We are committed to providing accessible customer service.
If you need accessible formats or communications supports, please contact us.

Nous tenons à améliorer l’accessibilité des services à la clientèle.
Si vous avez besoin de formats accessibles ou d’aide à la communication, veuillez nous contacter.

Assessment Report on Canada Silver Cobalt Works property (2018 drill program), Gowganda, Province of Ontario

NTS 41P10

UTMS 519250E, 5280500N NAD 83, Zone 17

***Assessment Period*:** **July 2018 to March 2019**

Prepared by
Merouane Rachidi, P.Geo., Ph. D. (APGO # 2998)
GoldMinds Geoservices
2999, Ch. Ste Foy, suite 200
Québec, Québec G1X 1P7

For:
Canada Silver Cobalt Works Inc.
3028 Quadra Court
Coquitlam, BC
V3B 5X6

CLAIMS*: *4263351, 4263352, 4263360, 4263444, 4263445, 4263360, 4263583, 4263587, 4276107, 4278558, 4278559, 4278560, 4278561, 4281720, 4281817, 4282405, 4283197, 4285132, 4285133, 4286190, 4286191, 4286192, 4286193, 4286694, 4286695, 4286696, 4286697, 4286698, 4286699, 4286700, 4286738, 4286739, 4286740, 4286741, 4263583, GG3879, HS350, HS352, HS353, HS354, HS355, HS356, HS357, HS358, HS359, HS360, HS361, HS362, HS363, HS364, HS365, HS366, HS367, HS368, HS369, GG3652, GG3879, LM105, LM106, LM107, LM111, LM108, LM109, LM110, MLO857, RCS99, RSC100, RSC101, RSC102, RSC104, RSC105

***COMMODITIES*: Silver, Cobalt and Gold**

August 12, 2020



1. Summary

Canada Silver Cobalt Works (CCW) started an exploration program at Castle Silver Mine at Gowganda. The exploration program was composed of a previously filed drone mag survey and a surface diamond drilling program under Exploration Permit PR-16-10926A-1.

The surface drilling campaign comprised a total of seven (7) holes and 1 wedge hole, drilled from August 13,, 2018 to February 23, 2019. A total of 3075.94 m was drilled to assess potential mineralization based on earlier boulder tracing, IP survey, surface geochemical (MMI) sampling as well as trenching and channel sampling. The drilling size was NQ and the core samples were sent to Swastika Laboratories, Ontario, and ALS Canada, Québec, for assaying.

A total of CAD$ 555,392 was spent on the Canada Silver Cobalt Works property during the reporting period.

Table of contents

1. Summary ii
Table of contents iii
List of Tables iv
List of Figures v
Certificate of author 6
2. Introduction 7
3. Project location and access 7
4. Description of the property 9
5. Physiography and vegetation 21
6. Regional and local geology 21
7. Work program 29
7.1. Surface diamond drill campaign 2018 29
7.2. Geophysics 32
7.3. Expenditures 36
8. Drilling 37
8.1 Sampling approach and methodology 37
7.4. 8.2 Sample preparation 38
7.5. 8.3 Quality assurance and Quality control 39
9. Results 42
10. Conclusions 44
11. References 45

List of Tables

Table 1: Mining claims information, 100%owned by Canada Silver Cobalt Works Inc. as at May 11, 2020 12
Table 2: Mining Land Tenure information, 100%owned by Canada Silver Cobalt Works Inc. 20
Table 3: Diamond drill holes data program 2018/2019 (UTM coordinates; NAD 83, zone 17) 29
Table 4: Summary of samples sent to Swastika Laboratory and ALS Laboratory 31
Table 5: Highlights from the 2018 drilling program 31
Table 6: Exploration Expenditure Summary 36
Table 7: Highlights from the 2018 drilling program 42

List of Figures

Figure 1: Project location map 8
Figure 2: The property access roads 8
Figure 3: Project access from the Ontario Highway 560 (Google Map, source) 9
Figure 4: Claim and lease location of the Canada SilverCobalt Works property (May, 2020) 11
Figure 5: Stratigraphy for the Gowganda Lake and the Miller Lake Silver Area 23
Figure 6: Geology of the property 25
Figure 7: Drill hole locations, 2018 drill program 30
Figure 8: Location of mining leases and drone's path (Zen Geomap inc., Report - Drone Magnetometer survey) 33
Figure 9: Field magnetics survey map 34
Figure 10: 1 VD magnetics survey map 35
Figure 11: Photos of core taken from hole CS-18-18 (dry and damp) 38
Figure 12: Silver analysis results for blanks and the different standards (green dot representing the normal value for OREAS 600 and 601b) 41

Certificate of author

Merouane Rachidi, Ph.D., P.Geo. GoldMinds Geoservices Inc. 2999 Chemin Sainte-Foy, suite 200, Québec, Qc Canada G1X 1P7.

To accompany the Assessment Report on Canada Silver Cobalt Works property (drilling works), Gowganda, Province of Ontario, dated August 15th, 2020.

I, Merouane Rachidi, Ph.D., P. Geo., do hereby certify that:

1. I am a professional geoscientist, employed as Senior Geologist at GoldMinds Geoservices. I am a member of good standing of registered member of the l'Ordre des Géologues du Québec (Order of Geologists of Quebec, license # 1792) a registered member of APGO registered #2998 and member of APEGNB license # L5769. My relevant experience includes over 7 years in exploration geology, drilling supervision, 3D orebody modelling, mining and mineral resource estimation (NI 43-101).

2. I graduated from Laval University, Québec city (Ph.D. in Geology, 2012).

3. I have continuously worked as a Geologist since my graduation. My relevant experience for the purpose of the Technical Report is over seven years of consulting in the field of Mineral Resource estimation (NI 43-101), 3D orebody modeling, drilling supervision and geological mapping.

4. I have prepared the present report.

5. I have no personal knowledge, as of the date of this certificate, of any material fact or material change not reflected in this report.



Dated this 12th day of August 2020.

Merouane Rachidi P.Geo., Ph.D.
GoldMinds Geoservices Inc.

2. Introduction

This assessment report describes the exploration works done on the Canada Silver Cobalt Works property from July 2018 into March 2019. Canada Silver Cobalt Works Inc. started a surface drilling program in August 2018 in an under-explored area prospective for a new deposit type at 1.5 km east-southeast of the Castle Mine No.3 Shaft area.

The drilling program was performed by Vic Progressive Diamond Drilling Inc. and Laframbroise Drilling Inc. The drilling started on June 13th and continued until mid-December, 2018 and was supervised by Douglas Robinson, P. Eng.

The surface diamond drilling program consisted of 1131 core samples (including standards and blanks). These were split, bagged and then transported to Swastika Laboratory at Swastika (Ontario) and ALS Laboratory in Rouyn-Noranda (Quebec) for gold, silver, cobalt and multi-element analysis.

3. Project location and access

The property is located in the province of Ontario south of Timmins and Matachewan (Figure 1). The property is located within the administration boundaries of Haultain, Nicol, Chown, Morel and Shillington Townships in the Larder Lake Mining Division. The Haultain property is centered at 519420 mE and 5280414 mN in National Topographic Map.

It comprises the National Topographic System (NTS) map sheet 41P10, as shown in Figure 2. The locations in this report and appendices are referenced to NAD 83 UTM coordinates zone 17.



Figure 1: Project location map

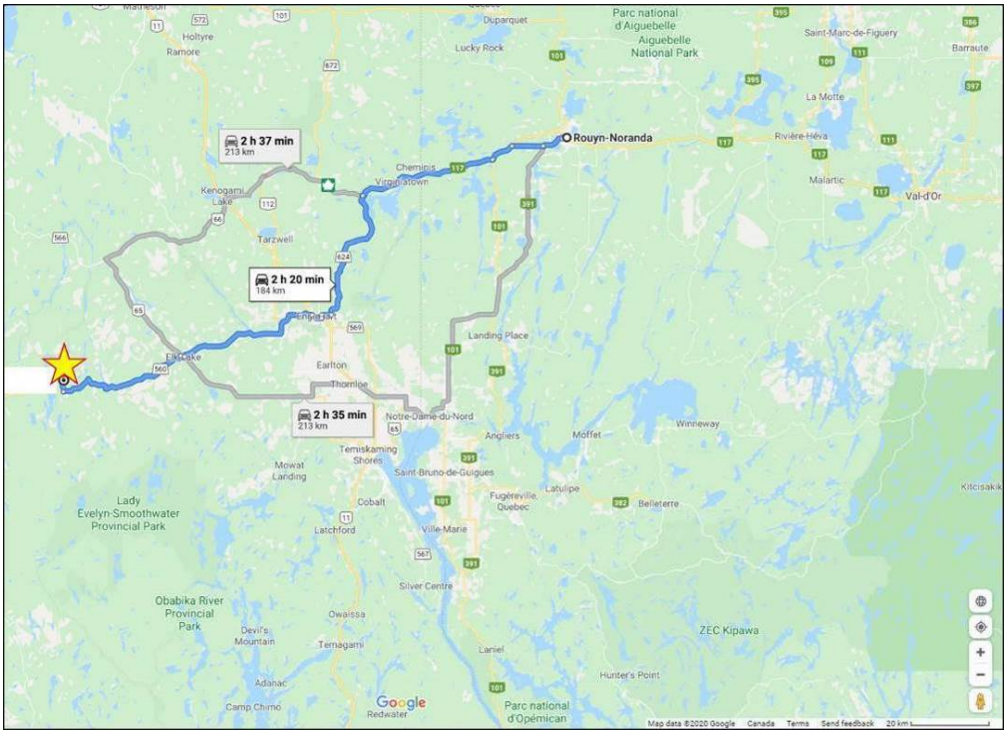


Figure 2: The property access roads

The Robinson Zone property is located within the administration boundaries of Haultain and Nicol Townships in the Larder Lake Mining Division. It is located approximately 4 km northeast of the rural community of Gowganda and 36 km west of Elk Lake (Figure 2).

Access to the Castle Mine Site from Elk Lake is via Hwy 560 west for approximately 36km. Elk Lake is accessible from either New Liskeard to the east along Hwy 65W or from Kirkland Lake to the northeast via Hwy 66 west to Matachewan then Hwy 65 south to Elk Lake. The mine road turns north from Hwy 560 at a point described as UTM zone 17 T 519515E 5277459N. Head along mine road to a fork at a point 2.7km north of Hwy 560 (Figure 3). The right fork veers NE and reaches the shaft area at 330m from the fork. The mine road is in excellent condition.



Figure 3: Project access from the Ontario Highway 560 (Google Map, source)

4. Description of the property

The property covers a total area of 7,332.76 hectares and comprises 340 mining claims: 55 boundary cell claims, 280 single-cell claims and 30 cells in multi-cell

claims across Shillington Township (101 claims), Nicol Township (11 claims), Morel Township (34 claims), Haultain Township (176 claims) and Chown Township (18 claims).

The property also comprises a total of 34 mining leases and two (2) Licenses of Occupation (GG3879 and MLO657) in both Haultain and Nicol Townships (Figure 4). All these claims are 100% owned by Canada Silver Cobalt Works Inc. (TSX-V: CCW; Table 1). The Mining Leases and Licenses of Occupation cover a total area of 546.41 ha. (Table 2). Additional information regarding the status of the staked claims are available in the table below, as viewed from MNDM public record of mining lands, the Mining Lands Administration System (MLAS) Web Site.

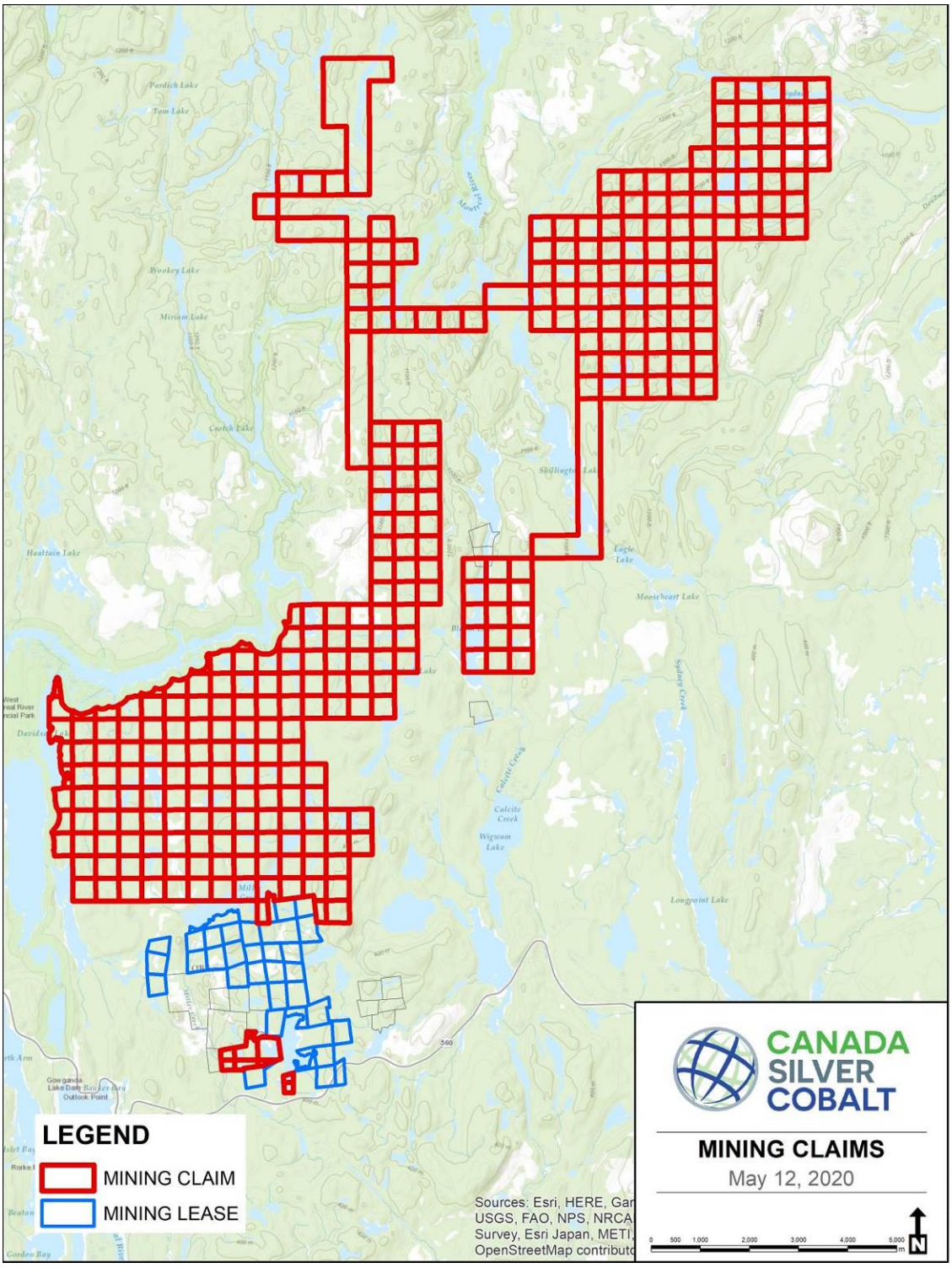


Figure 4: Claim and lease location of the Canada SilverCobalt Works property (May, 2020)

Table 1: Mining claims information, 100%owned by Canada Silver Cobalt Works Inc. as at May 11, 2020

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Work Required (CAN$)	Work Applied (CAN$)	Anniversary Date
4263351	NICOL	261755	BCMC	200	600	2023-04-11
4263351	NICOL	244593	SCMC	200	600	2023-04-11
4263351	NICOL	143901	BCMC	200	600	2023-04-11
4263351	NICOL	120555	BCMC	200	600	2023-04-11
4263352	NICOL	327653	BCMC	200	400	2021-09-15
4263352	NICOL	120556	SCMC	200	400	2021-09-15
4263352	NICOL	184587	SCMC	200	800	2023-06-23
4263360	HAULTAIN	342947	SCMC	200	400	2021-06-06
4263360	HAULTAIN	163316	SCMC	400	800	2021-06-06
4263360	HAULTAIN	297285	SCMC	200	600	2022-04-25
4263360	HAULTAIN	243116	SCMC	200	600	2022-04-25
4263360	HAULTAIN	230598	SCMC	400	1200	2022-04-25
4263360	HAULTAIN	184398	SCMC	200	600	2022-04-25
4263360	HAULTAIN	176009	SCMC	200	600	2022-04-25
4263360	HAULTAIN	146753	SCMC	200	600	2022-04-25
4263444	HAULTAIN	336673	SCMC	400	800	2021-06-06
4263444	HAULTAIN	191108	BCMC	200	400	2021-06-06
4263444	HAULTAIN	335947	BCMC	200	400	2021-07-11
4263444	HAULTAIN	240997	SCMC	400	800	2021-07-11
4263444	HAULTAIN	211840	SCMC	400	800	2021-07-11
4263444	HAULTAIN	201793	SCMC	400	800	2021-07-11
4263444	HAULTAIN	332993	SCMC	200	600	2022-03-25
4263444	HAULTAIN	271887	BCMC	200	600	2022-03-25
4263444	HAULTAIN	264655	SCMC	400	1200	2022-03-25
4263444	HAULTAIN	253116	BCMC	200	600	2022-03-25
4263444	HAULTAIN	253115	SCMC	400	1200	2022-03-25
4263444	HAULTAIN	205375	BCMC	200	600	2022-03-25
4263444	HAULTAIN	205374	SCMC	200	600	2022-03-25
4263444	HAULTAIN	197915	SCMC	400	1200	2022-03-25
4263444	HAULTAIN	190580	BCMC	200	600	2022-03-25
4263444	HAULTAIN	186522	SCMC	400	1200	2022-03-25
4263444	HAULTAIN	172303	BCMC	200	600	2022-03-25
4263444	HAULTAIN	167946	BCMC	200	600	2022-03-25
4263444	HAULTAIN	153272	BCMC	200	600	2022-03-25
4263445	HAULTAIN	287776	BCMC	200	600	2022-03-25
4263445	HAULTAIN	228485	BCMC	200	600	2022-03-25
4263583	HAULTAIN	309967	BCMC	200	400	2021-06-06
4263583	HAULTAIN	230599	SCMC	400	800	2021-06-06
4263583	HAULTAIN	222593	BCMC	200	400	2021-06-06
4263583	HAULTAIN	316008	SCMC	400	800	2021-07-11
4263583	HAULTAIN	309968	SCMC	400	800	2021-07-11
4263583	HAULTAIN	242732	SCMC	400	800	2021-07-11
4263583	HAULTAIN	129370	SCMC	400	800	2021-07-11

