08/07

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP40	
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6807605 E447255		ELEVATION:	
SAMPLE TYPE: ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION
▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40 Depth(ft)							
0.0						ORGANIC ROOT MAT	UNFROZEN
						SILT – sandy, trace of fine gravel, moist, medium grey	
						GRAVEL – sandy, some silt, well graded angular gravel and sand, compact, moist, grey – cobbles throughout testpit	
2.0						END OF TESTPIT 2.0 m – sloughing throughout	
3.0							
4.0							

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP41	
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6807339 E447200		ELEVATION:	
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			PERCENT SAND ■			Depth(ft)			
								20	40	60	80	20	40		60	80	
								PLASTIC			M.C.				LIQUID		
								10	20	30	40						
0.0						ORGANIC ROOT MAT	UNFROZEN							0.0			
						GRAVEL – sandy, trace of silt, coarse grained, angular gravel and sand, compact, dry, grey											
						– cobbles throughout											
1.0																	
						– becomes gravelly below 1.5 m											
2.0						BEDROCK – highly fractured, angular, fair quality, medium grey											
						– becomes competent with depth											
						END OF TESTPIT 2.5 m (REFUSAL)											
3.0																	
4.0																	

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 2.8 m
		REVIEWED BY: JRT	COMPLETE: 06/07/12
		Page 1 of 1	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP42		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6807154 E447239		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID -----●----- 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL – some sand, some silt, coarse grained angular gravel and sand, compact, moist, brownish grey			
						– cobbles and boulders throughout			
						– trace of silt below 0.5 m			
						– no samples obtained due to coarseness of material			
1.0									2.0
									4.0
						END OF TESTPIT 1.5 m (REFUSAL)			6.0
									8.0
									10.0
									12.0
									14.0
4.0									

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 1.5 m
		REVIEWED BY: JRT	COMPLETE: 06/07/12
		Page 1 of 1	

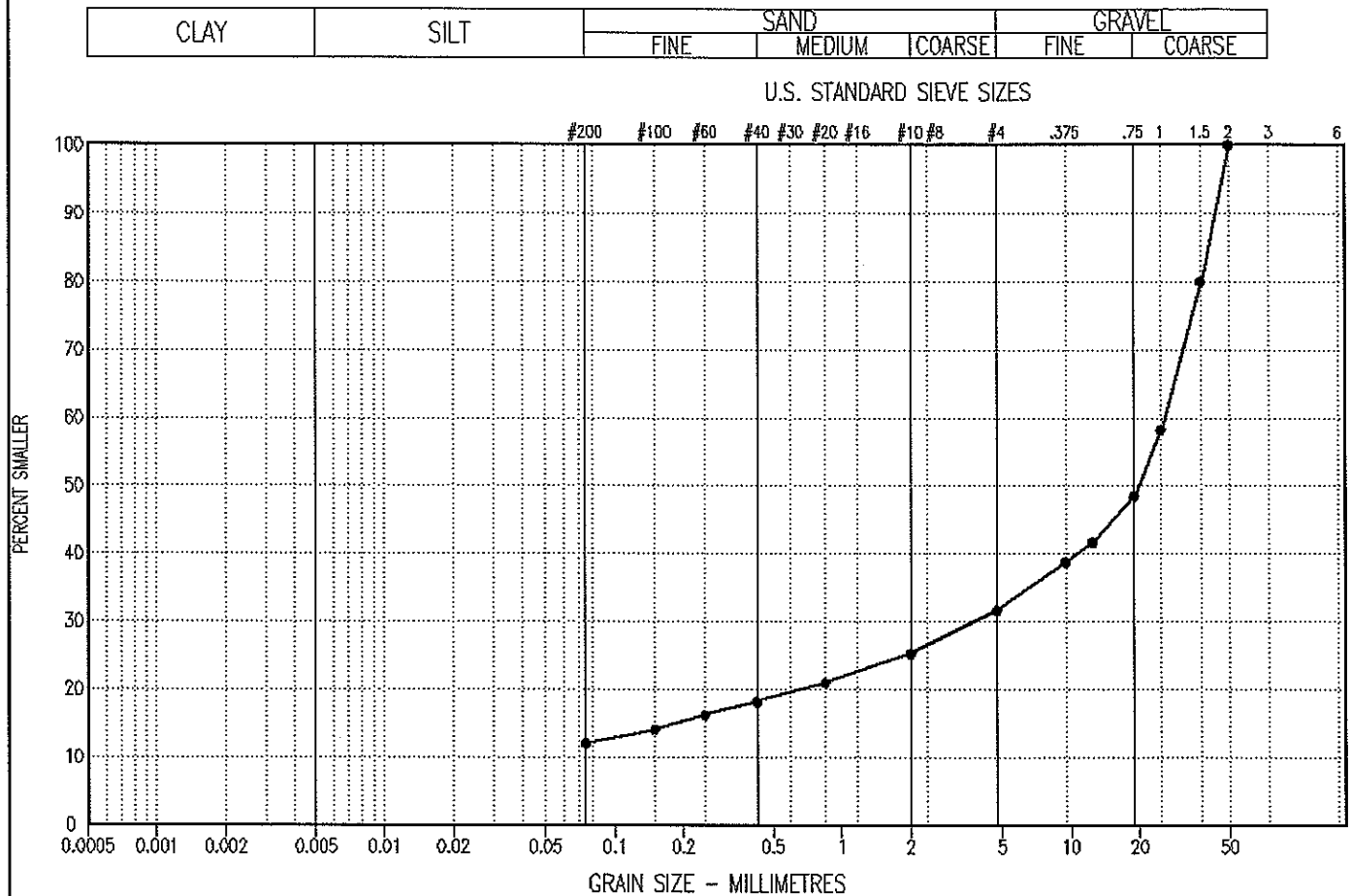
Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP43		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6806980 E447259		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID -----●----- 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL – some sand, trace of silt, coarse grained angular gravel and sand, compact, damp, reddish grey			
						– cobbles throughout gravel			
						– becomes finer grained below 0.8 m			
						– colour changes to grey below 0.8 m			
1.0									
2.0									
						END OF TESTPIT 2.2 m (REFUSAL)			
3.0									
4.0									

EBA Engineering Consultants Ltd.

Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 1.5 m
REVIEWED BY: JRT	COMPLETE: 06/07/12
	Page 1 of 1

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●——●	1200197-TP43	0.80 - 1.00	---	12 ---	19	69	-	-	GM

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP44				
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197				
Wolverine Lake, YT					UTM ZONE: 8 N6806731 E447312		ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40			Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						GRAVEL (FLUVIAL) – sandy, trace silt, coarse grained angular gravel and sand, compact, moist, greyish brown – cobbles and some boulders present below 0.5 m					2.0
1.0						END OF TESTPIT 1.1 m – pit previously excavated by operator during original clearing					4.0
2.0											6.0
											8.0
											10.0
3.0											12.0
											14.0
4.0											
EBA Engineering Consultants Ltd.							LOGGED BY: JSB		COMPLETION DEPTH: 1.1 m		
Whitehorse, Yukon							REVIEWED BY: JRT		COMPLETE: 06/07/12		
									Page 1 of 1		

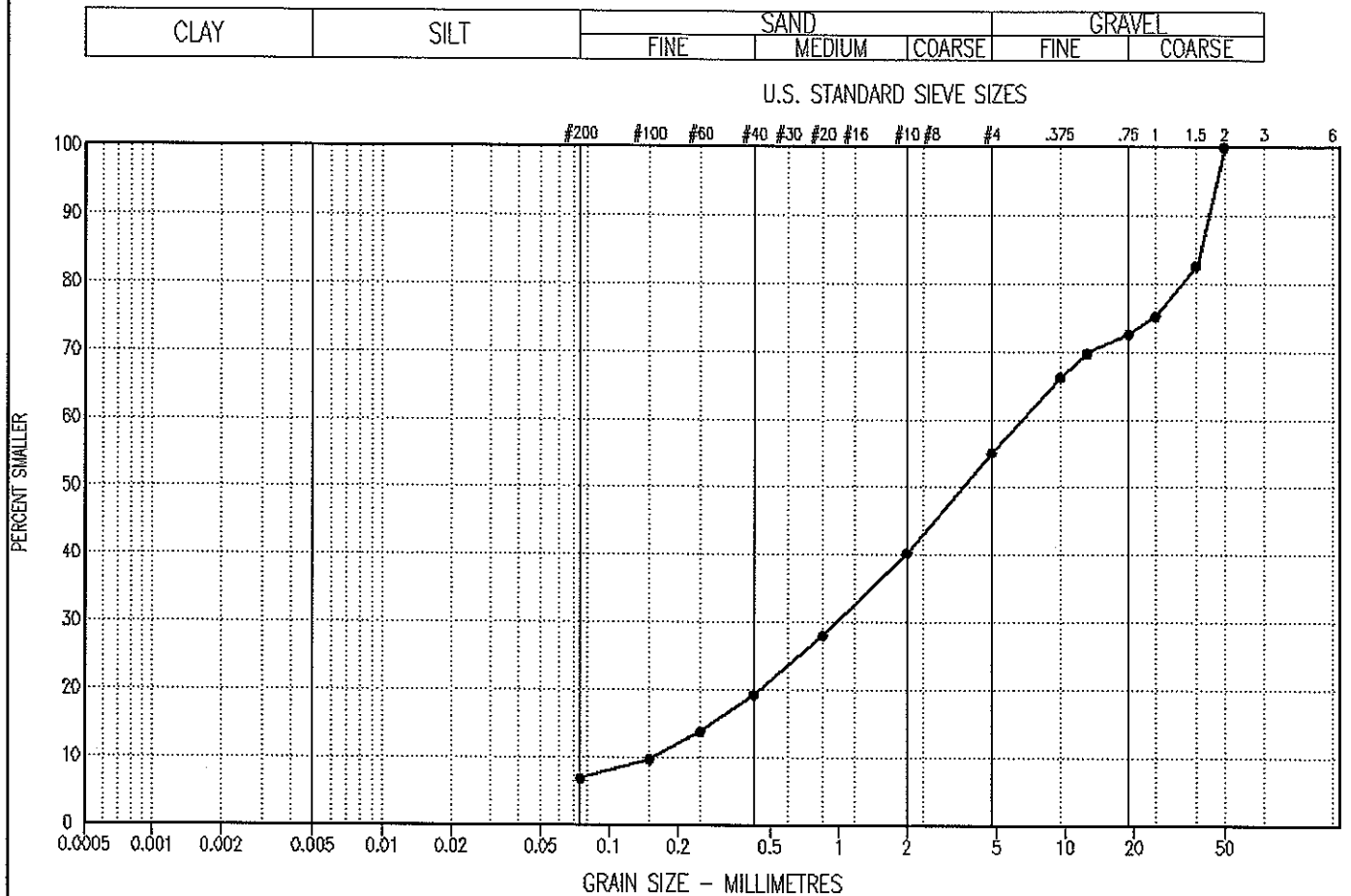
Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP45						
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197						
Wolverine Lake, YT				UTM ZONE: 8 N6806137 E447109		ELEVATION:						
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL												
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲			Depth(ft)	
								■ PERCENT SAND ■				
								20	40	60		
								20	40	60		
								PLASTIC	M.C.	LIQUID		
								10	20	30	40	
0.0						ORGANIC ROOT MAT	UNFROZEN					0.0
						SAND – silty, fine to medium grained						
						BEDROCK – sand and silt infilled, highly fractured, weathered, fair quality						
						– becomes more competent with depth						2.0
1.0						END OF TESTPIT 1.0 m (REFUSAL)						4.0
						– no samples obtained due to material coarseness						
2.0												6.0
3.0												10.0
4.0												12.0
												14.0
EBA Engineering Consultants Ltd. Whitehorse, Yukon							LOGGED BY: JSB	COMPLETION DEPTH: 1 m				
							REVIEWED BY: JRT	COMPLETE: 06/07/12				
							Page 1 of 1					

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP47								
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197								
Wolverine Lake, YT				UTM ZONE: 8 N6805801 E446958		ELEVATION:								
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL														
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲ 20 40 60 80			PERCENT SAND ■ 20 40 60 80			Depth(ft)
								PLASTIC M.C. LIQUID 10 20 30 40						
0.0						ORGANIC ROOT MAT	UNFROZEN						0.0	
						SAND AND GRAVEL - trace silt, coarse angular gravel, well graded sand, compact, moist, dark brown							2.0	
1.0						SAND - some silt, fine to medium grained, loose to compact, very wet, grey							4.0	
						- becomes silt, some sand, fine grained around 1.2 m - water encountered, possibly from upper gravels END OF TESTPIT 1.5 m - sloughing throughout							6.0	
2.0													8.0	
													10.0	
3.0													12.0	
													14.0	
4.0														

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 1.5 m
REVIEWED BY: JRT	COMPLETE: 06/07/12

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP47	0.30 - 0.50	---	7 ---	48	45	43.0	1.0	SP-SM

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP48		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6805524 E446902		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL (FLUVIAL) – some sand, trace of silt, coarse angular gravel, compact, damp, dark brown			
						– cobbles throughout			
1.0									
2.0						SAND (TILL) – silty, gravelly, well graded sand, fine to medium grained, subangular gravel, compact, damp, medium grey			6.0
						END OF TESTPIT 2.0 m			
3.0									10.0
4.0									14.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 2 m
REVIEWED BY: JRT	COMPLETE: 06/07/12

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP49		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6805229 E446838		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL (FLUVIAL) – sandy, trace of silt, coarse angular gravel, coarse sand, compact, moist, grey – cobbles from 0.2 to 0.5 m – gravel becomes well graded below 0.5 m			2.0
1.0									4.0
									6.0
2.0									8.0
						END OF TESTPIT 2.2 m			10.0
3.0									12.0
									14.0
4.0									