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Work Required (CAN$)	Work Applied (CAN$)	Anniversary Date
4263583	HAULTAIN	316007	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	297286	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	278615	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	250079	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	242730	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	230601	BCMC	200	600	2022-03-25
4263583	HAULTAIN	230600	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	163317	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	130753	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	129369	SCMC	400	1200	2022-03-25
4263583	HAULTAIN	242731	SCMC	400	1200	2022-07-11
4263583	HAULTAIN	278614	SCMC	400	1400	2023-03-25
4263583	HAULTAIN	222592	SCMC	400	1400	2023-03-25
4263587	NICOL	238172	BCMC	200	0	2020-12-04
4263587	NICOL	226752	BCMC	200	0	2020-12-04
4276107	NICOL	201316	SCMC	200	400	2021-09-15
4276107	NICOL	137144	BCMC	200	400	2021-09-15
4278558	HAULTAIN	332289	SCMC	400	800	2021-07-11
4278558	HAULTAIN	306323	SCMC	400	800	2021-07-11
4278558	HAULTAIN	306322	SCMC	400	800	2021-07-11
4278558	HAULTAIN	302871	SCMC	400	800	2021-07-11
4278558	HAULTAIN	290718	SCMC	400	800	2021-07-11
4278558	HAULTAIN	282672	SCMC	400	800	2021-07-11
4278558	HAULTAIN	282671	SCMC	400	800	2021-07-11
4278558	HAULTAIN	269346	SCMC	400	800	2021-07-11
4278558	HAULTAIN	261403	SCMC	400	800	2021-07-11
4278558	HAULTAIN	250664	SCMC	400	800	2021-07-11
4278558	HAULTAIN	210616	SCMC	400	800	2021-07-11
4278558	HAULTAIN	182972	SCMC	400	800	2021-07-11
4278558	HAULTAIN	160775	SCMC	400	800	2021-07-11
4278558	HAULTAIN	157916	SCMC	400	800	2021-07-11
4278558	HAULTAIN	134878	SCMC	400	800	2021-07-11
4278558	HAULTAIN	130665	SCMC	400	800	2021-07-11
4278559	HAULTAIN	305014	SCMC	400	800	2021-07-11
4278559	HAULTAIN	274515	SCMC	400	800	2021-07-11
4278559	HAULTAIN	259124	SCMC	400	800	2021-07-11
4278559	HAULTAIN	247124	SCMC	400	800	2021-07-11
4278559	HAULTAIN	247123	SCMC	400	800	2021-07-11
4278559	HAULTAIN	190422	SCMC	400	800	2021-07-11
4278559	HAULTAIN	157919	SCMC	400	800	2021-07-11
4278559	HAULTAIN	157918	SCMC	400	800	2021-07-11
4278559	HAULTAIN	157917	SCMC	400	800	2021-07-11
4278559	HAULTAIN	143796	SCMC	400	800	2021-07-11
4278559	HAULTAIN	138291	SCMC	400	800	2021-07-11

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Work Required (CAN$)	Work Applied (CAN$)	Anniversary Date
4278560	HAULTAIN	335948	BCMC	200	400	2021-07-11
4278560	HAULTAIN	335946	SCMC	400	800	2021-07-11
4278560	HAULTAIN	315025	BCMC	200	400	2021-07-11
4278560	HAULTAIN	277714	BCMC	200	400	2021-07-11
4278560	HAULTAIN	277210	SCMC	400	800	2021-07-11
4278560	HAULTAIN	260544	SCMC	400	800	2021-07-11
4278560	HAULTAIN	193835	SCMC	400	800	2021-07-11
4278560	HAULTAIN	192371	SCMC	400	800	2021-07-11
4278560	HAULTAIN	145714	SCMC	400	800	2021-07-11
4278561	HAULTAIN	305899	SCMC	400	800	2021-07-11
4278561	HAULTAIN	276577	SCMC	400	800	2021-07-11
4278561	HAULTAIN	246806	SCMC	400	800	2021-07-11
4278561	HAULTAIN	222165	BCMC	200	400	2021-07-11
4278561	HAULTAIN	341629	SCMC	400	1200	2022-07-11
4278561	HAULTAIN	325925	SCMC	400	1200	2022-07-11
4278561	HAULTAIN	325924	SCMC	400	1200	2022-07-11
4281720	HAULTAIN	246807	BCMC	200	400	2021-07-11
4281720	HAULTAIN	216055	SCMC	400	800	2021-07-11
4281720	HAULTAIN	199589	BCMC	200	400	2021-07-11
4281720	HAULTAIN	302870	SCMC	400	1200	2022-07-11
4281720	HAULTAIN	216054	SCMC	400	1200	2022-07-11
4281720	HAULTAIN	186857	SCMC	400	1200	2022-07-11
4281720	HAULTAIN	123386	SCMC	400	1200	2022-07-11
4281720	HAULTAIN	106296	SCMC	400	1200	2022-07-11
4281817	HAULTAIN	317336	SCMC	400	1200	2022-07-11
4281817	HAULTAIN	233446	SCMC	400	1200	2022-07-11
4281817	HAULTAIN	162127	SCMC	400	1200	2022-07-11
4281817	HAULTAIN	148583	SCMC	400	1200	2022-07-11
4281817	HAULTAIN	131997	SCMC	400	1200	2022-07-11
4282405	SHILLINGTON	324785	SCMC	400	800	2021-05-29
4282405	SHILLINGTON	294977	SCMC	400	800	2021-05-29
4282405	SHILLINGTON	288229	SCMC	400	800	2021-05-29
4282405	SHILLINGTON	228943	SCMC	400	800	2021-05-29
4282405	SHILLINGTON	202048	SCMC	400	800	2021-05-29
4282405	SHILLINGTON	202047	SCMC	400	800	2021-05-29
4282405	SHILLINGTON	114954	SCMC	400	800	2021-05-29
4282405	SHILLINGTON	100165	SCMC	400	800	2021-05-29
4283197	HAULTAIN	191107	SCMC	400	800	2021-06-06
4283197	HAULTAIN	174573	BCMC	200	400	2021-06-06
4285132	HAULTAIN,MOREL	325406	SCMC	400	400	2021-11-09
4285132	MOREL	325405	SCMC	400	800	2021-11-09
4285132	MOREL	313183	SCMC	400	400	2021-11-09
4285132	HAULTAIN,MOREL	305880	SCMC	400	800	2021-11-09
4285132	MOREL	305879	SCMC	400	800	2021-11-09

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Work Required (CAN$)	Work Applied (CAN$)	Anniversary Date
4285132	MOREL	305878	SCMC	400	800	2021-11-09
4285132	MOREL	305877	SCMC	400	400	2021-11-09
4285132	MOREL	305876	SCMC	400	800	2021-11-09
4285132	MOREL	305875	SCMC	400	400	2021-11-09
4285132	HAULTAIN	276564	SCMC	400	400	2021-11-09
4285132	MOREL	258111	SCMC	400	800	2021-11-09
4285132	HAULTAIN	257229	SCMC	400	800	2021-11-09
4285132	HAULTAIN	239917	SCMC	400	800	2021-11-09
4285132	HAULTAIN	222137	BCMC	200	400	2021-11-09
4285132	HAULTAIN	202581	SCMC	400	800	2021-11-09
4285132	MOREL	202580	SCMC	400	400	2021-11-09
4285132	HAULTAIN	162747	SCMC	400	800	2021-11-09
4285132	MOREL	162746	SCMC	400	800	2021-11-09
4285132	MOREL	162745	SCMC	400	400	2021-11-09
4285132	MOREL	162744	SCMC	400	400	2021-11-09
4285132	HAULTAIN	112479	SCMC	400	400	2021-11-09
4285132	HAULTAIN,MOREL	112478	SCMC	400	800	2021-11-09
4285133	HAULTAIN	332095	SCMC	200	400	2021-11-09
4285133	HAULTAIN	315310	BCMC	200	400	2021-11-09
4285133	HAULTAIN	315309	BCMC	200	400	2021-11-09
4285133	CHOWN,HAULTAIN	268166	BCMC	200	400	2021-11-09
4285133	HAULTAIN	249986	BCMC	200	400	2021-11-09
4285133	HAULTAIN	249985	SCMC	400	800	2021-11-09
4285133	HAULTAIN	231458	BCMC	200	400	2021-11-09
4285133	CHOWN,HAULTAIN	231457	SCMC	400	800	2021-11-09
4285133	HAULTAIN	224792	BCMC	200	400	2021-11-09
4285133	CHOWN,HAULTAIN	212737	SCMC	400	800	2021-11-09
4285133	HAULTAIN	160080	BCMC	200	400	2021-11-09
4285133	HAULTAIN	140594	SCMC	400	800	2021-11-09
4285133	HAULTAIN	140593	SCMC	400	821	2021-11-09
4285133	CHOWN,HAULTAIN	140592	SCMC	400	800	2021-11-09
4285133	CHOWN,HAULTAIN	113977	SCMC	400	800	2021-11-09
4286190	HAULTAIN	310963	SCMC	400	800	2021-06-06
4286190	HAULTAIN	292067	BCMC	200	400	2021-06-06
4286190	HAULTAIN	255480	BCMC	200	400	2021-06-06
4286190	HAULTAIN	236851	SCMC	400	800	2021-06-06
4286190	HAULTAIN	236850	SCMC	400	800	2021-06-06
4286190	HAULTAIN	235991	SCMC	400	800	2021-06-06
4286190	HAULTAIN	235990	SCMC	400	800	2021-06-06
4286190	HAULTAIN	217400	SCMC	400	800	2021-06-06
4286190	HAULTAIN	181428	SCMC	200	400	2021-06-06
4286190	HAULTAIN	124718	SCMC	400	800	2021-06-06
4286190	HAULTAIN	107776	SCMC	400	800	2021-06-06
4286191	HAULTAIN	331704	SCMC	400	800	2021-06-06

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Work Required (CAN$)	Work Applied (CAN$)	Anniversary Date
4286191	HAULTAIN	313922	SCMC	400	800	2021-06-06
4286191	HAULTAIN	277769	BCMC	200	400	2021-06-06
4286191	HAULTAIN	259356	BCMC	200	400	2021-06-06
4286191	HAULTAIN	223405	SCMC	400	800	2021-06-06
4286191	HAULTAIN	211904	SCMC	400	800	2021-06-06
4286191	HAULTAIN	203326	BCMC	200	400	2021-06-06
4286191	HAULTAIN	203325	BCMC	200	400	2021-06-06
4286191	HAULTAIN	192436	SCMC	400	800	2021-06-06
4286191	HAULTAIN	144628	SCMC	400	800	2021-06-06
4286192	HAULTAIN	241052	BCMC	200	400	2021-06-06
4286192	HAULTAIN	211903	BCMC	200	400	2021-06-06
4286192	HAULTAIN	193892	BCMC	200	400	2021-06-06
4286192	HAULTAIN	159876	BCMC	200	400	2021-06-06
4286192	HAULTAIN	308378	SCMC	400	1200	2025-06-06
4286193	HAULTAIN	221023	BCMC	200	400	2021-06-06
4286193	HAULTAIN	117496	BCMC	200	400	2021-06-06
4286694	SHILLINGTON	325523	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	325522	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	313468	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	313467	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	313466	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	277389	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	276817	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	258846	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	230201	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	222932	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	222931	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	202781	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	162983	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	162982	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	162981	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	144827	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	117020	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	116965	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	100369	SCMC	400	800	2021-05-29
4286694	SHILLINGTON	100324	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	325468	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	313415	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	313414	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	313413	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	258801	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	229626	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	229625	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	222861	SCMC	400	800	2021-05-29

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Work Required (CAN$)	Work Applied (CAN$)	Anniversary Date
4286695	SHILLINGTON	210804	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	202740	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	162922	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	156924	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	156923	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	127635	SCMC	400	800	2021-05-29
4286695	SHILLINGTON	116966	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	326899	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	326898	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	314701	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	314700	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	314699	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	260225	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	231566	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	231565	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	177700	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	102071	SCMC	400	800	2021-05-29
4286696	SHILLINGTON	102070	SCMC	400	800	2021-05-29
4286697	SHILLINGTON	326749	SCMC	400	800	2021-05-29
4286697	SHILLINGTON	278150	SCMC	400	800	2021-05-29
4286697	SHILLINGTON	223658	SCMC	400	800	2021-05-29
4286697	SHILLINGTON	204034	SCMC	400	800	2021-05-29
4286697	SHILLINGTON	164242	SCMC	400	800	2021-05-29
4286697	SHILLINGTON	158219	SCMC	400	800	2021-05-29
4286697	SHILLINGTON	158218	SCMC	400	800	2021-05-29
4286697	SHILLINGTON	115947	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	326176	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	312647	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	279603	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	279602	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	279601	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	278063	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	259543	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	223600	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	211550	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	203457	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	164170	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	158139	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	145414	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	117206	SCMC	400	800	2021-05-29
4286698	SHILLINGTON	101893	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	339889	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	327546	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	280934	SCMC	400	800	2021-05-29

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Work Required (CAN$)	Work Applied (CAN$)	Anniversary Date
4286699	SHILLINGTON	280298	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	280297	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	232229	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	224932	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	213420	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	194266	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	116585	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	116584	SCMC	400	800	2021-05-29
4286699	SHILLINGTON	102073	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	297607	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	297606	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	268247	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	260230	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	177702	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	164871	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	158875	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	158874	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	158873	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	116082	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	102074	SCMC	400	800	2021-05-29
4286700	SHILLINGTON	268246	SCMC	400	1200	2022-05-29
4286738	HAULTAIN	300478	BCMC	200	600	2022-04-27
4286738	HAULTAIN	263820	BCMC	200	600	2022-04-27
4286738	HAULTAIN	204562	BCMC	200	600	2022-04-27
4286738	HAULTAIN	204538	BCMC	200	600	2022-04-27
4286738	HAULTAIN	111841	BCMC	200	600	2022-04-27
4286739	HAULTAIN	318287	SCMC	200	400	2021-04-27
4286739	HAULTAIN	311899	SCMC	200	400	2021-04-27
4286739	HAULTAIN	237916	SCMC	400	800	2021-04-27
4286739	HAULTAIN	209310	SCMC	400	800	2021-04-27
4286739	HAULTAIN	201289	SCMC	200	400	2021-04-27
4286739	HAULTAIN	171329	SCMC	200	400	2021-04-27
4286739	HAULTAIN	171328	SCMC	200	400	2021-04-27
4286739	HAULTAIN	156659	SCMC	200	400	2021-04-27
4286739	HAULTAIN	137115	SCMC	200	400	2021-04-27
4286739	HAULTAIN	137114	SCMC	200	400	2021-04-27
4286740	HAULTAIN	336288	SCMC	200	400	2021-04-27
4286740	HAULTAIN	300297	SCMC	200	400	2021-04-27
4286741	HAULTAIN	287927	SCMC	200	400	2021-04-27
4286741	HAULTAIN	154607	SCMC	200	400	2021-04-27
4286741	HAULTAIN	192092	BCMC	200	600	2022-04-27
4286741	HAULTAIN	154608	BCMC	200	600	2022-04-27
	CHOWN,SHILLINGTON	545987	MCMC	3600	0	2021-03-20
	MOREL	510917	SCMC	400	400	2021-04-10

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Work Required (CAN$)	Work Applied (CAN$)	Anniversary Date
	MOREL,SHILLINGTON	545997	MCMC	800	800	2022-03-20
	MOREL	545996	MCMC	1200	1200	2022-03-20
	MOREL	545995	SCMC	400	400	2022-03-20
	MOREL	545994	SCMC	400	400	2022-03-20
	MOREL	545993	SCMC	400	400	2022-03-20
	MOREL	545992	SCMC	400	400	2022-03-20
	MOREL	545991	SCMC	400	400	2022-03-20
	MOREL	545990	SCMC	400	400	2022-03-20
	MOREL	545989	SCMC	400	400	2022-03-20
	MOREL	545988	MCMC	2400	2400	2022-03-20
	MOREL	510916	SCMC	400	800	2022-04-10
	MOREL	510915	SCMC	400	800	2022-04-10
	MOREL	510914	SCMC	400	800	2022-04-10
	MOREL	510913	SCMC	400	800	2022-04-10
	MOREL	510912	SCMC	400	800	2022-04-10
	MOREL	510911	SCMC	400	800	2022-04-10
	MOREL	510910	SCMC	400	800	2022-04-10
	MOREL	510909	SCMC	400	800	2022-04-10
	MOREL	510908	SCMC	400	800	2022-04-10
	MOREL	510907	SCMC	400	800	2022-04-10
	CHOWN	593291	SCMC	400	0	2022-05-29
	CHOWN	593290	SCMC	400	0	2022-05-29
	CHOWN	593289	SCMC	400	0	2022-05-29
	CHOWN	593288	SCMC	400	0	2022-05-29
	CHOWN	593287	SCMC	400	0	2022-05-29
	CHOWN	593286	SCMC	400	0	2022-05-29
	CHOWN	593285	SCMC	400	0	2022-05-29
	CHOWN	593284	SCMC	400	0	2022-05-29
	CHOWN	593283	SCMC	400	0	2022-05-29
	CHOWN	593282	SCMC	400	0	2022-05-29
	CHOWN	593281	SCMC	400	0	2022-05-29
	CHOWN	593280	SCMC	400	0	2022-05-29
	MOREL,YARROW	530507	MCMC	4000	8000	2022-09-03

*SCMC refers to Single Cell Mining Claim; BCMC refers to Boundary Cell Mining Claim; MCMC refers to Multi-cell Mining Claim

Table 2: Mining Land Tenure information, 100%owned by Canada Silver Cobalt Works Inc.

Lease number	Claim Number	Type	Township/Area	Disposition	Area (ha)
LEA-19672	HS369	Lease	HAULTAIN	Mining and Surface Rights	20.11
LEA-19673	HS364	Lease	HAULTAIN	Mining and Surface Rights	15.86
LEA-19674	HS366	Lease	HAULTAIN	Mining and Surface Rights	8.62
LEA-19675	HS367	Lease	HAULTAIN	Mining and Surface Rights	16.27
LEA-19676	GG3879	Lease	NICOL	Mining and Surface Rights	0.55
LEA-19677	HS363	Lease	NICOL	Mining and Surface Rights	15.70
LEA-19678	HS368	Lease	HAULTAIN	Mining and Surface Rights	15.66
LEA-19679	HS357	Lease	HAULTAIN	Mining and Surface Rights	15.30
LEA-19680	HS355	Lease	HAULTAIN	Mining and Surface Rights	20.68
LEA-19681	HS354	Lease	HAULTAIN	Mining and Surface Rights	17.04
LEA-19682	HS365	Lease	HAULTAIN	Mining and Surface Rights	17.32
LEA-19683	HS350	Lease	HAULTAIN	Mining and Surface Rights	15.86
LEA-19684	HS352	Lease	HAULTAIN	Mining and Surface Rights	13.15
LEA-19685	HS353	Lease	HAULTAIN	Mining and Surface Rights	15.05
LEA-19694	HS362	Lease	NICOL	Mining and Surface Rights	6.56
LEA-19695	RSC105	Lease	NICOL	Mining and Surface Rights	15.05
LEA-19696	LM107	Lease	HAULTAIN	Mining and Surface Rights	15.05
LEA-19697	LM108	Lease	HAULTAIN	Mining and Surface Rights	16.27
LEA-19698	LM109	Lease	HAULTAIN	Mining and Surface Rights	12.91
LEA-19699	LM110	Lease	HAULTAIN	Mining and Surface Rights	15.46
LEA-19700	RSC99	Lease	HAULTAIN	Mining and Surface Rights	18.64
LEA-19701	HS356	Lease	NICOL	Mining and Surface Rights	21.73
LEA-19702	HS358	Lease	NICOL	Mining and Surface Rights	10.60
LEA-19703	HS359	Lease	NICOL	Mining and Surface Rights	19.63
LEA-19704	HS360	Lease	NICOL	Mining and Surface Rights	17.20
LEA-19705	HS361	Lease	NICOL	Mining and Surface Rights	15.38
LEA-19706	RSC104	Lease	HAULTAIN	Mining and Surface Rights	16.79
LEA-19707	RSC100	Lease	HAULTAIN	Mining and Surface Rights	17.93
LEA-19708	RSC101	Lease	HAULTAIN	Mining and Surface Rights	16.56
LEA-19709	LM111	Lease	NICOL	Mining and Surface Rights	18.98
LEA-19712	LM106	Lease	HAULTAIN	Mining and Surface Rights	15.54
LEA-19713	RSC102	Lease	HAULTAIN	Mining and Surface Rights	16.78
LEA-20049	LM105	Lease	HAULTAIN	Mining and Surface Rights	15.99
LEA-20053	GG3652	Lease	NICOL	Mining and Surface Rights	8.66
MLO-1379	GG3879	Mining Licence of Occupation	NICOL	Mining Rights	0.20
MLO-657	MLO657	Mining Licence of Occupation	NICOL	Mining Rights	45.33

The mining leases (total of 34 mining leases) and two (2) License of Occupation (GG3879 and MLO657) provide surface rights and access to the property. The status of the mining titles for the Property, provided to the QP by the issuer, can be verified in MENDM (Ministry of Energy, Northern Development and Mines).

5. Physiography and vegetation

The Haultain property has moderate topography comprised of rocky knolls covered with apparent boulder till consisting primarily of sandy soil dominated by cobbles to boulders. The boulders are commonly tightly packed in interstitial pebble, sandy soil.

The area is covered by clear cuts and stands of coniferous and mixed-wood forests composing the Boreal region of northern Ontario. The latter consists of diversified tree types, including balsam fir, jack pine, black spruce, poplar, maple, white cedar and alders. The trees under 10 cm diameter appear to be dominated by balsam fir.

6. Regional and local geology

The Gowganda area comprises, in part, the townships of Haultain and Nicol in the district of Timiskaming. The village of Gowganda is about 83 km (52 miles) west-northwest of New Liskeard.

The first mapping in the area was done by W.H. Collins (1913) at a scale of l inch to 4 miles (1:253,440). Later more detailed mapping was done by A.G. Burrows (1921) at a scale, l inch to l mile (1:63,360). Aeromagnetic maps of the area have been published by the Geological Survey of Canada (GSC 1956a and b) at a scale, l inch to l mile (1:63,360).

Gowganda, along with South Lorrain (McIlwaine, 1978), is one of the more important satellite silver camps of the Timiskaming silver area. These camps arose owing to the more widespread prospecting for silver deposits following the rich discoveries in Cobalt in 1903.

The Gowganda area is near the northwestern edge of the Cobalt Embayment of the Superior Structural Province of the Canadian Shield. Several areas of Precambrian

rocks are exposed and represent inliers in the Middle Precambrian cover with the exception of the metavolcanic assemblage exposed inside the Miller Lake diabase basin. The Nipissing Diabase is of great importance as it is closely related to the silver deposits for which the area is well-known.

The rocks of the area are readily divisible into four major units as follows:

- Late gabbroic rocks (Nipissing Diabase and later dikes);
- Cobalt Group Sedimentary rocks;
- Granitic intrusive rocks;
- Metavolcanics rocks with associated intrusive and sedimentary rocks including iron formation.

The area is underlain mainly by Middle Precambrian Huronian Supergroup sedimentary rocks which are relatively flat-lying, mildly metamorphosed, and intruded by several subcircular gabbroic intrusions of Nipissing Diabase. The metamorphism of the Huronian rocks was probably caused by the same tectonic events which deformed the Huronian rocks along the North Shore of Lake Huron (Card et al. 1970).

Deposition of Huronian Supergroup rocks followed a period of erosion; the Cobalt Group, locally, is represented by the Gowganda, and Lorrain Formations. Feldspathic arenite, feldspathic greywacke, and paraconglomerate are the most common lithologies in the Gowganda Formation. Laminated argillite of the Gowganda Formation, Firstbrook Member are present locally. Sedimentation of this unit was controlled, in part, by north-trending fault scarps which were a result of continued movement along the fractures which were the loci of intrusion of the early diabase dikes (McIlwaine, 1978).

Silver mineralization, with associated cobalt-nickel-iron arsenides, occurs in carbonate veins, mainly in the Nipissing Diabase. Over 60,000,000 ounces of silver have been won from the area with two thirds of this coming from the Miller Lake O'Brien Mine.

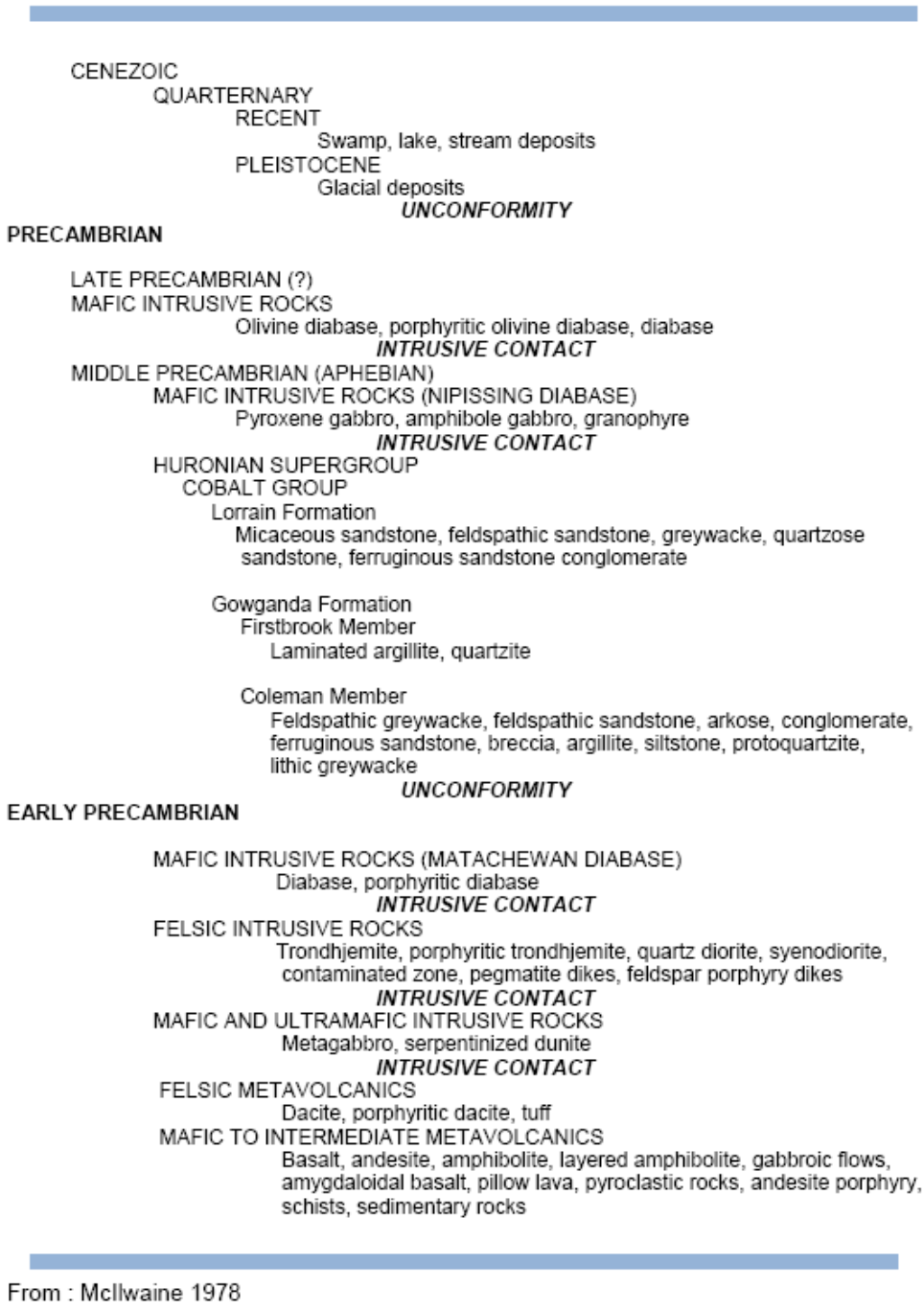


Figure 5: Stratigraphy for the Gowganda Lake and the Miller Lake Silver Area

Figure 5, presents the stratigraphic units in more details. Figure 6, shows the geology of the property. The main exposures of mafic metavolcanics are in south-central Van Hise Township, in southwest and central Haultain Township, within the Miller Lake diabase basin, which straddles the Haultain-Nicol Township boundary, and

northeast of Wilson Lake in central Nicol Township. Felsic metavolcanics underlie a "horseshoe"-shaped area in northwest Nicol Township. Sulphide facies iron formation is associated with this unit. Granitic rocks are also exposed in central Nicol Township, north of Wilson Lake. North-trending Matachewan-type diabase dikes are ubiquitous throughout the metavolcanic and granitic rocks. Nonconformably overlying the Early Precambrian basement rocks are relatively flat-lying Middle Precambrian clastic sedimentary rocks of the Cobalt Group, which is part of the Huronian Supergroup (Robertson et al. 1969).

- Early Precambrian – Ultramafic, Mafic and Intermediate Metavolcanics

This unit of Early Precambrian rocks has been mapped as the oldest in the area and is composed mainly of fine-grained flows of basaltic composition with local coarse-grained facies and pyroclastics. The rocks have been metamorphosed mainly under greenschist facies, but amphibolite facies conditions prevail locally. A narrow belt of layered amphibolite separates quartz diorite from albite trondhjemite in central Haultain Township. The foliation in the rocks, however, suggests that all of the larger areas at least, and some, if not all, of the smaller areas were at one time part of the same belt. The foliation also suggests that a large fold possibly displaced, in part, by faulting, is present within the metavolcanics. On the basis of colour index, the metavolcanics are believed to be mainly basaltic in composition. They are massive to weakly foliated, fine grained, dark greenish grey to almost black and locally have a mottled appearance.

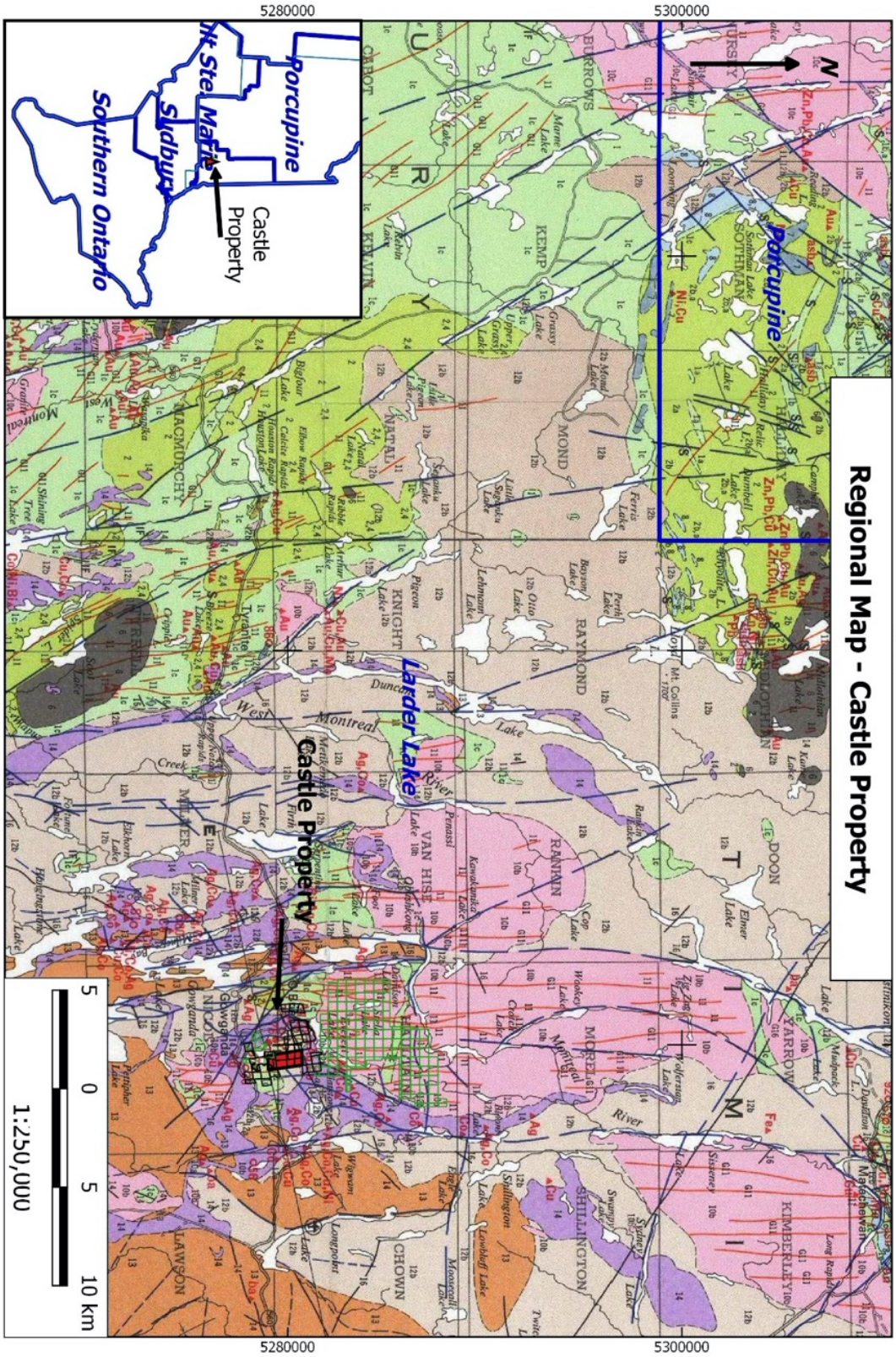


Figure 6: Geology of the property

Middle Precambrian – Huronian Supergroup, Cobalt Group

Following the igneous activity of the Early Precambrian a period of uplift, basin formation and erosion occurred, resulting in the deposition of rocks of the Huronian Supergroup (Robertson et al. 1969); of this Supergroup, only rocks of the Cobalt Group are present. The Cobalt Group in the Gowganda area is subdivided as follows:

Gowganda Formation which is made up mainly of:

- Coleman Member: conglomerate, siltstone, feldspathic sandstones and greywackes;
- Firstbrook Member: laminated argillite;

Lorrain Formation made up of pale green to white to pale pink feldspathic sandstones.

Gowganda Formation – Coleman Member

The Coleman Member of the Gowganda Formation is present in the western half of Nicol Township where it is repeated, owing to faulting and, in part, rests non-conformably on Early Precambrian rocks. Exposures also occur within the Miller Lake basin and along the margins of the north-trending "tail" of the diabase basin. The thickness of the Coleman Member is difficult to determine because of faulting, disruption from diabase intrusions and incomplete sections. The Coleman Member of the Gowganda Formation is lithologically heterogeneous and is composed of numerous clastic rock types, including feldspathic greywacke, arkose, feldspathic sandstone, ferruginous sandstones, argillite and siltstone, conglomerate, and breccia.

Gowganda Formation – Firstbrook Member

The Firstbrook Member is very limited in areal extent. The sequence in Nicol Township is estimated to be about 25 m (80 feet) thick and there is a similar thickness exposed in Milner Township.

The Firstbrook is a unit of laminated argillite with alternating graded laminae which are various shades of dark red, green and grey. This member conformably overlies the Coleman Member and is gradational into the overlying Lorrain Formation. The laminae are generally regular and undisturbed and range from about 0.5 to 4 mm and average about 1 mm. The laminae are graded with the quartz being more coarse-grained in the green and finer grained in the red. The grains are also more closely packed in the red laminae. A higher concentration of hematite in the red laminae gives them their colour. The magnetite in these laminae is finer grained. The concentration of hematite in the red laminae is variable and is locally gradational into green laminae.

Lorrain Formation

Lorrain Formation rocks underlie most of southeastern Nicol Township and are preserved in down-faulted blocks along the Gowganda Lake-Obushkong Lake zones. With an assumed mean dip of 10 degrees there is an estimated 900 m (3,000 feet) thickness in the southeastern part of Nicol Township.

The Lorrain Formation is composed of a variety of fine-grained quartzose sandstones which are generally arkosic at the base, becoming less feldspathic towards the top and grading to orthoquartzite. Feldspathic sandstone is the most common in this area.