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 2.2 m
		REVIEWED BY: JRT	COMPLETE: 06/07/12
		Page 1 of 1	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP50		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6805009 E446764		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80	Depth(ft)
								■ PERCENT SAND ■ 20 40 60 80	
								PLASTIC M.C. LIQUID 10 20 30 40	
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SAND (TILL) – silty, trace of fine gravel, fine grained, compact, moist, light grey – becomes gravelly, subrounded, well graded around 0.4 m – angular cobbles and some boulders below 0.4 m			2.0
1.0									4.0
						BEDROCK – competent END OF TESTPIT 1.3 m (REFUSAL)			6.0
2.0									8.0
									10.0
3.0									12.0
									14.0
4.0									
EBA Engineering Consultants Ltd. Whitehorse, Yukon							LOGGED BY: JSB		COMPLETION DEPTH: 1.3 m
							REVIEWED BY: JRT		COMPLETE: 06/07/12
									Page 1 of 1

Geotechnical Investigation					CLIENT: Yukon Engineering Services			TEST PIT NO: 1200197-TP51				
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR			PROJECT NO: 1200197				
Wolverine Lake, YT					UTM ZONE: 8 N6804778 E446617			ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL												
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			Depth(ft)	
								20	40	60		80
								PERCENT SAND ■				
								20	40	60		80
								PLASTIC	M.C.	LIQUID		
								10 20 30 40				
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0	
						BEDROCK (PHYLLITE) – highly fractured, weathered, sand and silt infilled, brown					2.0	
						– water encountered at 0.6 m						
						– becomes competent with depth						
1.0						END OF TESTPIT 0.8 m (REFUSAL)						
											4.0	
											6.0	
											8.0	
											10.0	
											12.0	
											14.0	
4.0												

EBA Engineering Consultants Ltd.

Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 0.8 m
REVIEWED BY: JRT	COMPLETE: 06/07/12
	Page 1 of 1

Geotechnical Investigation				CLIENT: Yukon Engineering Services				TEST PIT NO: 1200197-TP52				
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR				PROJECT NO: 1200197				
Wolverine Lake, YT				UTM ZONE: 8 N6804612 E446429				ELEVATION:				
SAMPLE TYPE				☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL								
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40				Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN					0.0
						GRAVEL (TILL) - sandy, silty, trace of clay, coarse angular gravel and sand, compact, damp, reddish brown						
						SILT (TILL) - sandy, some gravel, well graded sand, fine to medium grained, angular, compact, moist, grey						2.0
1.0						END OF TESTPIT 1.0 m (REFUSAL)						4.0
												6.0
												8.0
												10.0
												12.0
												14.0
EBA Engineering Consultants Ltd.							LOGGED BY: JSB		COMPLETION DEPTH: 1 m			
Whitehorse, Yukon							REVIEWED BY: JRT		COMPLETE: 06/07/12			
									Page 1 of 1			

Geotechnical Investigation						CLIENT: Yukon Engineering Services						TEST PIT NO: 1200197-TP53														
Proposed Access Road						EXCAVATOR: 320C TRACKED EXCAVATOR						PROJECT NO: 1200197														
Wolverine Lake, YT						UTM ZONE: 8 N6804525 E446184						ELEVATION:														
SAMPLE TYPE						☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL																				
Depth(m)		SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION						GROUND ICE DESCRIPTION						▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 						Depth(ft)	
0.0							ORGANIC ROOT MAT						UNFROZEN												0.0	
							BEDROCK – sand and silt infilled, highly fractured, slightly weathered – large boulder sized pieces encountered																			
							END OF TESTPIT 0.5 m (REFUSAL)																			
1.0																									2.0	
2.0																									4.0	
3.0																									6.0	
4.0																									8.0	
																									10.0	
																									12.0	
																									14.0	
EBA Engineering Consultants Ltd.												LOGGED BY: JSB						COMPLETION DEPTH: 0.5 m								
Whitehorse, Yukon												REVIEWED BY: JRT						COMPLETE: 06/07/12								
																		Page 1 of 1								

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP54				
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197				
Wolverine Lake, YT					UTM ZONE: 8 N6804486 E445998		ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80			Depth(ft)
								PLASTIC M.C. LIQUID			
0.0						ORGANIC ROOT MAT	UNFROZEN			0.0	
						SILT – sandy, fine grained, compact, moist, dark brown					
						BEDROCK – sand and silt infilled, fractured, weathered					
						END OF TESTPIT 0.4 m (REFUSAL)					
1.0											
2.0											
3.0											
4.0											

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 0.4 m
	REVIEWED BY: JRT	COMPLETE: 06/07/12
		Page 1 of 1

[illegible]

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP56				
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197				
Wolverine Lake, YT					UTM ZONE: 8 N6804649 E445551		ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80			Depth(ft)
								PLASTIC	M.C.	LIQUID	
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						GRAVEL (PHYLLITE) – some sand, some silt, coarse angular gravel and sand, compact, moist, grey					2.0
1.0						SAND (TILL) – gravelly, silty, trace of clay, coarse angular sand and fine to medium gravel, compact, wet, grey					4.0
						END OF TESTPIT 1.2 m (REFUSAL)					
2.0											6.0
											8.0
3.0											10.0
											12.0
4.0											14.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

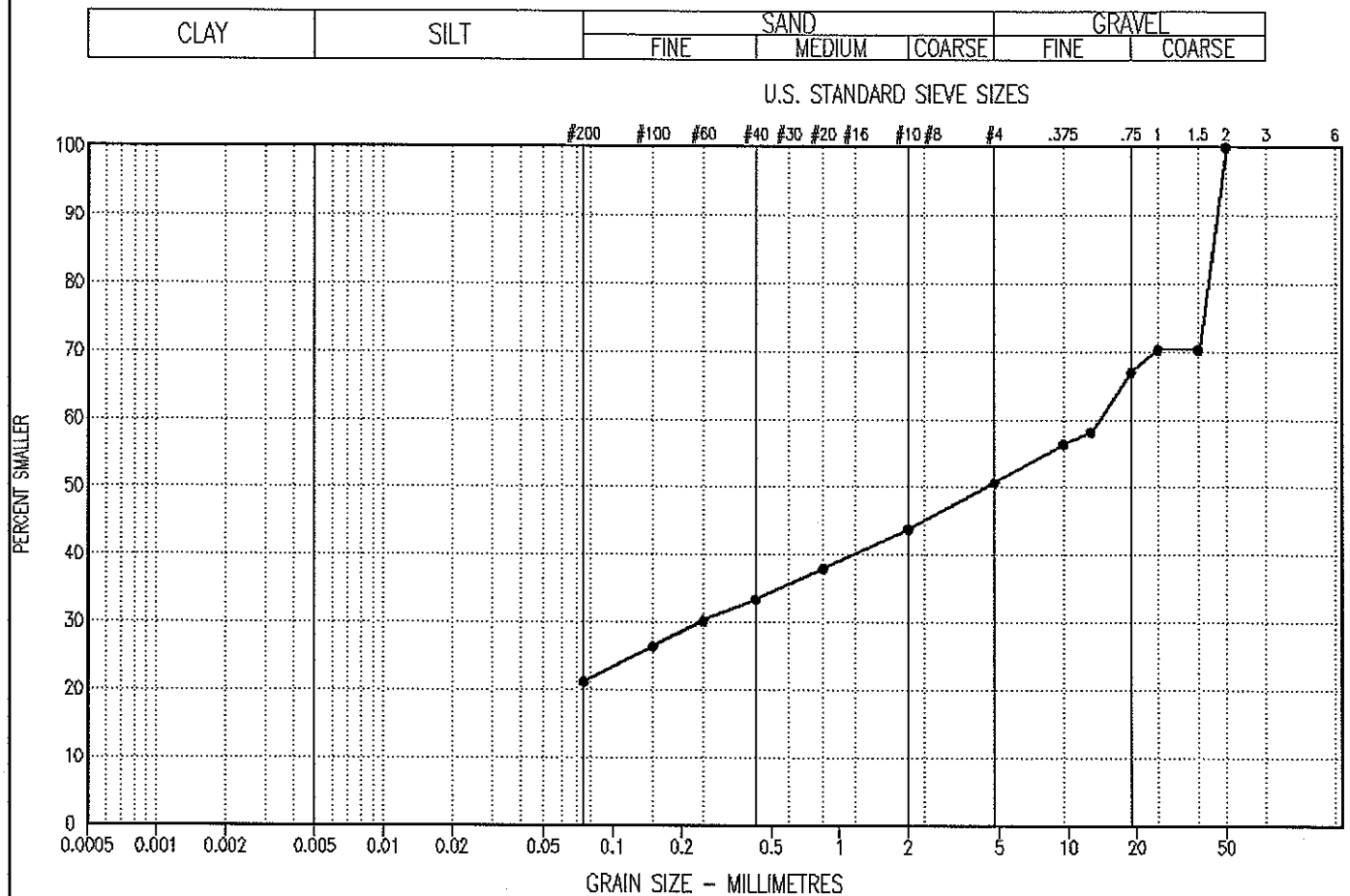
LOGGED BY: JSB	COMPLETION DEPTH: 1.2 m
REVIEWED BY: JRT	COMPLETE: 06/07/12
	Page 1 of 1