- Massive Intrusive Rocks - Nipissing Diabase

From an economic point of view the gabbroic rocks of the Nipissing Diabase (Miller, 1910) sheets are the most important in the area. Very early in the history of the Timiskaming silver area, it was recognized that these rocks held a close spatial relationship with the rich silver deposits and the prospecting for diabase became intensive. For many years, many geologists considered the areas of Nipissing Diabase to be remnants of a former continuous sheet which extended across the region (Burrows 1926; Campbell 1930). More recently, however, geologists have suggested that the Nipissing Diabase is actually made up of numerous gabbroic intrusions (Moore 1955; Hester 1967; Card et al. 1970).

Most of the diabase bodies in the area have a strong northerly orientation indicating that the dominant north-trending fault activity which controlled intrusion of Matachewan dikes and, in part, influenced Gowganda Formation deposition, was still active during intrusion of the Nipissing Diabase. Limited evidence, however, suggests an easterly dip which is probably steep. The evidence includes the occurrence of aplite dikes along the eastern contact; aplite dikes, where they occur, are generally at or near the top of a diabase body.

7. Work program

7.1. Surface diamond drill campaign 2018

Canada Silver Cobalt Works started a surface drilling program in August 2018 in an under-explored area prospective for a new deposit type at 1.5 km east-southeast of the Castle Mine

A total of seven (7) NQ diamond holes and 1 wedge hole, totaling 3,075.94 meters of core, were drilled (CS-18-13; CS-18-14; CS-18-15; CS-18-16; CS-18-16W; CS-18-17; CS-18-18, and CS-19-19; see Figure 7 and Table 3). Of the total of 1131 samples, 42 were assayed at Swastika Laboratories Ltd located in Swastika (Ontario), with the remaining samples assayed at ALS Laboratories in Rouyn-Noranda. This number includes 38 samples characterized as blanks and 37 standards.

Table 3: Diamond drill holes data program 2018/2019 (UTM coordinates; NAD 83, zone 17)

Hole Name	Easting	Northing	Elevation (m)	Azimuth (°)	Dip (°)	Length (m)	Starting date
CS-18-13	520985	5280590	400	344.1	-49	119	Aug 13th
CS-18-14	521002	5280154	400	344.1	-49	500.11	Aug 27th
CS-18-15	520747	5279538	400	4	-50	600	Sept 21st
CS-18-16	520684	5279631	405	169	-50	471	Oct 23th
CS-18-16W	520687	5279451	213.3	169	-50	586.55 (323.75)	Nov 8th
CS-18-17	520690	5279579	408	175	-50	356	Dec 11th
CS-18-18	520643	5279570	406	176	-50	350	Dec 14th
CS-19-19	520589	5279578	400	175	-50	356	21 Jan 2019
					Σ	**3,075.94**	

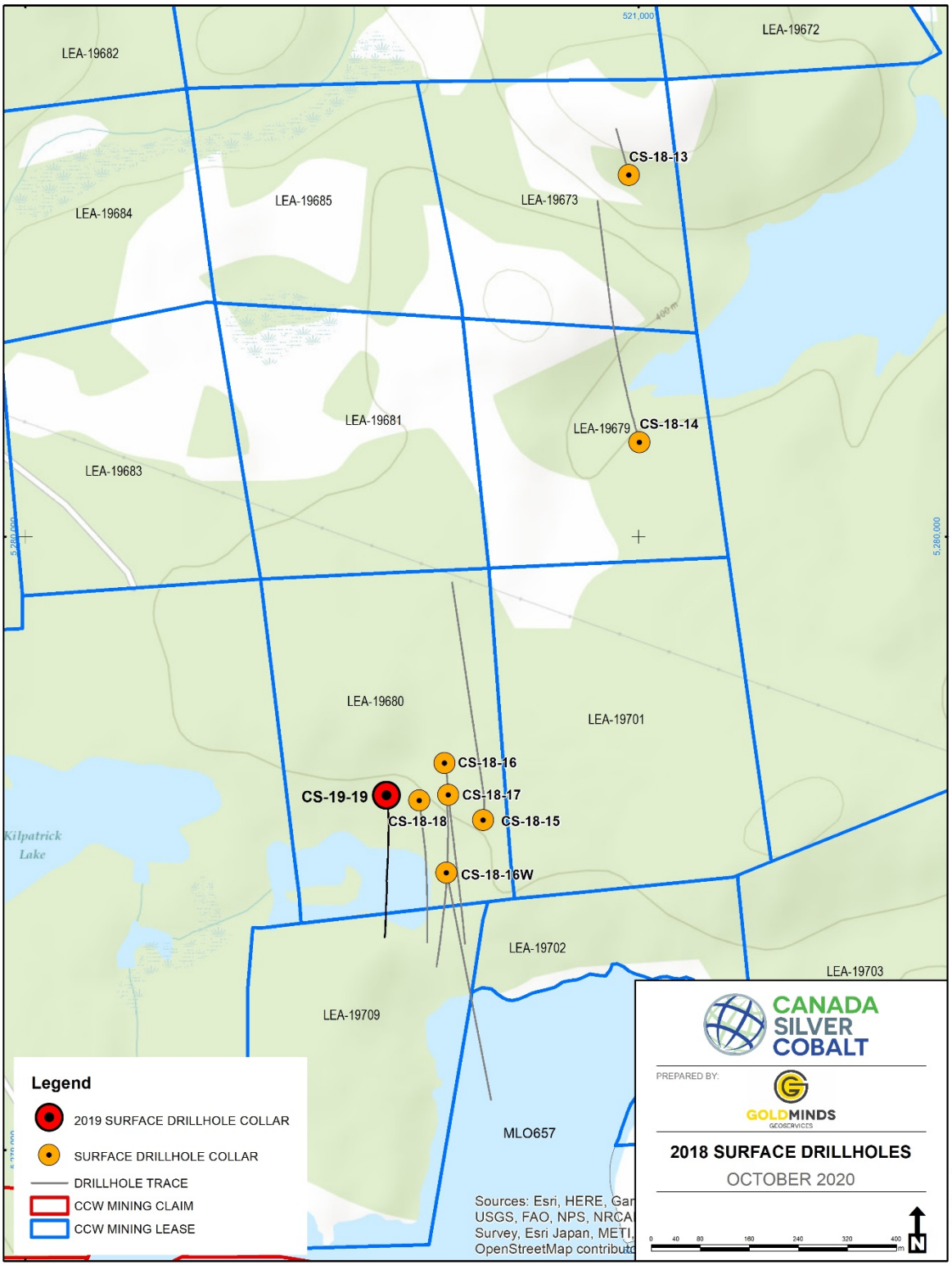


Figure 7: Drill hole locations, 2018 drill program

Table 4: Summary of samples sent to Swastika Laboratory and ALS Laboratory

CS-18-13	2	1	1	0	0	0
CS-18-14	124	5	2	3	0	0
CS-18-15	193	7	3	3	1	0
CS-18-16	213	9	4	5	0	0
CS-18-16W	177	2	0	0	1	1
CS-18-17	126	5	1	1	2	0
CS-18-18	174	5	1	1	2	1
CS-19-19	122	4	2	2	0	0
∑	1131	38	14	15	6	2

During this program several mineralized zones were intersected. The Table 5, shows the highlights from diamond holes drilled on the southeastern part of the property. The mineralised intervals occur within tuff, mafic to ultramafic units which are locally magnetic, have 1 to 2% pyrrhotite in the groundmass, and have quartz/carbonate veins up to 5 cm wide with minor galena locally in folded foliation plans. Also noteworthy is the presence of small brecciated zones with strong carbonate alteration with feldspar porphyry syenite.

Table 5: Highlights from the 2018 drilling program

Hole Name	From	To	Sample Number	Length	Au	Ag	Cu	Ni
CS-18-15	109.22	109.96	Z047736	0.74	3.78	3	0	0
CS-18-16	228.74	229.30	z047833	0.56	0.97	0	0	0
CS-18-16	268.23	268.32	z047864	0.09	1.06	0	0	0
CS-18-16	273.58	274.31	z047875	0.73	0.87	0	0	0
CS-18-16	274.31	274.44	z047876	0.13	6.18	2	6400	60
CS-18-16W	271.88	272.22	z047895	0.34	4.65	2	3530	50
CS-18-16W	315.97	316.34	z047915	0.37	5.52	26	4300	120
CS-18-16W	355.33	356.65	z047934	1.32	1.59	34	1910	60
CS-18-16W	433.87	434.07	z047954	0.20	0.045	0	20	2190
CS-18-18	172.26	172.94	z049006	0.68	0.52	0.5	50	10
CS-18-18	188.00	188.90	z049022	0.90	0.62	1	390	50
CS-18-18	259.00	260.00	Z049186	1.00	0.55	0.5	90	50
CS-19-19	298.00	299.00	Z049475	1.00	15.2	11	470	30
CS-19-19	295.00	298.00	Z049472 To -74	3.00	0.62	3.33	133.33	46.67

The 2018 drilling program tested an underexplored area the thickness of several mineralized zones. The mineralized zones are associated with the quartz veins with pyrite, pyrrhotite and minor arsenopyrite mineralization.

7.2. Geophysics

The survey was performed by ZEN Geomap Inc. on mining leases LEA-19673, 19679, 19680, 19701, 19709, 19702 and 19703 (Figure 8) in order to generate total field and 1st vertical derivative maps across the survey area. These maps help to visualize the structure and general nature of bedrock lying beneath overburden. Data processing and maps were completed between August 4th and September 28th, 2018.The report was prepared between February 1st and February 15th, 2019. This work was filed in March 2019 and approved.

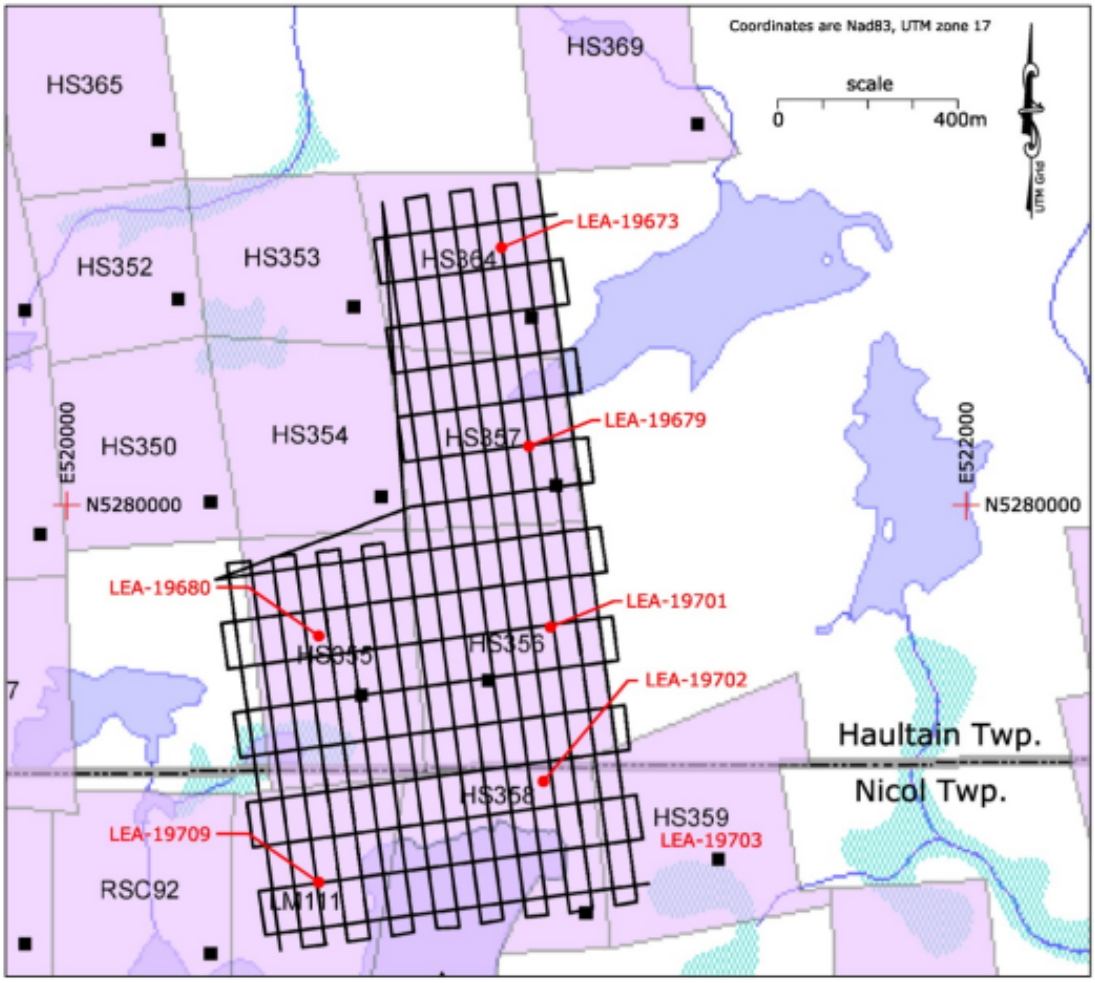


Figure 8: Location of mining leases and drone's path (Zen Geomap inc., Report - Drone Magnetometer survey)

The program consisted of a drone magnetic survey carried out on a grid with N-S lines spaced at 50m and E-W lines spaced at 100 m (Figure 8). The path is 31.3 linear kilometers and the drone flew at an altitude of 60 m height above ground level. A Geometrics MFAM magnetometer mounted on a DJI M600 Pro hexacopter drone was used to survey all grid lines. A Geometrics G856AX proton procession magnetometer was operated as a base station throughout the survey to provide diurnal correction.

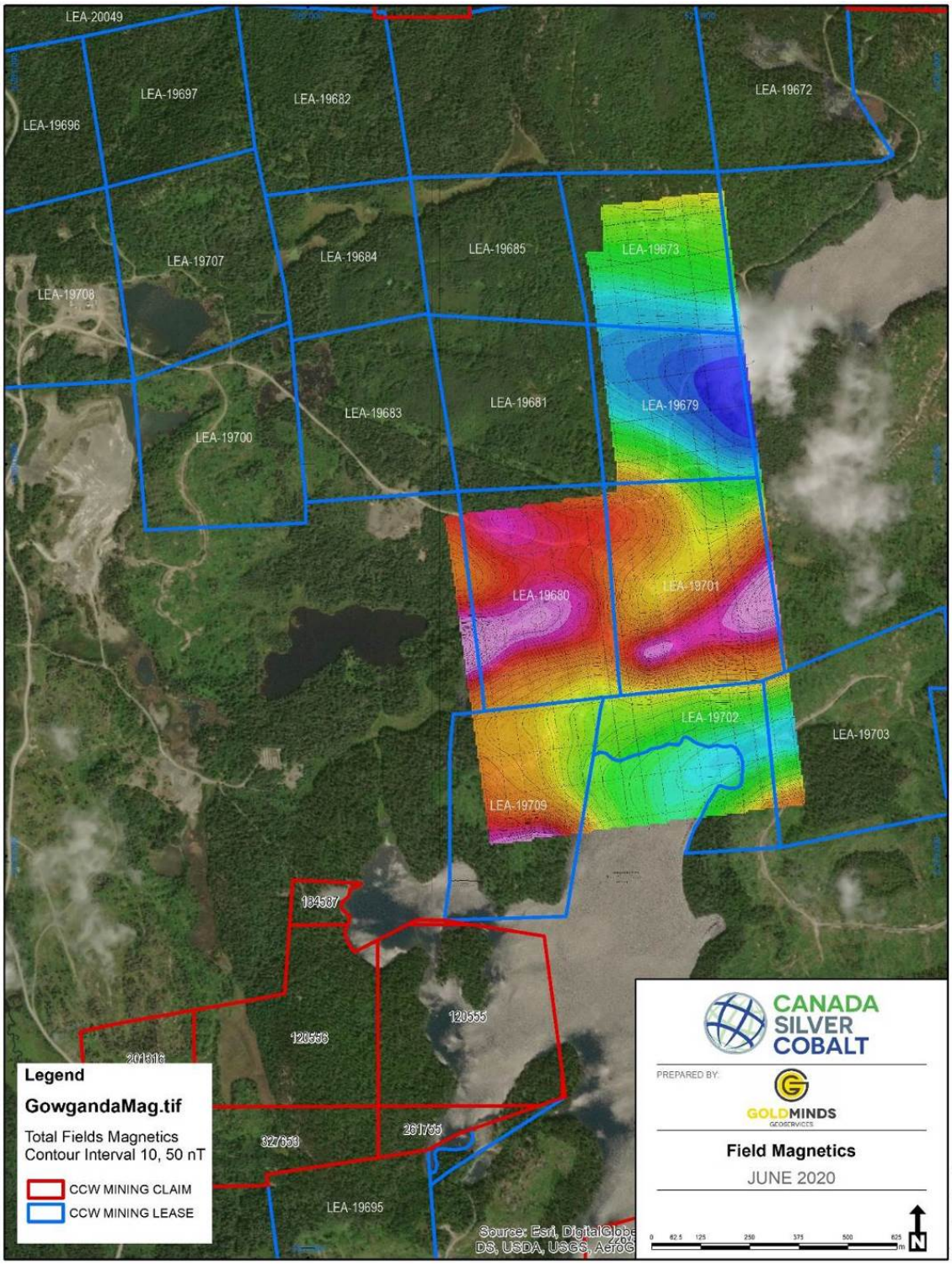


Figure 9: Field magnetics survey map

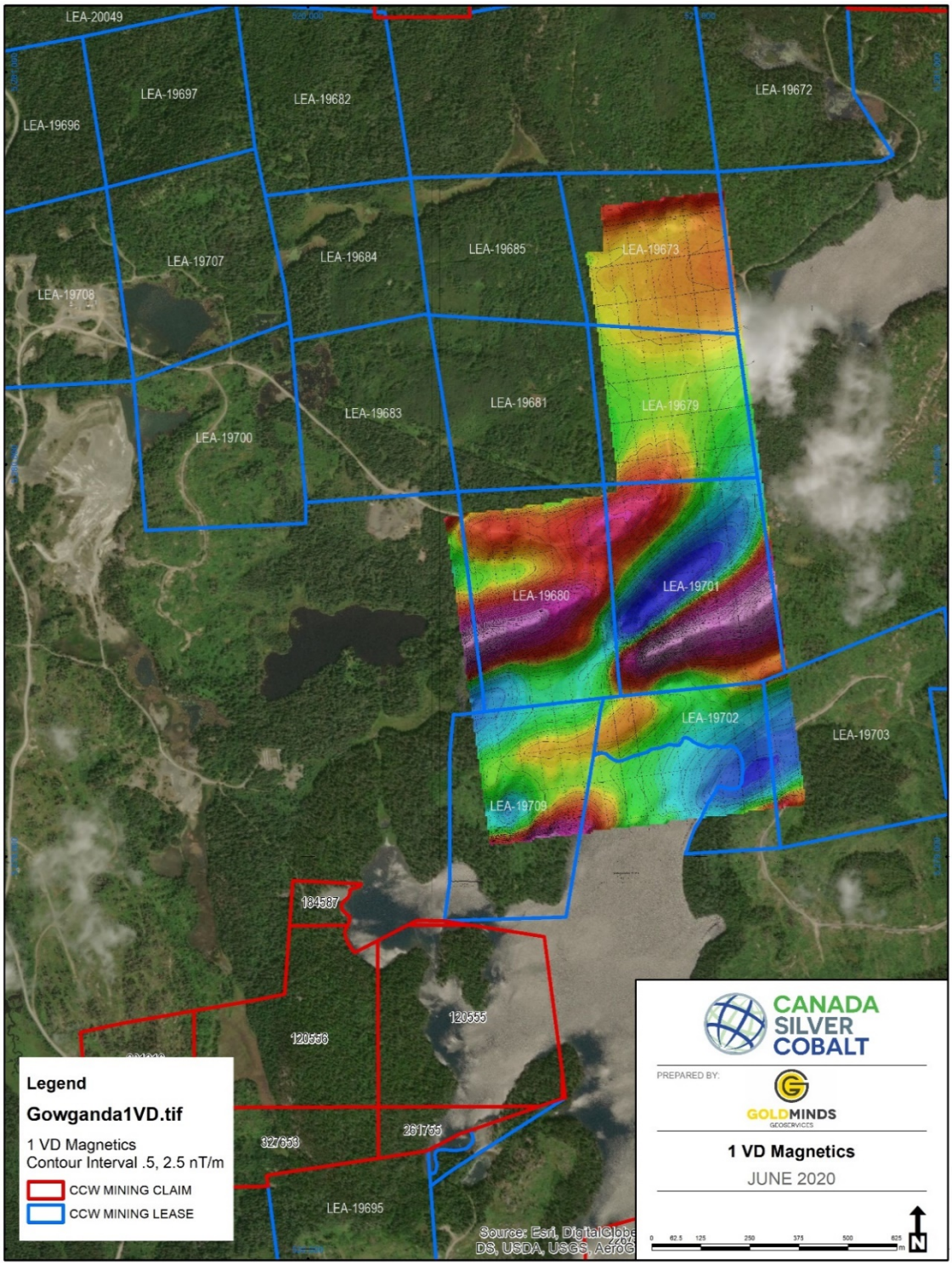


Figure 10: 1 VD magnetics survey map

The magnetic survey shows values ranging between 55250 and 56500nT. Contours are included on the Total Field map (Figure 9). The magnetic field values were processed to make a 1VD map that quantifies the change in signal as a function of

survey height. This method is used to enhance the short wavelength signal. The 1VD map shows steeply dipping magnetic features at approximately Northing 5279600 (Figure 10).

7.3. Expenditures

Table 6, below, presents the exploration expenditure summary from July, 2018 to March, 2018 for the surface diamond drill program.

Table 6: Exploration Expenditure Summary

SUPPLIER	TASK	Invoices	TOTAL (CA$)
Doug Robinson Consulting	Geologist, geological services, project management	13	95,942
GoldMinds Geoservices Inc.	Geologist, geological services, project management	5	32,250
Ronacher McKenzie Geoscience Inc. (Mr Luc Harnois)	Geological services (drill core logging), project management; expenses (flight, rental)	1	7,800
Vic Progressice Diamond Drilling Inc.	Drilling	5	186,755
Laframboise Drilling Inc.	Drilling	2	91,870
Usinage Laquerre & fils Inc.	Drilling equipment	2	13,636
Fordia; Laframboise Oils &Lubes	Drilling equipment	3	4,747
Granada Gold Mine	Field vehicle rental 6 mos@3200/mo	6	19,200
ALS Canada Ltd.	Geochemistry	19	67,732
Swastika Laboratories Inc.	Geochemistry	1	1,743
Tom O'Connor + helper	Trails, excavator, field support	1	14,055
GoldMinds Geoservices	Report writing		1250
various	Accom,meals,fuel,propane, plowing, supplies,contractor MOB,rentals		18,408
∑			555,392

8. Drilling

8.1 Sampling approach and methodology

During the drilling campaign, a consistent methodology was used for the sample preparation. The sampling approach was established by GMG during the drilling work. All logging activities took place at the core shack located on CCW's property following procedures further described herein.

Once the drilling core was extracted, the sampling method was as follows:

a) The geologist takes photos of dry and wet core boxes (Figure 11);

b) The geologist matches the different pieces of the core to determine the direction of veins and faults;

c) Once the geology is described, the geologist marks the beginning and the end of the samples directly onto the core with a yellow-colored wax crayon;

d) Generally, the core was sampled over regular intervals of one meter;

e) GoldMinds sample tags were placed at the beginning of each sample interval and the tag number is integrated within the database;

f) Blanks and standards tags were inserted after each batch of 20 samples for the drill holes CS-18-15 to CS-19-19;

g) The cores were split with part of each sample being sent for assaying by fire-assay at Swastika laboratory or ALS Laboratory and the other half was stored for the archives;

h) The half-core meter-long samples were placed in plastic bags with their tag and closed. The remaining half-cores were kept at the company's core-shack for future assay verification or any other further investigation;

i) The plastic bags were placed into rice bags. Each rice bag was then closed with a tie-wrap and identified prior to being transported to the laboratory.



Figure 11: Photos of core taken from hole CS-18-18 (dry and damp)

7.4. 8.2 Sample preparation

For the 2018 drilling campaign at the Canada Silver Cobalt Works property, samples were assayed using fire assay and screen metallic method.

For the 2018 drilling campaign, samples from holes CS-1813 and part of CS-1814 were sent to Swastika laboratories in Swastika (Ontario). All remaining samples from this campaign were sent to ALS Laboratory in Rouyn-Noranda, Quebec. A total of 1131 samples (not including blanks, duplicates and standards) from the drill core were cut, bagged and shipped to Swastika Laboratories in Ontario or ALS Laboratory in Quebec.

The core samples received are dried then crushed to achieve a nominal sample size (~9 mesh). Then, samples are split using a 14 slot, ¾ inch splitter that divides the sample into 2 portions (pulp and reject). A representative head sample of which is within ~10% of the required sample weight is riffled.

The entire head sample is pulverized then screened using a Ro-tap assembly to a specified micron size (based on scheme selected) to ensure target weight is obtained. The entire plus fraction is submitted to the lab for analysis to extinction. Two aliquots are riffled from the minus fraction and submitted for analysis (weight of these aliquots is around 30g). The grade is calculated with the contribution of each fraction weight.

7.5. 8.3 Quality assurance and Quality control

A rigorous QA/QC program was established by the GMG geologist. This procedure includes the systematic addition of blanks and certified standards. The material used for the custom-made blank is decorative marble. The sampling preparation described here was performed under the supervision of GMG. Since all assays were analyzed at independent and certified laboratories, no duplicates were sent to another laboratory.

The standards STD1 (OREAS 76a) were prepared by OREAS, from high grade massive nickel sulphide ore and barren ultramafic material from the Cosmos Nickel mine operated by Xstrata Nickel located in the Kathleen Valley area »1, Western Australia. With cobalt and nickel grading around 1215 ppm Co and 7.29 wt% Ni. In between the intervals planned by GMG, the standards were bagged in translucid bags identified by their own sample tags.

The standards STD4 (OREAS 601b) were prepared by OREAS, from gold-silver-copper bearing ore from Evolution Mining's Mount Carlton Operation in Queensland, Australia, blended with argillic rhyodacite waste rock. With silver, cobalt and nickel grading around 50.1 ppm Ag, 2.97 ppm Co, and 6.54 ppm Ni. In between the intervals planned by GMG, the standards were bagged in translucid bags identified by their own sample tags.

The standards STD5 (OREAS 600) were prepared by OREAS, from gold-silver-copper bearing ore from Evolution Mining's Mount Carlton Operation in Queensland,

[1] OREAS, https://www.ore.com.au/search/

Australia, blended with argillic rhyodacite waste rock. With silver, cobalt and nickel grading around 24.8 ppm Ag, 7.06 ppm Co, and 16.5 ppm Ni. In between the intervals planned by GMG, the standards were bagged in translucid bags identified by their own sample tags.

A total of 38 blanks were inserted between the samples. From this number, five (5) weren't assayed, and three (3) assay results showed presence or traces of cobalt, copper or nickel (Z047501, Z047527 and Z049083). This might be due to some slight contamination of the assaying equipment between batches.

Overall, the blank samples showed no significant grade of silver, cobalt and nickel, which is normal since the material used for the custom-made blank is white marble decorative stone (Figure 12, Figure 13 and Figure 14).

For the standard samples, a total of 37 samples were inserted, from which five (5) weren't assayed. The graph regarding silver assays show three (3) different tendency in the standard results that is correlated to the fact that three (3) different standards were used.

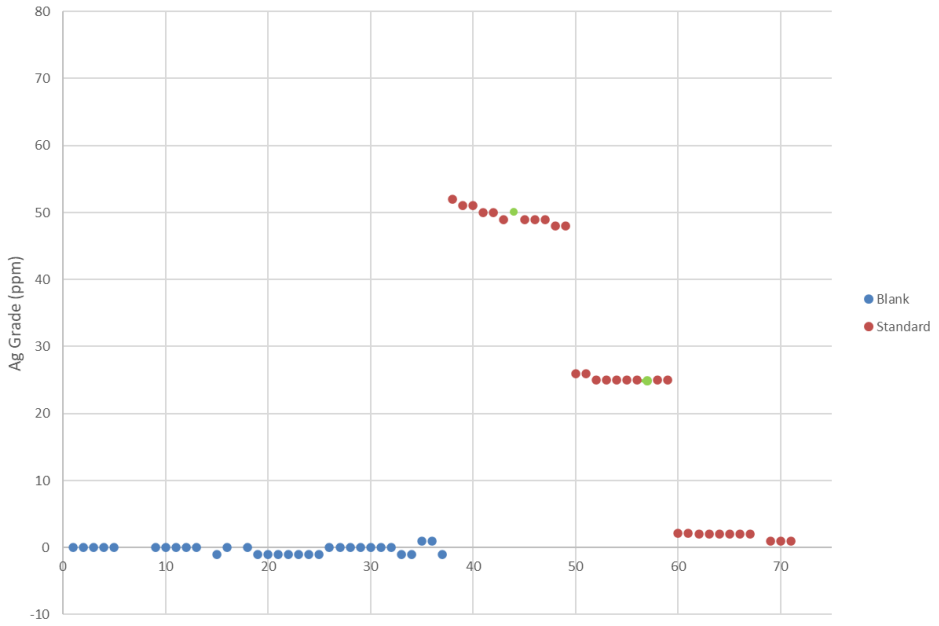


Figure 12: Silver analysis results for blanks and the different standards (green dot representing the normal value for OREAS 600 and 601b)

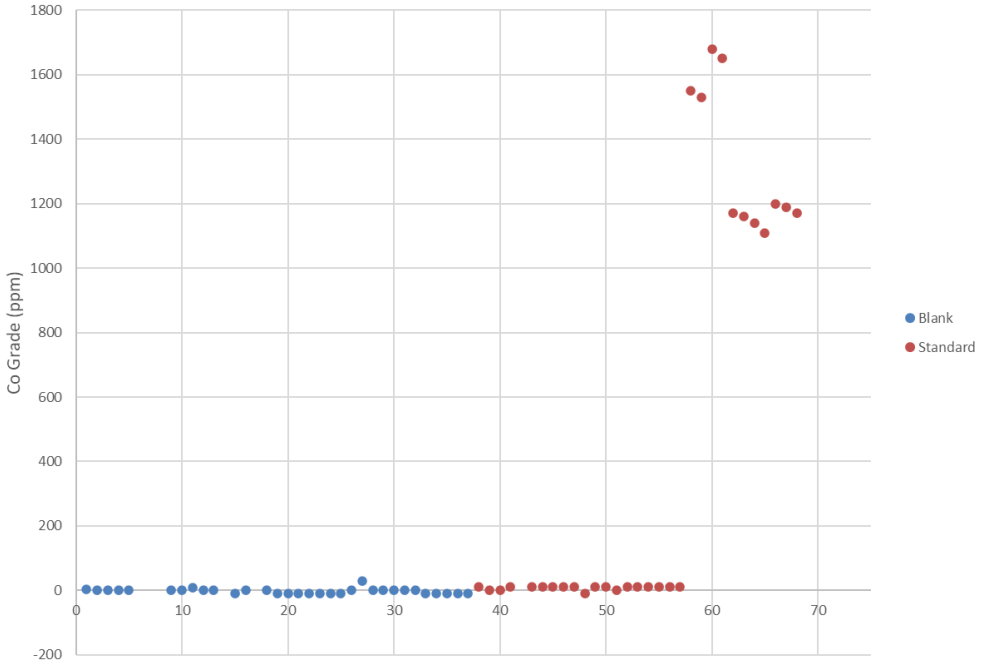


Figure 13: Cobalt analysis results for blanks and the different standards.

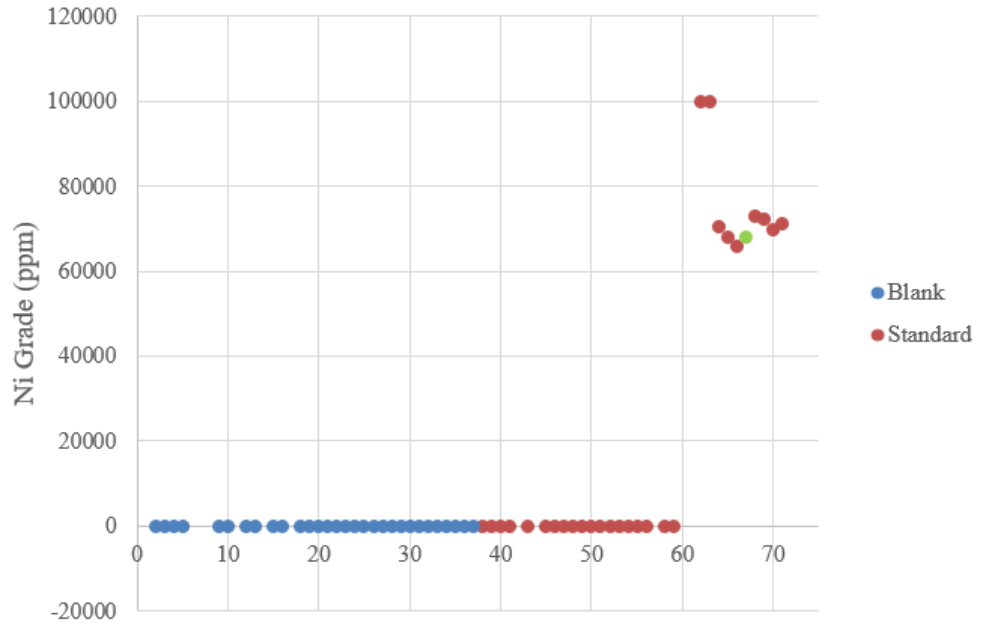


Figure 14: Nickel analysis results for blanks and the different standards (green dot representing the normal value for OREAS 76a)

9. Results

During this program several mineralized zones were intersected. The Table 7, shows the highlights from diamond holes drilled on the southeastern part of the property.

Table 7: Highlights from the 2018 drilling program

Hole Name	From	To	Sample Number	Length	Au	Ag	Cu	Ni
CS-18-15	109.22	109.96	Z047736	0.74	3.78	3	0	0
CS-18-16	228.74	229.30	z047833	0.56	0.97	0	0	0
CS-18-16	268.23	268.32	z047864	0.09	1.06	0	0	0
CS-18-16	273.58	274.31	z047875	0.73	0.87	0	0	0
CS-18-16	274.31	274.44	z047876	0.13	6.18	2	6400	60
CS-18-16W	271.88	272.22	z047895	0.34	4.65	2	3530	50
CS-18-16W	315.97	316.34	z047915	0.37	5.52	26	4300	120
CS-18-16W	355.33	356.65	z047934	1.32	1.59	34	1910	60
CS-18-16W	433.87	434.07	z047954	0.20	0.045	0	20	2190
CS-18-18	172.26	172.94	z049006	0.68	0.52	0.5	50	10
CS-18-18	188.00	188.90	z049022	0.90	0.62	1	390	50
CS-18-18	259.00	260.00	Z049186	1.00	0.55	0.5	90	50
CS-19-19	298.00	299.00	Z049475	1.00	15.2	11	470	30
CS-19-19	295.00	298.00	Z049472 To -74	3.00	0.62	3.33	133.33	46.67

The mineralized intervals were within Archean volcanic lithologies of tuff, mafic to ultramafic units. These units are locally magnetic, have 1 to 2% pyrrhotite in the groundmass, and host veins of quartz/carbonates up to 5 cm wide with minor galena locally folded into foliation plans. Small brecciated zones with strong carbonate alteration with feldspar porphyry syenite were present.