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP57						
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197						
Wolverine Lake, YT				UTM ZONE: 8 N6804810 E445295		ELEVATION:						
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL												
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ ■ PERCENT SAND ■ 20 40 60 80 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40			Depth(ft)	
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0	
						GRAVEL (TILL) - sandy, silty, trace of clay, coarse angular gravel and sand, compact, moist, grey - cobbles and some boulders throughout testpit						2.0
1.0												
						BEDROCK - competent						4.0
						END OF TESTPIT 1.2 m (REFUSAL)						
												6.0
												8.0
												10.0
												12.0
												14.0
4.0												

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 1.2 m
REVIEWED BY: JRT	COMPLETE: 06/07/12
	Page 1 of 1

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP57	0.40 - 0.60	---	21	---	29	50	—	—

Project: 0201-1200197

Date Tested: 06/08/07

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP58	
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6804986 E445059		ELEVATION:	
SAMPLE TYPE		☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL					

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80			Depth(ft)
								■ PERCENT SAND ■ 20 40 60 80			
								PLASTIC M.C. LIQUID ----- 10 20 30 40			
0.0						ORGANIC ROOT MAT	UNFROZEN			0.0	
						SILT – sandy, fine grained, compact, moist, grey					
						BEDROCK (PHYLLITE) – sand and silt, infilled, weathered, highly fractured, flat, angular, elongated, grey – cobble and boulder sized pieces throughout – competent at 0.5 m				2.0	
1.0						END OF TESTPIT 0.5 m (REFUSAL)				4.0	
2.0										6.0	
										8.0	
										10.0	
										12.0	
										14.0	

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 0.5 m
		REVIEWED BY: JRT	COMPLETE: 06/07/12

Geotechnical Investigation					CLIENT: Yukon Engineering Services			TEST PIT NO: 1200197-TP59		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR			PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6805103 E444861			ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL										

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	PERCENT SILT OR FINES ▲			PERCENT SAND ■			Depth(ft)		
								20	40	60	80	20	40		60	80
								PLASTIC			M.C.				LIQUID	
								10	20	30	40					
0.0						ORGANIC ROOT MAT	UNFROZEN							0.0		
						SILT – sandy, fine grained silt, moist, dark brown										
						GRAVEL – sandy, some silt, coarse grained, angular, compact, moist, grey – flat, elongated, poor quality rock pieces										
1.0																
2.0						END OF TESTPIT 2.0 m										
3.0																
4.0																

EBA Engineering Consultants Ltd.		LOGGED BY: JSB	COMPLETION DEPTH: 2 m
Whitehorse, Yukon		REVIEWED BY: JRT	COMPLETE: 06/07/12
		Page 1 of 1	

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP60						
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197						
Wolverine Lake, YT				UTM ZONE: 8 N6805286 E444641		ELEVATION:						
SAMPLE TYPE		☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL										
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION		GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40			Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN			0.0		
						SILT (TILL) – sandy, gravelly, silty, trace of clay, well graded sand, fine to medium grained angular gravel, compact, moist, dark grey				2.0		
1.0						– becomes less sand and gravel						
						BEDROCK (PHYLLITE) – poor quality, highly fractured				4.0		
2.0						END OF TESTPIT 1.5 m (REFUSAL)				6.0		
										8.0		
										10.0		
										12.0		
										14.0		

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 1.5 m
		REVIEWED BY: JRT	COMPLETE: 06/07/12
		Page 1 of 1	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP62				
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197				
Wolverine Lake, YT					UTM ZONE: 8 N6805539 E444207		ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80			Depth(ft)
								PLASTIC 10 20 30 40 M.C. 20 30 40 LIQUID			
0.0						ORGANIC ROOT MAT	UNFROZEN			0.0	
					SILT – sandy, some gravel						
					BEDROCK (PHYLLITE) – poor quality, soft, highly fractured, greyish black					2.0	
1.0					– some coarser and cobble sized pieces below 1.0 m – more competent with depth					4.0	
						END OF TESTPIT 1.6 m (REFUSAL)				6.0	
2.0										8.0	
										10.0	
3.0										12.0	
										14.0	
4.0											

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 1.6 m
REVIEWED BY: JRT	COMPLETE: 06/07/12
Page 1 of 1	

Geotechnical Investigation		CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197--TP63					
Proposed Access Road		EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197					
Wolverine Lake, YT		UTM ZONE: 8 N6805686 E494080		ELEVATION:					
SAMPLE TYPE		☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL							
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SILT AND SAND - gravelly			
						BEDROCK (PHYLLITE) - silt and sand infilled, good quality, highly fractured, moist grey			
1.0						- cobble, some boulders below 0.8 m			2.0
						- competent at 1.2 m			4.0
						END OF TESTPIT 1.2 m (REFUSAL)			6.0
									8.0
									10.0
									12.0
									14.0
EBA Engineering Consultants Ltd.							LOGGED BY: JSB	COMPLETION DEPTH: 1.2 m	
Whitehorse, Yukon							REVIEWED BY: JRT	COMPLETE: 06/07/12	
								Page 1 of 1	

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP64					
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197					
Wolverine Lake, YT				UTM ZONE: 8 N6805912 E443912		ELEVATION:					
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40			Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						SAND (TILL) – silty, gravelly, trace of clay, well graded sand, fine to medium grained angular gravel, compact, moist, grey – some cobble present below 0.8 m					2.0
1.0						BEDROCK (PHYLLITE) – good quality, high fractured, silt infilled, grey – competent at 1.2 m ENDO OF TESTPIT 1.4 m (REFUSAL)					4.0
2.0											6.0
											8.0
											10.0
3.0											12.0
											14.0
4.0											
EBA Engineering Consultants Ltd. Whitehorse, Yukon							LOGGED BY: JSB		COMPLETION DEPTH: 1.4 m		
							REVIEWED BY: JRT		COMPLETE: 06/07/12		