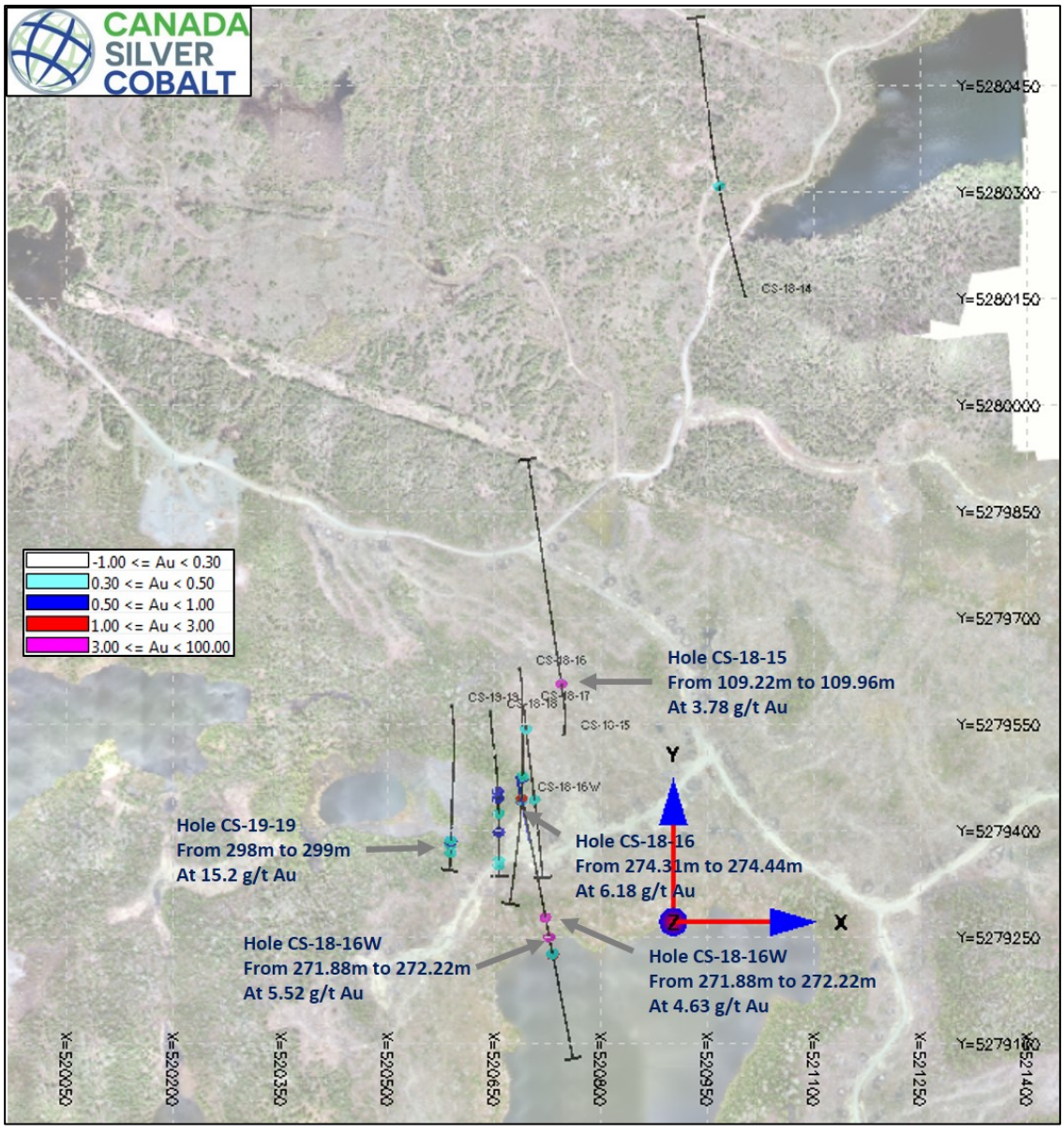


Figure 15: Drill hole location with highlights (Au g/t)

More drilling from the surface is recommended to test the lateral extension of the mineralized zone in the eastern part of the property.

10. Conclusions

The results of the 2018 drilling campaign allow the Company to test the thickness of several mineralized zones. Some of these are exposed at the surface and a trenching program to validate the orientation of the mineralized structures has been recommended.

The assay results support the extension at depth of the mineralized zones. These latter are associated with the quartz veins mineralized with pyrite and arsenopyrite.

The results of the 2018 drilling campaign were not incorporated into a resource model and will be used as a target for the future drilling campaigns.

11. References

Burrows, A.G. 1921: Gowganda Silver Area (4th report); p.1-46 in Gowganda and Other Silver Areas, Ontario Dept. Mines, Vol.30, pt.3, 54p. (published 1922).

Burrows, A.G. 1926: Gowganda Silver Area (Fourth report, revised); Ontario Dept. Mines, Vol.35, pt.3, p.I-61.

Campbell, A.D. 1930: Gowganda Silver Area; Trans. Can. Inst. Mining and Metallurgy, Vol.33, p.272-291.

Card, K.D., Mcilwaine, W.H., and Meyn, H.D. 1970: Operation Maple Mountain, Districts of Timiskaming, Nipissing, and Sudbury; Ontario Dept. Mines and Northern Affairs OFR5050, 275p. Accompanied by Maps P.584, P.585, scale 1:63,360 or 1 inch to 1 mile.

Collins, W.H. 1913: Geology of Gowganda Mining Division; Geol. Surv. Canada, Memoir 33, 121p.

Hester, B.W. 1967: Geology of the Silver Deposits near Miller Lake, Gowganda; CIM Bull., Vol.60, p.1277-1286.

McIlwaine, W.H., 1978: Gowganda Lake-Miller Lake Silver Area, District of Timiskaming; Ontario Geological Survey, Ministry of Natural Resources, Report 175, 161p.

Ministry of Northern Development and Mines (http://www.mci.mndm.gov.on.ca/Claims/clm_mmen.cfm)

Moore, E.S., 1955: Geology of the Miller Lake Portion of the Gowganda Silver Area; Ontario Dept. Mines, Vol.64, pt.5, 41 p. (published 1956).

Robertson, J.A., Card, K.D., and Frarey, M.J. 1969: The Federal-Provincial Committee on Huronian Stratigraphy: Progress Report; Ontario Dept. Mines MP31, 26p.

Robinson, D., 2015: Assessment Report on the Mapping, MMI Geochemical Sampling, Stripping and Channel Sampling, Grid Rehabilitation, Castle #3 Rehabilitation & Castle #1 Voluntary Rehabilitation, Castle Silver Property for Castle Silver Mines Inc.

Zen Geomap inc., 2019. Report - Drone Magnetometer survey. Timmins, Ontario.

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-18-13

Property	Castle-East
Claim/Lease Number	LEA-19673
NTS Map Sheet	41P10
UTM Zone	17
UTM Easting	520985
UTM Northing	5280590
Elevation	400 m
Drilling Company	Vic Progressive Diamond Drilling Inc.
Start Date	2018-08-14
Finish Date	2018-08-16
Hole Length	119 m
Core Size	NQ
Date Logged	2019-11-29
Geologists	Doug Robinson P. Eng.

Objective: This hole was drilled to test an IP anomaly east of Line C098W.
The surface trace of the IP anomaly was flagged from Line 098W.
12 or 24 m was chained along the trace of the anomaly.

GÉOLOGUE / GEOLOGIST
MERQUANE RACHIDI
1792
QUÉBEC

PROFESSIONAL GEOSCIENTIST
MEROUANE RACHIDI
PRACTISING MEMBER
2998
ONTARIO

LICENCED PROFESSIONAL GEOSCIENTIST
New Brunswick
L5769 2020
Merouane Rachidi

Test type : Reflex

Depth (m)	Azimuth (°)	Dip (°)

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-18-13

Property	Castle-East
Claim/Lease Number	LEA-19673
NTS Map Sheet	41P10
UTM Zone	17
UTM Easting	520985
UTM Northing	5280590
Elevation	400 m
Drilling Company	Vic Progressive Diamond Drilling Inc.
Start Date	2018-08-14
Finish Date	2018-08-16
Hole Length	119 m
Core Size	NQ
Date Logged	2019-11-29
Geologists	Doug Robinson P. Eng.

Objective: This hole was drilled to test an IP anomaly east of Line C098W.
The surface trace of the IP anomaly was flagged from Line 098W.
12 or 24 m was chained along the trace of the anomaly.

Test type : Reflex

Depth (m)	*Azimuth (°)*	*Dip (°)*

Hole name	From	To	Rock type	Comments
CS-18-13	0	1.92	OVB	Casing
CS-18-13	1.92	39.66	NPD	Nipissing diabase: Uniform and massive. medium grained 1.0-3.0 cm crystalline. Medium greenish grey. Plagioclase : pyroxene ~50:50. Generally not magnetic. locally weakly magnetic 1.5cm fall back of pencil magnet. 1.92 to 8.10 Moderately broken ground with slip spacing 5-20 cm commonly 80 & 60 dca. 8.10 to 41.78 Moderately competent ground with slip spacing 8-34 cm. commonly 80 & 45-60 dca. From 11.23 to 11.26 10 dca 2.0 cm feldspathic self dike with frozen walls. Mineral grains appear to be continuous across the contact. From 13.20 to 13.28m 15 dca. 2.0 cm feldspathic self dike with frozen walls. Mineral grains appear to be continuous across the contact. From 15.00 to 15.30m SG 2.97. Medium grained diabase. From 15.33 to 15.33m 35 dca. Very weak serpentine slip with slickensides 78 dca. No apparent alteration or mineralization. From 21.03 to 25.92 Rock is weakly fractured (evidenced by wet lines on semi dry core) but not broken. 1-19cm slip spacing with chloritic faces. From 21.44 to 21.69 SG 2.96 Medium grained diabase. From 36.45 to 36.71 SG 2.94 Medium grained diabase. From 39.66 to 39.69 Coarse grained diabase. From 39.69 to 39.70 Medium grained diabase. altered
CS-18-13	39.66	39.79	NPD	NB Fault 50 dca with sharp frozen walls. Healed as very competent ground. hard >/= chisel dca. Thin medium green foliation 30-45 dca and oblique to the walls. Central core of pale grey quartz core to 0.5mm. 39.621 and 39.92 breaks with no continuity of core. Core could be backwards. Sampled to detect metals that may extend from mineralization intersected by this zone.
CS-18-13	39.79	39.94	DIA	Medium grained diabase
CS-18-13	39.94	84.65	DIA	Varied textured diabase. Dominantly medium grained diabase as above and below with patches of coarse grained diabase at 39.93-40.08 30 dca. 34.65-44.11 40 & 135 dca. 61.85-62.32 40 dca. 62.72-63.23 50 dca. 76.07-76.31. 83.56-84.65 at 50 dca. The zones are variable (including fine grained sections in contact with coarse grained rock). generally 5 mm crystalline. Mineral grains appear to be continuous across zone walls. Approximately 2-4% interstitial magnetic grains to 4.0mm in the coarse grained phase. Strongly magnetic 4 cm fall back of pencil magnet at magnetite grains. From 39.69 to 39.79m SG 3.03 Medium grained diabase. From 40.81 to 74.84 Very weak very fine grained. medium green fully healed fracture filling similar to the groundmass alteration at 70.22-70.58m. This alteration/fracture filling is << 1% of the core. From 41.78 to 49.84 Moderately broken ground with slip spacing 5-20cm. commonly 35. 30 & 20 dca. From 49.84 to 54.00 Competent ground with slip spacing 10-30 cm. commonly 60-65 dca.From

				43.90 to 44.02m SG 2.90 Medium grained diabase. From 54.00 to 64.00m Moderately competent ground with slip spacing 6-28 cm. Slips at 25. 33. 42. 48 60 65 and 75 dca measured. From 56.70 to 56.97m SG 2.95 Coarse grained diabase. From 61.94 to 62.27m SG 2.96 Coarse grained diabase. From 64.00 to 75.26m Broken ground with slip spacing 5-44 cm. generally <12 cm. dominantly 60 and 30 dca. From 70.18 to 70.64 SG 2.90 Alteration. From 70.22 to 70.58m 40 dca Alteration (/Deformation Zone?): Appears to be a strong alteration zone having an apparent pseudo breccia appearance. ~50% pale grey alteration groundmass hosting ~50% 0.5-1.0 cm surviving rock preserving original igneous crystal texture. The surviving rock has the appearance of rounded breccia fragments. A few apparent fragments appear to be foreign fine extremely fine grained patches with the appearance of breccia fragments. A few scattered anhedral chalcopyrite grains to 2.0 mm appear to be interstitial to the alteration mineralogy. Zone lacks apparent walls but has a weak fabric at 40 dca. Not magnetic and moderately hard < chisel. From 79.68 to 79.93 SG 2.94 Medium grained diabase. From 74.27 to 74.64 Very fine grained. medium green. fully healed fracture filling similar to the groundmass alteration at 70.22-70.58m. This alteration/fracture filling is approximately 5% of the core. From 75.26 to 81.59m Moderately competent ground with slip spacing 9-44 cm. Slips at 45. 65 and 30 dca measured. From 77.56 To 77.57m 43 dca 1.0x5.0 cm calcite fracture filling. Pale green calcite infilling brittle fracturing aligned with weak healed chloritic fracture filling. From 81.59 to 99.00 Moderately broken ground with slip spacing 4-39cm. generally < 15 cm. commonly 25-35 and commonly 45 dca. From 83.97 to 84.26m Chloritic fracture filling. 5% thin medium green chloritic fracture filling and replacement of pyroxene.
CS-18-13	84.65	119.08	DIA	Nipissing diabase: Uniform and massive. medium grained 1.0-3.0 cm crystalline. Medium greenish grey. Plagioclase : pyroxene ~50:50. Generally not magnetic. locally weakly magnetic with 1.0 cm fall back of pencil magnet. Moderately hard < chisel. 91.56 92.07 Arbitrarily logged as lost core to accommodate sampling and to meet 43-101 requirements to deal with core recovery. From 92 to 110 (inclusive) meters tagging was irregular and increased slip frequency and core breakage made core recovery estimation difficult. From 94.90 to 95.12m SG 2.95 Medium grained diabase 99.00 113.58 Competent ground with slip spacing 20-59 cm. Slips at 40 and 22 dca measured. From 113.58 119.08 Moderately broken ground with slip spacing 2-28 dca. dominantly 45 dca. From 114.11 to 114.25 Slip set of 5 slips at 45 dca. From 115.40 to 115.69m 2.95 Medium grained diabase. From 116.00 to 116.15m Slip set of 6 slips at 45 dca.

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-18-14

Property	Castle-East
Claim/Lease Number	LEA-19679
NTS Map Sheet	41P10
UTM Zone	17
UTM Easting	521002
UTM Northing	5280154
Elevation	400 m
Drilling Company	Vic Progressive Diamond Drilling Inc.
Start Date	2018-08-27
Finish Date	2018-09-20
Hole Length	500.11m
Core Size	NQ
Date Logged	10/10/2018
Geologists	Doug Robinson P. Eng.

Objective: This hole was drilled to test an IP conductivity anomaly near the upper Nipissing diabase contact and a vague chargeability anomaly near the lower contact of the Nipissing diabase. Neither anomaly was explained: however the conductivity anomaly appears to be coincident with a major alteration zone cutting all rock types, and having a post Archean age.

Test type : Reflex

Depth (m)	*Azimuth (°)*	*Dip (°)*
0	344,1	-45
40	344,1	-46,6
91	346,4	-47,6
142	347,3	-48,3
202	348,3	-48,8
262	350,2	-48,1
313	351,6	-48,3
364	352,9	-48,4

HOLE NAME	FROM	TO	ROCK TYPE	COMMENTS
CS-18-14	0	0.04	OVB	casing
CS-18-14	0.04	224.16	HSED	HURONIAN SEDIMENTS: Mixed Siltstone and diamictite that appears to be gradational in composition. A definite classification would require thin section identification. The apparent diamictite is generally dark green, soft to moderately soft <</ chisel, and has a significant >0.5 mm grains of various mineral types and a few scattered well rounded granitic pebble to boulders. The apparent siltstone is uniform and massive, and appears to be sorted grains <0.2 mm identified as feldspar and quartz based on the pale colour under hand lens observation, the extreme hardness of the rock and the SG of the rock. The siltstone lacks apparent bedding. The siltstone colour is locally uniform and varies from pale to dark brick red to dark grey with a ghost like reddish tint. Except were otherwise stated the siltstone appears to have extremely fine grained (at visual detection limit) sulphides (<<1%) that can only be identified by (large) polished section. Pyrite is rare and noted where it was observed. Both diamictite and siltstone are non magnetic. From 0.04 to 1.77 Siltstone: Hard > chisel, dark brick red to dark grey. Transitional into diamictite. From 0.04 to 4.33 Moderately broken ground with slip spacing 5-28 cm. commonly 45-48 dca. From 1.77 to 1.90 Diamictite: soft (<< chisel), dark green. From 1.90 to 4.60m Siltstone: Hard =/> chisel, dark green to dark red green. From 4.33 to 5.51 Moderately competent ground with three slips. From 4.60 to 9.40 Diamictite: soft << chisel. From 5.51 to 7.55 Strongly broken ground with water lost at 7.40 m. Case extended to below this point. From 7.55 to 25.55 Moderately broken ground with slip spacing 5-95 cm. commonly 5-10cm. From 9.40 to 10.55 Siltstone: very hard > chisel, medium brick red. From 10.55 to 11.63 Diamictite: moderately soft < chisel, dark green. Pebbles to 0.5 cm. one 5.0 cm granitic pebble. From 11.63 to 13.40 Siltstone: very hard > chisel, pale brick red. Apparent bedding at 50 dca defined by red layers. From 13.40 to 14.55 Diamictite: Dominantly diamictite with minor siltstone. Moderately soft < chisel, dark green. Lower contact sharp at 50 dca. From 13.91 to 13.92 Trace Chalcopyrite as fracture filling. From 13.51 to 13.55 Trace Chalcopyrite. From 14.55 to 15.55 Siltstone: very hard > chisel, medium brick red.