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP65				
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197				
Wolverine Lake, YT					UTM ZONE: 8 N6806071 E443702		ELEVATION:				
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC 10 20 30 40 M.C. LIQUID			Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						SAND (TILL) – silty, gravelly, trace of clay, well graded sand, fine to medium grained angular gravel, compact, moist, grey – cobbles below 0.6 m					2.0
1.0											4.0
						BEDROCK – competent END OF TESTPIT 1.2 m					6.0
											8.0
											10.0
											12.0
											14.0
EBA Engineering Consultants Ltd. Whitehorse, Yukon							LOGGED BY: JSB		COMPLETION DEPTH: 1.2 m		
							REVIEWED BY: JRT		COMPLETE: 06/07/12		

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP67	
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197	
Wolverine Lake, YT				UTM ZONE: 8 N6806252 E443668		ELEVATION:	
SAMPLE TYPE		☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL					

Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80			Depth(ft)
								PLASTIC M.C. LIQUID ----- 10 20 30 40			
0.0						ORGANIC ROOT MAT	UNFROZEN				0.0
						GRAVEL – sandy, silty, coarse, angular, compact, moist, dark brown – cobbles, some boulders from 0.2 to 0.6 m – finer grained gravels below 0.6 m – colour changes to reddish brown below 0.6 m					2.0
1.0											4.0
											6.0
2.0						BEDROCK (PHYLLITE) – poor quality, highly fractured, flat, angular					8.0
						– becomes competent at 2.5 m					10.0
						END OF TESTPIT 2.5 m					12.0
						– sloughing from upper layers					14.0
3.0											
4.0											

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 2.5 m
		REVIEWED BY: JRT	COMPLETE: 06/07/13
		Page 1 of 1	

Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP69					
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197					
Wolverine Lake, YT				UTM ZONE: 8 N6806588 E443501		ELEVATION:					
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☒ 75 mm SPOON ☐ CRREL BARREL											
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80			Depth(ft)
								PLASTIC 10 20 30 40 M.C. 10 20 30 40 LIQUID 10 20 30 40			
0.0						ORGANIC ROOT MAT	UNFROZEN			0.0	
						GRAVEL (TILL) – sandy, silty, trace of clay, well graded gravel, compact, moist, grey – cobbles, some boulders below 0.2 m – colour changes to blackish grey below 0.6 m				2.0	
1.0						BEDROCK (PHYLLITE) – poor quality, angular, highly fractured, soft, dark grey				4.0	
						– becomes competent with depth				6.0	
2.0						END OF TESTPIT 2.5 m (REFUSAL) – some sloughing throughout				8.0	
										10.0	
3.0										12.0	
										14.0	
4.0											
EBA Engineering Consultants Ltd. Whitehorse, Yukon						LOGGED BY: JSB		COMPLETION DEPTH: 2.5 m			
						REVIEWED BY: JRT		COMPLETE: 06/07/13			
								Page 1 of 1			

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP70		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N680686D E443409		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC 10 20 30 40 M.C. 20 30 40 LIQUID	Depth(ft)
0.0						ORGANIC ROOT MAT			0.0
						GRAVEL – sandy, silty, coarse grained angular gravel and sand, compact, moist, blackish brown			
						SILT – sandy, gravelly, fine to medium grained, angular sand and gravel, grey	FROZEN Nbn, Vs, 15-20%		2.0
1.0						END OF TESTPIT 0.8 m (REFUSAL)			
2.0									4.0
									6.0
									8.0
									10.0
									12.0
									14.0
4.0									

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 0.8 m
REVIEWED BY: JRT	COMPLETE: 06/07/13
	Page 1 of 1

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP71		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6807042 E443340		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC 10 20 30 40 M.C. 20 30 40 LIQUID	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SAND (RESIDUUM) – silty, some gravel, coarse grained angular sand and gravel, compact, moist, light grey – interbedded layer of silt throughout			2.0
1.0						– colour changes to reddish brown below 1.0 m			4.0
						– sand and gravel becomes softer finer gravel below 1.8 m – silt content increases with depth – colour changes to mottled grey, brown and red			6.0
2.0									8.0
									10.0
3.0									12.0
						GRAVEL (TILL) – sandy, some silt, coarse angular gravel and sand, compact, saturated, dark brown			14.0
4.0						END OF TESTPIT 4.0 m			

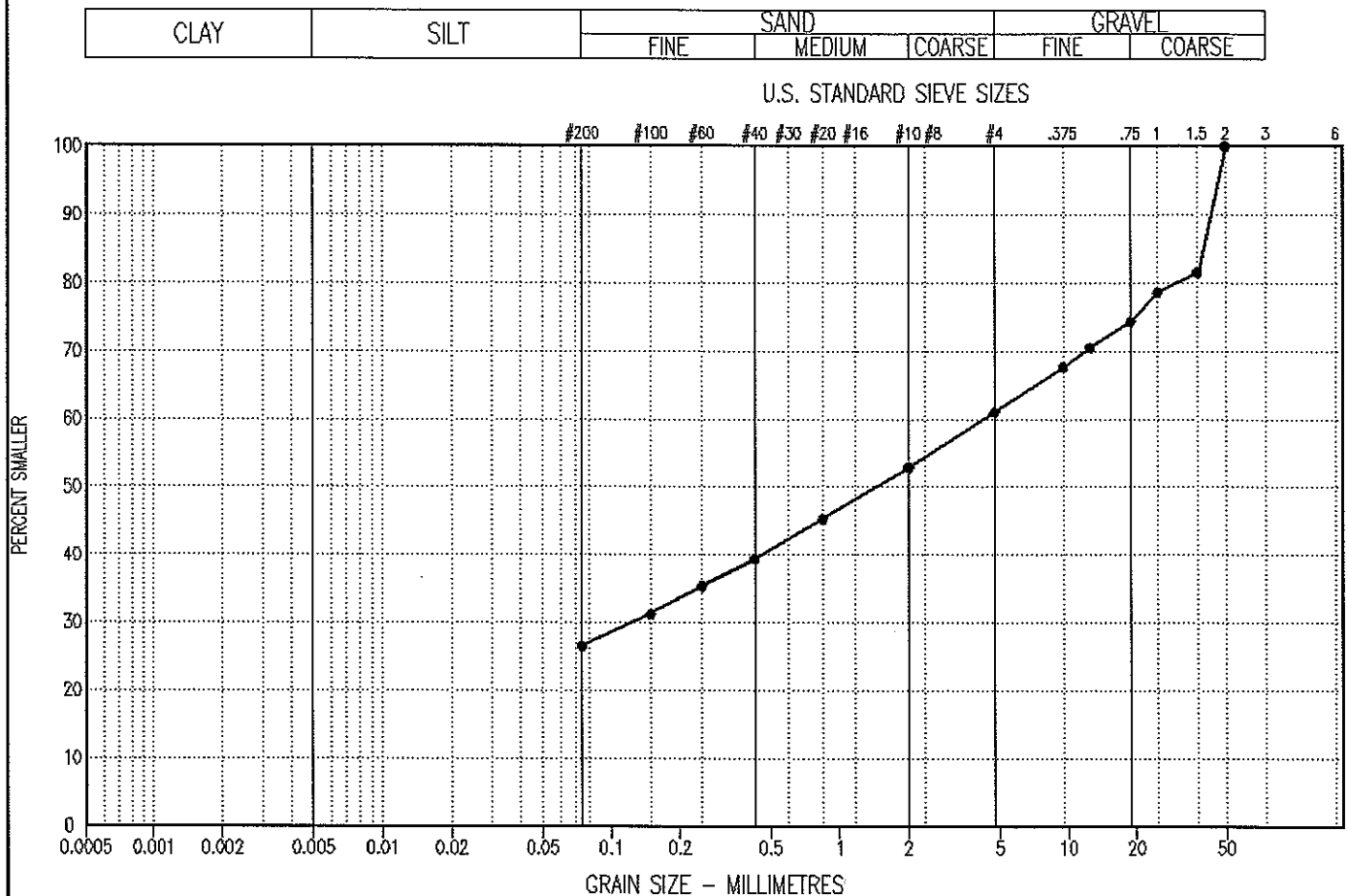
EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 4 m
REVIEWED BY: JRT	COMPLETE: 06/07/13
	Page 1 of 1

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP72		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6807314 E443235		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						SAND (TILL) – silty, gravelly, fine grained, moist, compact, dark grey			
1.0						– gravel content increases and becomes coarser below 1.2 m			
2.0						– trace of gravel below 2.0 m – very compact, difficult to excavate beyond 2.0 m			
3.0						END OF TESTPIT 2.8 m (REFUSAL)			
4.0									
EBA Engineering Consultants Ltd.						LOGGED BY: JSB		COMPLETION DEPTH: 2.8 m	
Whitehorse, Yukon						REVIEWED BY: JRT		COMPLETE: 06/07/13	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP73		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6807641 E443119		ELEVATION:		
SAMPLE TYPE					☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL				
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL (FLUVIAL) – sandy, trace of silt, well graded subrounded gravel and sand, loose, damp, reddish brown – becomes silty below 0.5 m – colour changes to medium grey around 0.5 m			2.0
1.0									4.0
									6.0
2.0						– becomes trace of silt below 2.0 m – coarse sand below 2.0 m			8.0
									10.0
3.0						END OF TESTPIT 2.5 m (REFUSAL)			12.0
									14.0
4.0									
EBA Engineering Consultants Ltd.						LOGGED BY: JSB		COMPLETION DEPTH: 2.5 m	
Whitehorse, Yukon						REVIEWED BY: JRT		COMPLETE: 06/07/13	
								Page 1 of 1	

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP73	1.50 - 1.70	---	27 ---	34	39	—	—	

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

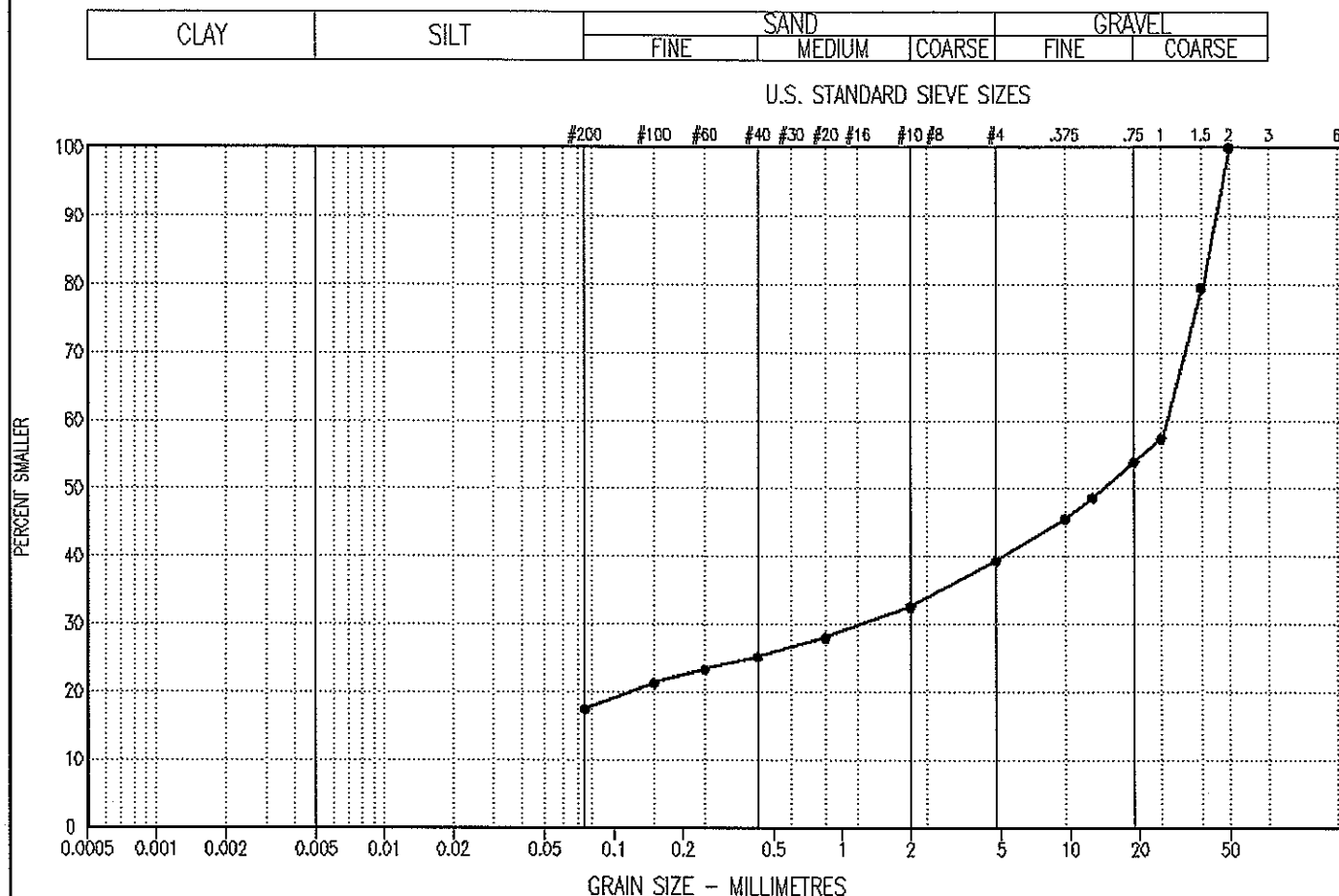


Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP74		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6807834 E442996		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☐ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC 10 20 30 40 M.C. 20 30 40 LIQUID	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL (FLUVIAL) – sandy, silty, well graded angular gravel and sand, compact, moist brown – cobbles and some boulders throughout			2.0
1.0						– becomes trace of silt around 1.0 m			4.0
									6.0
2.0						BEDROCK – competent END OF TESTPIT 1.8 m			8.0
									10.0
									12.0
									14.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 1.8 m
REVIEWED BY: JRT	COMPLETE: 06/07/13
	Page 1 of 1