				From 15.55 to 16.20 Diamictite: moderately soft < chisel, dark green. Sharp lower contact sharp at 40 dca. From 16.20 to 17.18 Siltstone: very hard > chisel, medium brick red. Trace chalcopyrite fracture filling at 140 dca and approximately perpendicular to apparent contact above at 16.20m. From 17.18 to 25.55 Diamictite: Moderately soft < chisel, dark green with a few granitic pebbles to 1.0 cm. At 21.22-21.44m pink granitic boulder. From 25.43 to 66.00 <0.1% chalcopyrite in hairline quartz-calcite fracture fillings. Also, extremely fine grained <0.0mm (visual detection limit) sulphide grains in groundmass appear to be chalcopyrite. From 25.51 to 25.52 Trace chalcopyrite in minor vugs (calcite dissolved?) From 25.55 to 54.63 Siltstone: very hard > chisel. From 25.55 to 30.00 Dark green with red green sections. From 30.00 to 54.63 medium to dark reddish grey. From 25.55 to 38.98 Moderately broken ground with slip spacing 5-100 cm. generally 20-25 cm. From 26.82 to 26.83 Trace chalcopyrite to 3.0 mm in hairline quartz-calcite fracture fillings at 50 dca. From 38.98 to 75.33 Very competent ground with slip spacing 50-350 cm. From 54.63 to 58.65 Diamictite: Moderately hard </= chisel dark green. A few scattered pebbles (drop stones?) in a sandy silt matrix. At 58.56-58.65 Coarse grained granitic cobble with 80% pink feldspar. 5% white quartz and 15% mafic minerals. From 58.65 to 74.74 Siltstone: Uniform and massive, medium reddish grey, very hard > chisel. Lower contact arbitrarily placed at gradational hardness and color change. From 66.00 to 106.00 <0.1% disseminated extremely fine grained (visual detection limit) to 3.0 mm chalcopyrite disseminated in groundmass. From 74.74 to 89.00 Diamictite: Massive, dark green, moderately hard </= chisel with rare granitic pebbles (also gneissic) to 4.0 cm. Short sections of hard pale red siltstone. Lower contact at broken core with missing piece. From 75.35 to 78.30 Broken ground with slip spacing 1-40 cm. From 76.45 to 77.50 Core dropped in hole and recovered. Brass scrubbing on core surface. From 77.50 to 77.51 Drillers report water fault and lost water return at this point at brown/yellow slip 10 dca. No water return after this point. From 78.30 to 100.90 Moderately competent ground with slip spacing 30-178 cm. generally 50-100 cm. From 87.65 to 87.80 10% open vugs associated with brittle fracturing at approximately 30 dca. From 89.00 to 104.10 Siltstone: Uniform and massive, medium grey, medium green, moderately hard </= chisel. Lower contact arbitrarily placed.

				From 91.97 to 92.92 1% vugs to 2 mm associated with chalcopyrite. From 95.11 to 95.31 3% vugs to 5 mm associated with minor chalcopyrite. From 100.13 to 100.88 3% vugs to 3 mm associated with quartz fracture filling. From 100.13 to 100.90 2% 1.0-3.0 mm open vugs associated with hairline quartz fracture fillings. From 100.90 to 118.88 Competent ground with slip spacing 35-213 cm. From 102.00 to 119.00 NB Conspicuous chalcopyrite as <0.1% as extremely fine-grained disseminated chalcopyrite in groundmass, in vugs and along fracture surfaces. From 104.10 to 116.17 Siltstone: Uniform and massive, pale grey to pale reddish grey, hard =/> chisel. Lower contact contorted, sharp and frozen at high angle to core axis. From 106.09 to 110.21 1% vugs to 4mm associated with chalcopyrite <5% overall. From 106.99 to 119.00 Minor disseminated chalcopyrite (<0.1%) in groundmass. From 109.58 to 109.59 Post logging note: Chalcopyrite confirmed as chalcopyrite with acid. Calcite alteration as rhombic spots to 3.0mm From 110.89 to 110.90 Chalcopyrite covering slip fracture filling break. Disseminated chalcopyrite below and prominent pyrite fracture fillings above. All at 30 DCA. From 116.17 to 122.60 Diamictite: Dominantly diamictite with granitic pebbles to 4.0 cm. Locally massive. From 118.88 to 127.79 Moderately competent ground with slip spacing 30-60 cm. From 119.00 to 130.24 Chalcopyrite zone: >0.1% and <0.3% chalcopyrite disseminated in groundmass and in quartz fracture fillings and along slip faces. From 119.02 to 119.03 Typical quartz fracture filling with chalcopyrite. 20-30 dca. From 119.07 to 119.08 25 dca 2.0 mm quartz fracture filling with 2% chalcopyrite. From 121.00 to 121.10 15 dca 5% quartz fracture filling to 1.0 mm with disseminated chalcopyrite in wall rock. From 125.15 to 121.16 1 cm granitic pebble with 2% disseminated chalcopyrite. From 122.60 to 124.81 Siltstone: Uniform and massive. Very hard =/> chisel. Lower contact sharp and frozen at 90 dca. From 122.70 to 122.82 Chalcopyrite in minor quartz fracture fillings generally 0.1cm commonly 35 dca. From 123.14 to 123.32 Top of apparent red bed. Upper contact frayed as expect from an alteration front invading green rock above. No chalcopyrite in green sediment above. The top 18 cm of this red bed is approximately 1% 0.5 mm disseminated chalcopyrite in groundmass. From 124.81 to 148.96 Diamictite: Diamictite with very fine-grained groundmass. Medium to dark green, Generally soft < chisel with hard =/> chisel, reddish sections.

				From 127.28 to 128.00 0.1% chalcopyrite to 2.0 mm in groundmass.127.28 127.57 0.1% chalcopyrite and hematite in quartz fracture fillings and quartz fillings. From 127.41 to 127.42 1mm open fracture with drusy quartz and 2%coarse chalcopyrite. From 127.79 to 127.80 33 dca 1.0 cm HEMATITE vein. Coarse, grained black, non-magnetic. Appears to have a very weak hematization of the wall rock. From 127.79 to 143.77 Competent ground with slip spacing 30-180 cm. From 129.76 to 129.77 35 dca 0.4 cm Quartz-Hematite vein with 10% quartz. 90% hematite. Wall rock not enriched with chalcopyrite. Possibly very weak hematization of wall rock. From 137.52 to 137.58 44 dca. 4.0 cm breccia with 5% hematite breccia filling. From 137.68 to 140.00 half of the core has 1-25% 2-3 mm pale orange silicate alteration spotting, very hard > chisel. From 142.97 to 147.03 Minor pyrite as fracture filling. From 143.77 to 170.57 Very competent ground with slip spacing 2-316 cm. Fractures are brittle fractures. From 147.68 to 147.69 45 dca 0.1-0.4 cm calcite fracture filling along loose slip with lineament on slip face 65 dca. From 147.71 to 147.72 45 dca. 0.3 cm Quartz-Hematite-Calcite fracture filling with 50 volume % hematite and 5% chalcopyrite. Minor orange feldspathic alteration along walls. From 148.96 to 156.63 Siltstone-Sandstone: Medium grey, hard =/> chisel. Prominent, thin bedded siltstone to sandstone. Consistent bedding from 65-75 dca, generally 70-75 dca. Rare drop stones to 1.0 cm Sand grains to 0.5 mm evident. Both chalcopyrite and pyrite disseminated in groundmass. From 156.63 to 165.00 Sandstone: NB. Uniform and massive, medium pink, very hard =/> chisel, scratched with carbide scriber. Appears to be strongly altered with random fully healed bleached stockwork alteration. Approximately 1-2% flakes of black specular hematite to <0.01x.05 in groundmass, approximately 0.1% chalcopyrite Confirmed by HCl cleaning) is present in most pieces of core. This core appears to be extremely hard to cut. From 156.63 to 164.16 14 hairline to 0.3 cm black hematite fracture fillings (some as loose hematite coating along loose fractures. Groundmass has prominent chalcopyrite (<1%). From 156.89 to 156.90 60 dca 0.1 cm hematite fracture filling. From 157.04 to 157.05 52 dca Thin hematite fracture filling on slip. From 157.19 to 157.20 50 dca 0.2 cm black hematite chlorite fracture filling. From 157.36 to 157.37 38 dca 0.3 cm black hematite fracture filling. From 158.92 to 158.93 40 dca 0.3 cm hematite fracture filling, with hematite invading 0.3 cm

				into the wall rock. Also, at 158.97m hairline hematite-chlorite fracture filling. From 159.77 to 160.20 2% calcite spotting as anhedral to euhedral spots to 4.0 mm centred on calcite-hematite fracture filling described below. From 159.94 to 159.95 45 dca 0.1 cm hematite fracture filling. From 160.64 to 160.65 47 dca 0.2 cm black and red hematite fracture filling. From 160.94 to 160.95 48 dca 0.1 cm calcite with 50% black hematite on strong slip. From 160.79 to 160.80 45 dca 0.2 cm calcite-chlorite-hematite fracture filling. From 163.08 to 164.76 2% 0.3-0.5 mm white calcite alteration spotting. From 163.08 to 169.13 20-40 dca. 2% sheeted quartz fracture filling to 0.3 cm. Extremely tough and hard quartz flooding alteration and veining. The veining is sub-parallel. 163.10 m appears to be the lowest point of groundmass chalcopyrite mineralization Hematite as groundmass mineralization persist below 163.08m. Weak response to Concentrated HCl. From 165.00 to 224.16m Huronian Siltstone: Hard =/> chisel to very hard (scratched with difficulty with scriber), very fine grained, color variable from pale red to medium green except as described below. From 165.58 to 165.68 38m dca 6.0 cm white to pale pink dolomite vein with frozen walls. 0.2-0.5 cm quartz coating both walls. Large wall rock fragment also quartz rimmed. Barren of mineralization. From 166.23 to 166.29m 40 dca 3.5 cm dolomite vein, pale pink with frozen walls. Thin dark green chlorite along upper contact and quartz along lower contact. Barren of mineralization. Weakly effervescenscent in concentrated HCl. From 166.33 to 166.37m 40 dca 0.0-1.8 cm dolomite vein. Barren of mineralization. Effervesce weakly in concentrated HCl. Thin quartz along lower contact. From 169.00 to 169.30 28 dca 5% quartz fracture filling. From 169.13 to 169.44 5% dolomite fracture filling to 1.0 cm. generally <0.5 cm cross cutting and sub parallel to quartz fracture filling. Frozen walls. Barren of mineralization. From 169.84 to 170.67 15% pale pink dolomite crosscutting quartz fracture filling. Pink alteration of wall rock. Barren of mineralization. From 169.44 to 169.69 30 dca. 14 cm true width dolomite vein. Coarse grained white calcite with interstitial coarse-grained reddish dolomite. Effervesce weakly to concentrated HCL. From 170.67 to 171.67 30 dca. NB Dolomite quartz vein with 15% altered to extremely altered breccia fragments to 2.0 cm. 1.0 mm crystalline dolomite. 10% irregular pale green quartz masses to 1.0cm thick. 1% vugs to 2.0 mm. Upper contact not defined due to irregular walls. Lower contact sharp frozen at 30 dca. Barren of mineralization. Effervesce weakly in

				concentrated HCl. Barren of mineralization. From 170.68 to 172.40 Altered to dark brick red. 5% quartz fracture filling. Barren of mineralization. From 170.57 to 173.35 Moderately broken ground with slip spacing 15-120 cm. Brittle fractures. From 172.40 to 201.93 Mixed 60% hard =/> chisel, dark green siltstone and 40% more altered harder pale pink siltstone. Fine disseminated hematite in groundmass. From 172.97 to 172.98 2.0 cm granitic drop stone. From 173.42 to 173.46 6.0 cm granitic drop stone. From 173.00 to 178.00 Minor disseminated chalcopyrite in groundmass. At 173.00 is the first apparent appearance of sulphides (disseminated chalcopyrite in groundmass) below the veining described above. From 173.35 to 201.50 Moderately broken ground with slip spacing 7-123 cm. Somewhat brittle fracturing commonly 35 dca and 40. 45. 50 and 60 dca also. From 177.27 to 177.28 45 dca 0.0-1.2 cm dolomite vein. Opaque, pale pink dolomite vein with 2% masses of (two shades) of 0.1-0.2 mm granular pyrite. Dark green chlorite selvages along frozen contacts. 5% well formed quartz crystals, mostly in middle of vein and along chloritic rip off selvages. Wall rock dark brick red as apparent hematitic alteration. Granular pyrite in fracture fillings near vein. From 177.77 to 177.80 25 dca 1.0-2.0 cm opaque, pale pink dolomite. Barren of mineralization. Frozen walls. From 179.00 to 179.15 Insitu breccia. Weakly developed insitu breccia. From 179.09-179.15m has 5% hematite—0.5% pyrite as breccia filling. From 182.59 to 186.00 Insitu Breccia: Weak insitu breccia with insitu to disassociated breccia frags of altered red siltstone in a dark green chloritic breccia filling with extremely fine hematite and trace of chalcopyrite or pyrite. From 179.32 to 192.00 half of core has up 5% calcite alteration as 0.5-3.0 anhedral (locally euhedral) white specks. From 180.00 to 241.00 NB requires cementing for In-Hole Geophysics. From 186.00 to 187.48 Arbitrarily logged as lost core to accommodate logging and sampling intervals driller reported 0.40 m of lost core. From 188.48 to 194.87 Disseminated hematite in groundmass. From 193.76 to 193.83 Insitu breccia: Minor insitu breccia with true width calcite breccia filling. From 194.58 to 194.62 18 dca Shattered core healed by chlorite fracture filling.

				From 196.00 to 198.00 Rods were pulled at tag 196m (198m in log). The hole was remeasured and found to actually be true depth 199m. The core down to 196m tagged was logged as 2.00 meters greater than the tag distance. These logging measurements were not changed in the logs. The core below this tag was logged as tagged. From 196.00 to 202.86 Chalcopyrite disseminated in groundmass. From 196.39 to 202.84 Brittle calcite fracture filling: Locally minor short sections with fine net a calcite fracture fillings (<2%). From 201.50 to 211.00 Extremely broken ground with max core length 42 cm generally <6 cm. Generally. < 6cm core lengths. Individual Faults described below. From 202.58 to 202.83 0.2% chalcopyrite in chloritic fracture filling. From 203.02 to 205.00 Closely spaced chlorite (locally hematite) healed fracture filling and breccia filling. From 203.54 to 203.56 45 dca. 2.0 cm fault healed by dark green chlorite. From 203.90 to 204.00 60 dca. Fault recovered as chips to 1.0 cm. From 203.94 to 203.95 80 dca 1.0 cm fault gouge. From 204.67 to 204.87 Brittle fractured ground, dominantly < 1.0 cm pieces. From 205.00 to 205.77 Brittle fractured ground with ~30% chips <1.0 cm and 70% 1.0-7.0 cm core lengths. From 205.00 to 215.32 Notable hematite (<2%). From 208.34 to 208.35 40 dca 1.2 cm dolomite-hematite vein. Pale pink dolomite with 5% black hematite. Hark red hematitic wall rock alteration. From 208.45 to 208.46 175 dca 0.3 cm dolomite-hematite vein. 15% dark green chlorite and 15% (both) red and black hematite. Hark red hematitic wall rock alteration. From 208.48 to 208.49 30 dca 0.3-0.5 cm dolomite vein. Pale pink dolomite. 5% dark green chlorite 10% Red and black hematite. Hark red hematitic wall rock alteration. From 209.64 to 211.00 Brittle fractured ground with ~30% chips <1.5 cm and 70% 1.5-13 cm core lengths, generally <5.0 cm. From 211.00 to 216.18 Moderately broken ground with slip spacing 13-56 cm commonly 55-60 dca also 70 dca. From 211.49 to 215.00 Calcite fracture filling, brittle. From 212.73 to 215.94 ~3% quartz flooding as vague white quartz seams to 0.5cm, generally <0.3 cm. The quartz flooding is very competent ground. From 212.50 to 212.54 65 dca 3.0 cm dolomite vein. Opaque, pale pink dolomite with frozen walls. Lower contact appears to be an older quartz fracture filling from quartz flooding event.

				From 215.79 to 215.92 10 dca 2.0 cm dolomite vein that terminate in quartz flooding without cross the core. Opaque pale pink dolomite within dominant quartz flooding. From 212.73-213.26 is 15% quartz veining as apparent quartz flooding event. Very competent ground. From 216.61 to 216.81 00 dca. 0.3 cm hematite fracture filling. From 216.69 to 216.70 70 dca. 0.3 cm calcite-pyrite-hematite vein. Effervesces strongly in acid. 30% massive granular pyrite, and 20% black hematite. Vein centred in 45 cm of intense red hematic alteration. From 216.18 to 224.16 Badly broken ground with slip spacing 10-35 cm. generally 0-20 cm. Slips generally 30-40 dca, also 767-70 dca. From 217.00 to 218.06 Hematitic alteration. Intense red, intense. Associated with veining described below. From 217.31 to 217.33 25 dca 0.5-1.5 dolomite vein. Opaque white dolomite with 5% black hematite along frozen walls. Hematite wall rock alteration. From 217.98 to 218.01 32 dca 4.0 cm dolomite hematite vein. Pale pink dolomite vein with 2% black hematite along frozen walls. 1% Coarse grained pyrite, (has appearance of chalcopyrite). Hematite wall rock alteration. From 218.35 to 218.36 70 dca 1.5 cm dolomite vein. Pale pink dolomite with frozen walls. From 218.36 to 218.41 Hematite alteration: Intense dark red hematite alteration with 5% euhedral pale grey calcite spots with approximately 40% sand grain inclusions. From 218.41 to 218.43m 55 & 130 dca 0.5-2.5 cm dolomite vein. White dolomite vein with central pale pink dolomite, 1% chalcopyrite? pyrite? From 218.06 to 224.16 Hematitic alteration: Moderate, red hematite alteration with residual green tint. Associated with veining described below. From 220.00 to 220.01 Drillers tag 220m used as reference point. From 220.00 to 200.01 75 dca 0.2 cm hematite fracture filling. Core broken at fracture filling exposing 1.0 mm euhedral pyrite crystals and anhedral chalcopyrite exposed on break. From 220.11 to 220.12 53 dca 0.6 cm dolomite vein with 5% black hematite crystals. Weak effervesce in acid. From 220.50 to 220.51 50 dca 0.3 cm dolomite-hematite vein. 5% hematite along frozen walls. Weak effervesce in acid. From 220.82 to 220.86 55 dca 3.0 cm dolomite-hematite vein. 0.5% hematite along both walls and two breccia inclusions. Trace pyrite. Weak effervesce in acid. From 222.03 to 222.06 40 dca 2.0 cm dolomite-calcite vein. 5% core of translucent white calcite. Upper contact loose slip lower contact frozen. Weak effervesce in acid.