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP74	1.30 - 1.50	---	17	22	61	—	—	

Project: 0201-1200197

Date Tested: 06/08/04

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

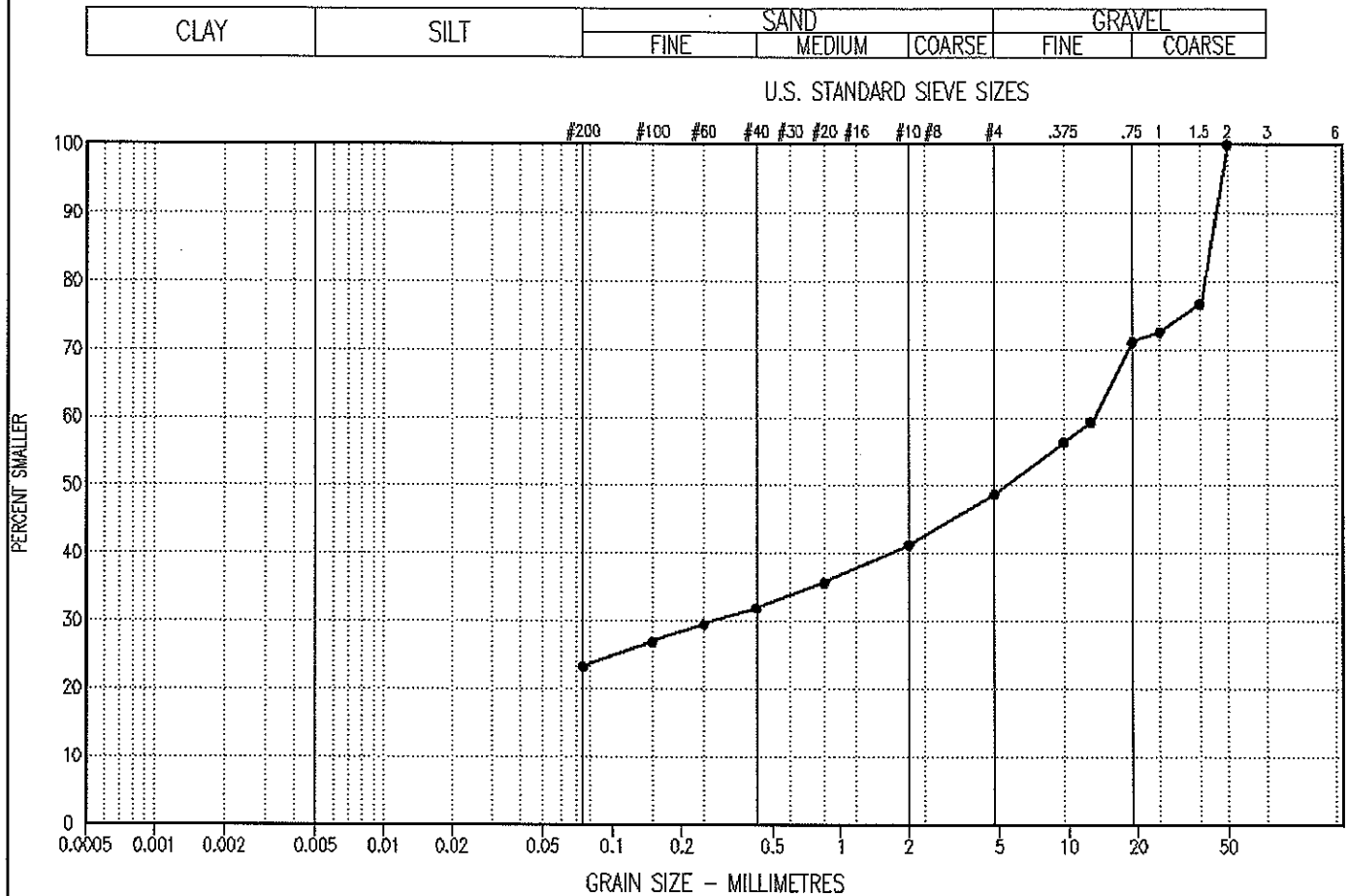


Geotechnical Investigation				CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP75			
Proposed Access Road				EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197			
Wolverine Lake, YT				UTM ZONE: 8 N6807834 E442996		ELEVATION:			
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CORREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲	Depth(ft)
								■ PERCENT SAND ■	
								20 40 60 80 20 40 60 80 PLASTIC M.C. LIQUID	
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL – sandy, silty, coarse grained angular gravel, well graded sand, compact, moist, grey – cobbles and boulders throughout			2.0
1.0									4.0
						END OF TESTPIT 1.4 m (REFUSAL)			6.0
2.0									8.0
									10.0
3.0									12.0
									14.0
4.0									

EBA Engineering Consultants Ltd. Whitehorse, Yukon		LOGGED BY: JSB	COMPLETION DEPTH: 1.4 m
		REVIEWED BY: JRT	COMPLETE: 06/07/13
		Page 1 of 1	

Geotechnical Investigation					CLIENT: Yukon Engineering Services		TEST PIT NO: 1200197-TP76		
Proposed Access Road					EXCAVATOR: 320C TRACKED EXCAVATOR		PROJECT NO: 1200197		
Wolverine Lake, YT					UTM ZONE: 8 N6808186 E442777		ELEVATION:		
SAMPLE TYPE ☒ GRAB SAMPLE ☒ NO RECOVERY ☒ STANDARD PEN. ☐ 75 mm SPOON ☐ CRREL BARREL									
Depth(m)	SAMPLE TYPE	RUN NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	▲ PERCENT SILT OR FINES ▲ 20 40 60 80 ■ PERCENT SAND ■ 20 40 60 80 PLASTIC M.C. LIQUID 10 20 30 40	Depth(ft)
0.0						ORGANIC ROOT MAT	UNFROZEN		0.0
						GRAVEL – sandy, silty, well graded gravel and sand, angular, compact, moist, grey – cobbles and boulders throughout			2.0
1.0									
						END OF TESTPIT 1.2 m (REFUSAL)			4.0
2.0									6.0
									8.0
3.0									10.0
									12.0
4.0									14.0
EBA Engineering Consultants Ltd.						LOGGED BY: JSB		COMPLETION DEPTH: 1.2 m	
Whitehorse, Yukon						REVIEWED BY: JRT		COMPLETE: 06/07/13	

PARTICLE SIZE - ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●—●	1200197-TP76	0.50 - 0.70	---	23 ---	25	52	—	—	

Project: 0201-1200197

Date Tested: 06/08/10

BY: PF

Tested in accordance with ASTM D422 unless otherwise noted.

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



STATION	EASTING	NORTHING	ASPECT	UPSLOPE GRADIENT	DOWNSLOPE GRADIENT	STATE	ICE	PRINCIPAL COMPONENT	PRINCIPAL COMPONENT MODIFIERS	USC SYMBOL	MATERIAL ORIGIN	TERRAIN SYMBOL	PIT DEPTH (m)	PARTICULARS
26JD-1	453428	6818645	NNW	26	22	unfrozen	-	SAND	gravelly	trace silt	GM-GP	<u>colluvium</u> bedrock	Cv/Ra	about 0.5m weathered rock and minor till overlying bedrock; bedrock outcrops common; uniform slope; dry; platy jointing meta-volcanics(?).
26JD-2	453230	6818265	SW	25	22	unfrozen	-	SAND	gravelly	trace silt	GM-GP	<u>colluvium</u> bedrock	Cx/R	about 0.5m weathered rock and minor till overlying bedrock; irregular slope: bedrock outcrops of narrow 3m relief ridges trending downslope; dry; platy jointing meta-volcanics(?); hardness 5-6; jointing is steeply dipping 55° South
26JD-3	453242	6818120	W	15	10	frozen below 0.33m	Nbn	GRAVEL	sandy		GP	<u>colluvium</u> bedrock	pOv/Rj	shallow, sidehill bog with 0.45 peat/organics overlying colluvium and bedrock; in area of 60m wide swale; uniform slope; permafrost
26JD-4	453026	6817753	W	18	0	frozen below 0.30m	Vs-20	SAND	some silt	trace gravel	SM	<u>colluvium</u> bedrock	pOv/gzsCv R	sidehill bog; uniform slope; benchy hillslope; ~20% visible ice, weakly stratified; ice crystals up to 12mm; permafrost
26JD-5	452928	6817361	W	10	10	Stream Crossing							pOv/C?/R?	channel width: 0.35m; depth: 0.07m; meandering; flowing within sidehill bog;
26JD-6	452882	6817321	W	12	10	frozen below 0.28m	Nbn	SAND	some silt		SM	<u>colluvium</u> bedrock	pOv/Cv/R	shallow, sidehill bog with 0.28 peat/organics overlying colluvium and (bedrock?); sidehill bog area; uniform slope; permafrost
26JD-7	452733	6816898	W	18	20	frozen below 0.28m	Nf	SAND	gravelly		GW	<u>glaciofluvial</u>	pOv/FGt	shallow sidehill boggy area with moss cover
27JD-8	451269	6814955	110° SE	20	14	frozen below 0.28m	Nbn	SAND	silty	some gravel	GM	<u>till or colluvium</u>	gzsCb	talus slope?
27JD-9	451094	6814689	103° E	10	8	unfrozen	-	SAND	gravelly	silty	GM	<u>till or colluvium</u>	[Mx]Cv	some sub-rounded clasts (till) mixed with colluvium (angular and sub-angular clasts); moist slope; talus slope?
27JD-10	451116	6814773		10	10	Stream Crossing								variable width and depth; average channel width: 0.8m; depth: 0.15m;
27JD-11	451393	6815193	105° E	13	12	unfrozen	-	SAND	gravelly	trace silt	GM-GP	<u>till or colluvium</u>	gsCb	trace rounded gravel (till)
27JD-12	451543	6815491	E	20	14	Stream Crossing								channel width: 0.8m; depth: 0.11m; uniform slope; within shallow, wide swale
27JD-13	451562	6815548	130° SE	20	24	unfrozen	-	SAND	gravelly	some silt	GM	<u>till or colluvium</u>	gsCb//Mx	some sub-rounded clasts (till) with sub-angular clasts (colluvium)
27JD-14	451757	6815863	130° SE	30	35	unfrozen	-	SAND	gravelly		GW	<u>till or colluvium</u>	gsCb	dry slope; talus? Slope
	451757	6815843				Stream Crossing								located 20m south of 27JD14; similar in size to 27JD12
27JD-15	451967	6816200	115° SE	20	12	frozen below 0.30m	Nbn	SAND	silty	organics	-	<u>till or colluvium + organics</u>	pOx/C	shallow sidehill bog area with moss cover; C and O mixed within seasonally active layer.
27JD-16	452079	6816434	E	12	0	Stream Crossing								channel width: 0.60m; depth: 0.10m; flowing within sidehill bog; flows into flat wetland at this location.
27JD-17	452146	6816555	E	6	15	frozen below 0.32m	Nbn	-	-	-	-	<u>organic</u>	pOv/[C]	0.59 "refusal" in frozen organics at 0.59m; mostly non-visible ice, but a shallow peat layer included a discontinuous 20mm thick strata of 50% visible stratified ice.
27JD-18	452274	6816294	0	5	0	unfrozen	-	SAND	some silt	some gravel	GM	<u>alluvium</u>	zgsAp	0.40
27JD-19	452322	6816348				Stream Crossing: Light Creek								estimated present channel width: 1.4m; depth: 0.25m; estimated full bank width: 5.0m; estimated full bank depth: 0.5m.
27JD-20	452399	6816394	0			unfrozen	-	SAND	gravelly		GW	<u>glaciofluvial</u>	gsFGt	0.64 on flat-topped, low relief ridge between Light Creek and Pitch Creek; eroded FG terrace; sloughing on gully sideslopes noted 30m NE of this site
27JD-21	452454	6816441				Stream Crossing: Pitch Creek								estimated present channel width: 1.1m; depth: 0.1m; estimated full bank width: 4.5m; estimated full bank depth: 1.6m.
27JD-22	452563	6816470	0			unfrozen	-	SAND and	GRAVEL				gsFGr	0.60 eroded glaciofluvial terrace
27JD-23	452741	6816688	270° W	20	15	frozen below 0.32m	Nbn	-	-	-	-	<u>organic</u>	pOv/[C?]	0.45 sidehill bog; uniform slope; "refusal" within frozen organics at 0.45m; same terrain polygon back to 50m N of 27JD22.
27JD-24	453747	6818790	0			unfrozen	-	GRAVEL	some sand			<u>bedrock</u>	sgCx/R	0.70 south side cutslope at Robert Campbell Highway; on crest of broad, rounded low-relief ridge oriented SW-NE;
27JD-25	453916	6818763	0			unfrozen	-	GRAVEL	and SAND			<u>glaciofluvial</u>	sgFGt	4 gravel borrow pit on Robert Campbell Highway 200m east of access road; glaciofluvial terrace; ~10% oversize (>75mm)



APPENDIX

APPENDIX A *General Conditions



GEOTECHNICAL REPORT – GENERAL CONDITIONS

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

1.0 USE OF REPORT AND OWNERSHIP

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

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

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

2.0 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

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

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

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

3.0 LOGS OF TESTHOLES

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

4.0 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

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

5.0 SURFACE WATER AND GROUNDWATER CONDITIONS

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

6.0 PROTECTION OF EXPOSED GROUND

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

7.0 SUPPORT OF ADJACENT GROUND AND STRUCTURES

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

8.0 INFLUENCE OF CONSTRUCTION ACTIVITY

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

9.0 OBSERVATIONS DURING CONSTRUCTION

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

10.0 DRAINAGE SYSTEMS

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

11.0 BEARING CAPACITY

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

12.0 SAMPLES

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

13.0 STANDARD OF CARE

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

14.0 ENVIRONMENTAL AND REGULATORY ISSUES

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

15.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA's instruments of professional service), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by EBA shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancies, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by EBA shall be deemed to be the overall original for the Project.

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

The Client recognizes and agrees that electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.