				From 222.12 to 222.19 40 dca 4.0 cm dolomite-calcite-quartz-chalcopyrite vein. 0.3-0.5 cm vague quartz crystals and agate along both frozen walls. Calcite between quartz edges and dolomite centre effervesces in acid. Two anhedral chalcopyrite(?) grains Two anhedral chalcopyrite grains 6.0 & 8 mm. From 222.23 to 222.25 45 dca 2.0 cm calcite vein, 20% net if bladed black hematite distributed throughout vein. From 225.25 to 225.59 5% hematite as irregular fracture filling. From 222.41 to 222.44 25 dca 1.1 cm calcite vein. True width calcite effervesces strongly in acid. 15% black hematite crystals along both walls of vein. From 223.25 to 223.31 50 dca 5.0 cm calcite vein. Pale pink calcite vein that effervesces strongly in acid. 1% hematite along frozen walls, 5.0 mm anhedral chalcopyrite? Grain.
CS-18-14	224.16	474.89	**Nipissing Diabase**	224.16-214.21m 80-85 dca. 5.0 cm loose calcite-quartz-epidote vein with trace very fine-grained chalcopyrite. Vein is 60% calcite-quartz-epidote (30% calcite, 25% quartz, 5% epidote) and 40% extremely fine grained chloritic chilled diabase. 214.21-232.10m Nipissing diabase, Medium grained: Uniform and massive, <1.0 mm crystalline, Non-magnetic, moderately hard < chisel. 224.21-224.42m Fault Upper contact along calcite vein above and strong lip at 45 dca below. Core recovered as dark green chloritic wedges to 0.5 cm thick. 224.42-224.90m 2% hairline to 0.2 cm calcite fracture filling as described below. 224.42-224.47m calcite fracture filling at 160 dca. 224.47-224.68m random calcite fracture filling. From 224.68-224.90m 42 calcite fracture filling at 42 dca. No core continuity at 224.47m 214.21 - 235.00m Badly broken ground with slip spacing 3-12 cm. Ground dominated by weakly healed (incompetent) randomly oriented chlorite fracture filling (insitu brecciation) at 0.3-3.0cm spacing. 232.10 - 242.15m Nipissing diabase, medium grained: Uniform and massive, 1mm crystalline, non-magnetic, moderately hard < chisel. Dominantly pyroxene <0.5 mm. 233.51 - 233.81m 18 dca 10.0 cm aplite vein with sharp frozen walls. Dark greenish reed very fine grained. 2% hairline hematite fracture fillings and trace chalcopyrite. Does not effervesce in acid, very hard > chisel.

				235.00 - 239.00 m Badly broken ground with slip spacing 10-28 cm. Prominent, dark green, randomly oriented chloric fracture filling (insitu brecciation) at 0.5-4cm, generally <2cm spacing. 239.00 - 317.00m Moderately broken ground (blocky ground) with slip spacing 5-100 cm dominantly 45 dca, also 60, 35 and 25 dca. Slips chloritic. 239.65 - 239.98m 20 dca Zoned carb-chlorite alteration. Alteration determined by dark green chlorite zone along vein with pale grey carbonate outer zone. Effervesces strongly in acid. 239.73 - 239.78m 20 dca 2.0 cm calcite vein. Coarse grained (2.0-3.0mm) grey, to reddish grey calcite. 0.5% pyrite to 1.0 mm. This vein has an apparent 2.0 cm offset along a healed fault. 241.65 - 242.02m 30 dca 22.0 cm aplite dike with frozen walls. Extremely fine grained, hard =/> chisel, medium grey. Upper contact sharp and frozen at 45 dca. Lower contact sharp and frozen at 30 dca. Pyrite in wall rock at lower contact. 241.89 - 241.9m 60 dca 4.5 cm epidote alteration. Minor patches of calcite. Trace pyrite. 242.72 - 242.82m 60 dca Epidote alteration zone centred on 0.5 cm Ca epidote fracture filling with strong lineament 25 dca with bottom of slip ellipse down. 242.15 - 257.47m Nipissing Diabase, Medium grained: Uniform and massive, 1-2 mm crystalline, non-magnetic, moderately hard < chisel. 2% 3.0 mm soft, dark green, chloritic spotting appears to be altered pyroxene, Approximately 50% plagioclase to 1.0x2.0 mm. Appears to be two pyroxene diabase. 257.47 - 300.15m Nipissing Diabase, Medium grained: similar to above without chloritic alteration. uniform and massive, 1-2 mm crystalline, generally non-magnetic (locally weakly magnetic with 0.5-1.0 cm fall back of pencil magnet), moderately hard < chisel. All pyroxene =/> 1.0 mm. 259.32 - 260.46m NB Vein-Alteration Zone: 30 dca 9.2 cm (8.1%) total core length of calcite and hematite veining with larger veins described below. Zoned carb-chlorite alteration dominated by pale grey carbonate alteration. This dark green chlorite alteration along the veins. 259.38 - 259.39m 37 dca 0.7 cm calcite vein. 1.0-2.0 mm crystalline calcite with white calcite along walls and grey calcite in the centre. Frozen walls.

				259.57 - 259.58m 30 dca 0.5 cm calcite vein. Light grey calcite vein with frozen walls. 259.70 - 259.71m 35 dca 0.5 cm calcite vein with frozen walls. 259.82 - 259.86m 35 dca 2.5 cm hematite vein. Massive hematite with crystal grains to 4.0 mm. Red hematitic quartz along both walls. 0.1% pyrite crystals to 2.0 mm. Upper contact along strong slip. Lower contact frozen wall. 260.39 - 260.40m 25 dca 0.3 cm calcite vein along a strong slip. 263.28 - 264.82m NB Zone carbonate-chlorite alteration zone dominated by pale grey carbonate alteration. Weak chlorite alteration along vein described below. 264.07 - 264.29m 32 dca 10cm Quartz-calcite-hematite-chalcopyrite vein. 10.0 cm true width crack and seal vein with six district zones that appear to be marked by rip of contacts. 264.07-264.19m coarse grained white calcite to 15.0mm and grey calcite to 3 mm crystalline. 264.19-264.20m Interrupted pale yellow silicate band. 264.20-264.23 m calcite vein with 65% Coarse grained white calcite to 30.0 cm and 35% regions of finer grained pale grey calcite. 50% patches. 264.23-264.24 m pale yellow silicate band with dark green chloritic edges. 264.24- 264.265 m quartz-hematite vein with dark green chlorite selvages along contacts. Vein is 50% white quartz crystals interstitial (5%) red hematitic quartz and 20% red hematite. A few pyrite crystals to 3.0 mm. 264.265-264.29m quartz vein with quartz crystals from wall and central (50%) calcite-chalcopyrite (4.3 x0.3 cm mass of chalcopyrite) interstitial to quartz crystals. Calcite fine grained grey. Note: at the Castle Mine, plumose and dendritic silver is frequently hosted in fine grain grey calcite interstitial to large white rhombic calcite crystals. 264.81 - 264.82m 43 dca 1 cm calcite vein: 0.5-1.0 mm crystalline white calcite. 266.13 - 266.72m Carbonate alteration zone. Pale grey carbonate alteration associated with vein described below. 266.39 - 266.43m 10 dca 1.0 cm calcite vein: Grey calcite crystals to 15 mm generally 3-5 mm with 10% interstitial very dark green chlorite.

				266.72 - 268.28m Chlorite alteration zone. As dark green alteration of pyroxene. Associated with vein described below. Zone also has 2% random hairline calcite fracture filling. 266.87 - 266.90m 28 dca 1.5 cm quartz-chlorite vein. 1% chalcopyrite, trace red hematite and 5% dark green chloritic rip off breccia. 267.01 - 267.07m 28 dca 1 cm quartz vein. 10% fine grained calcite, 10% chlorite patches to 1x4 mm. Minor chalcopyrite in wall rock within 0.5 cm of vein. 268.70 - 268.71m 42 dca 0.8 cm quartz vein with no wall rock alteration. 272.04 - 272.62m 30 dca Zoned carbonate-chlorite alteration: Appears to be strong alteration but is poorly defined. Strong, dark green chloritic shear slips the dominant feature of this alteration. 272.29 - 272.32m 30 dca Shear zone: Chlorite fault with 0.1 cm of dark green chloritic gouge along vein contact at contact of vein below. 272.32 - 272.35m 30 dca 2.0 cm calcite-hematite-chlorite vein. 3% hematite crystals to 10.0 mm in calcite and hard, red hematitic quartz. 272.57 - 272.58m 30 dca 0.5 cm calcite vein: Fine grained grey calcite. Upper contact strong chloritic slip. 279.77 - 279.95m 32 dca Zoned carbonate-chlorite alteration: strong central chlorite zone and moderate outer grey carbonate zone. Jointing parallel to veining below. Vein associated with vein described below. 279.84 - 279.85m 32 dca 0.3 cm fine grained grey calcite. 280.33 - 280.65m 35 dca Zoned carbonate-chlorite alteration. Jointing parallel to veining described below. 280.41 - 280.42m 35 dca 0.5 cm Ca vein. Fine grained banded grey calcite and chloritic rip offs(?). One strong slip wall. 280.53 - 280.54m 35 dca 1.0 cm fine grained grey calcite and dark green chlorite. 286.37 - 287.81m NB 30-45 dca Hematite vein zone with locally weak zoned carbonate-chlorite alteration as described below. 286.37 - 286.51m Carbonate Alteration Zone: Weak carbonate alteration associated with vein described below.

				286.43 - 286.48m 45 dca 2.3 cm hematite-quartz vein. Black hematite crystals to 4.0mm and red hematitic quartz (?). 1% pyrite crystals to 1.0 mm. 286.89 - 286.90m 30 dca 0.5 hematite-quartz-pyrite vein with one slip wall. No apparent wall rock alteration. 287.34 - 287.35m 35 dca 0.5 cm hematite-quartz vein with 2% pyrite to 2.0 mm. 50% hematite crystals. 287.41 - 287.42m 35 dca 0.3 cm hematite quartz vein with 50% black hematite crystals. 1% pyrite to 0.5 mm 287.62 - 287.81m Alteration zone: week carbonate alteration centred on vein described below. 287.70 - 287.72m 40 dca 1 cm hematite calcite quartz vein: 50% black bladed hematite crystals in a fine grained dark grey groundmass of calcite-quartz (?). 294.70 - 295.41m Zoned carbonate-chlorite alteration. Weak alteration zone weakly effervescent in acid. Associated with veining described below. 294.76 - 294.78m 22 dca 1.0 cm calcite-quartz vein. Fine grained grey calcite-quartz vein. Calcite and quartz appear to be intergrown. Hairline calcite fracture filling of wall rock. 295.33 - 295.36 30 dca 1.7 cm quartz vein. 80% quartz crystals with 20% central zone of fine-grained calcite. Trace pyrite. A cross vein at 120 dca appears to be continuous with the main vein but does not cross the main vein. 300.15 -337.00m Nipissing Diabase, Medium grained: similar to above without chloritic alteration. uniform and massive, 1-2 mm crystalline, generally non-magnetic (minor sections weakly magnetic with 0.5-1.0 cm fall back of pencil magnet), moderately hard < chisel. All pyroxene =/> 1.0 mm. Medium grey, generally paler grey than most diabase. 301.56 - 302.20m 35 dca Alteration-Vein Zone. Very weak zoned carbonate-chlorite alteration with weak effervescence in acid. Veining described below. This allegation zone is a closely spaced strong joint set parallel to the veining. 302.58 - 302.59m 32 dca 0.3 cm quartz vein with 5% interstitial chlorite. Frozen walls.

				301.79 - 301.80m 38 dca 0.7 cm quartz vein with 09.4 cm quartz and 0.3 cm fine grained grey calcite separated by a thin dark green chloritic selvage. Lower contact strong slip. 301.95 - 301.97m 40 dca 1.0 cm quartz vein with 15% fine grained brown to pale grey, interstitial calcite. Lower contact prominent slip with strong lineament 50 dca measured on slip ellipse facing up. Vein crosscut by late calcite vein at 150 dca. 302.11 - 302.12m 25 dca 0.4 cm calcite vein. Fine grained chloritic calcite with minor chalcopyrite and red hematite. 303.37 - 303.66m Carbonate alteration: very weak carbonate alteration preserving mineral textures. 303.52 - 303.53m 20 dca Strong chlorite slip with associated and controlling calcite gash fracturing 304.09 - 304.10m 35 dca 0.4 cm quartz calcite vein with central zone of pale green acicular actinolite(?). 305./09 - 306.15m Strong slip set of twenty dark green chloritic slips at 030 and 120 dca. 305.40 - 306.02m Very weak alteration zone associated with veining described below. Little or no response to HCl. Pyroxene altered dark green. 305.51 - 305.52m 30 dca. 0.6 cm quartz-calcite vein with one strong slip wall. 0.3 mm quartz band and 0.3 cm very fine-grained white calcite zone with very thin dark green chloritic salvage between. 305.78 - 305.79m 110 dca 0.3 cm very fine-grained white calcite with frozen walls. 305.88 - 305.79m 75 dca with half of vein at 75 dca with frozen walls and half of vein at 45 dca along strong slip. Very fine-grained white calcite. 316.13 - 337.20m Vein Zone with very weak alteration as described below. Veining is sub parallel to each other and local slips. Alteration does not react to HCl. 316.19 - 316.20m 50 dca 0.3 cm calcite seam. Very fine-grained white calcite with one strong slipwall. Very weak alteration.

				316.48 - 316.49m 38 dca 0.4 cm quartz vein with frozen walls. Weak chlorite alteration to 1.0 cm from vein. 316.60 - 316.61m 33 dca 0.4 cm Calcite vein. Fine grained grey calcite. Very weak chlorite alteration to 1.0 cm from vein. One strong slip wall. 317.00 - 317.01m 30 dca. 0.3 cm quartz-calcite vein. 60% quartz masses ands 40% grey calcite. One strong chloritic slip wall appears to be a weak fault. 319.09 - 407.70m Logging in this interval is higher quality and more consistent and coherent than the logging above. This logging was uninterrupted. 320.60 - 325.00m Vein-alteration zone as describes below. Veining and fracture filling and several strong slips at 22-35 dca. Soft << chisel except as described below. 320.60 - 322.08m Weak chlorite alteration centred on vein described below. Dark green chlorite alteration along vein grading outwards into grey bleaching. No response to HCL. 1% hairline calcite fracture filling at 22-35 dca (parallel to main vein described below). 320.89 - 320.87m 30 dca 2.2 cm calcite vein. 1-3 mm crystalline white calcite with 5% dark green chloritic bands indicating multiple rip off structures. Both walls frozen. Strong polished chlorite slip at 324.88 m. Parallel to vein at 324.24-324.40m. 320.93 - 320.94m 30 dca. 0.5 cm calcite hematite vein. Fine grained grey calcite with 35% red and black hematite and 10% dark green chlorite bands along both walls. Both walls frozen. 321.01 - 321.02m 30 dca. 0.3 cm calcite. Fine grained white calcite. 322.08 - 324.64m Alteration, Intense. Strongly bleached pale grey alteration with unexplained very low SG measured as 2.72 and 2.68. HARD to VERY HARD. This may be an altered self dike intermediate between normal diabase and aplite; a late phase differentiate of the diabase. 1-2 mm crystalline with white mineral (plagioclase dominant and two apparent altered pyroxenes, one medium grey the other dark green. From 322.30-323.24 m distinct fine disseminated chalcopyrite and tracer chalcopyrite fracture filling. 323.24 - 323.40m 15 dca 4.0 cm calcite vein. Pale grey, extremely coarse-grained calcite with cleavages to 4.0 cm. Trace chalcopyrite. This vein looks like the

				coarse-grained calcite associated with high grade Ag at the Castle Mine. Frozen walls. 323.86 - 324.03m 00 dca 4.0 cm Ca vein similar to calcite vein at 323.24-323.40m. Vein is in and out same side of the core without crossing the core. Frozen wall. 324.64 - 325.00m Very weak alteration. No response to HCL. 331.56 - 332.42m Vein alteration zone with 6cm of calcite fracture filling ands veining (8% over 86cm core length) at 35-38 dca. Moderate grey bleaching with dark green alteration of pyroxene along vein and grey pyroxene outside of dark green alteration of pyroxene. 4 strong slips parallel to veining. 331.59 - 331.60m 25 dca 0.6 cm calcite vein. Fine grained grey calcite with 10% dark green chlorite masses (not rip offs of wall rock). Trace chalcopyrite. 332.21 - 332.23m 35 dca 1.0 cm calcite vein. Fine grained, white calcite with 0.1 cm pale pink feldspar bands along both frozen contacts. 5% dark green chlorite masses (not rip offs of wall rock). 1% chalcopyrite. Strong polished dark green chlorite slip in centre of vein. Chalcopyrite on slip face. 333.84 - 335.21m Vein/Alteration zone with chalcopyrite. Zoned chlorite-carbonate alteration. Bleached pale grey with weak response to HCl. Dark green chlorite alteration of pyroxene near veins. Moderately soft < chisel. 333.91 - 333.92m 50 dca 1.0 cm calcite vein. Very fine-grained grey calcite, generally <0.5mm crystalline. 5% dark green chlorite patches (not vein wall rip offs). One strong slip wall. Dark green chlorite alteration of pyroxene to 4.0 cm from vein. 334.00 - 334.01m 45 dca. Strong slip with minor calcite. 334.11 - 334.17m 50 dca 4.0 cm breccia zone. 50% sharp angular breccia frags floating in 50% coarse grained 2-3 mm crystalline white calcite breccia filling. Fragments are altered identical to the altered wall rock indicating post alteration brecciation. No alteration zoning or rimming of the fragments. 334.63 - 334.73m 20 dca 4.5 cm calcite vein. Coarse grained white calcite with calcite cleavages to 11.0 cm. Minor chalcopyrite. The alteration in this vein zone appears to be focused on this vein. This appears to be the main vein in this apparent vein zone. The core was rotated 70 degree clockwise to measure this core angle in

				relation to the other veining in this vein zone. This vein is possibly parallel to or may be the same vein as the vein at 323.24 323.40m. 334.73 - 334.95m 15% calcite-chlorite-quartz veining to 1.0 cm and at various orientations/rotations ranging from 05-50 dca. Minor chalcopyrite <0.5%. 334.95 0 334.99m 50 dca 2.3 cm calcite-quartz-chlorite vein. Not rotated relative to the other veining in this zone except for the vein at 334.63-334.73m. 0.5 cm massive white quartz core. The rest of the vein is Very fine-grained grey calcite with 10% dark green chlorite patches (not vein wall rip offs) and 10% dark green chlorite bands (wall rock rip offs) with apparent adhering wall rock similar to the wall rock along the edge of the vein. 335.02 - 335.04m 165 dca. 1.0 cm calcite-chlorite vein. Very fine-grained grey calcite with 0.3 cm wall rock rip off in centre of vein. 15% dark green massive chlorite (not vein wall rip offs). This vein cross cuts and post-dates the vein at 334.95-334.99m. 336.50 - 336.52m 45 dca 1.5 cm calcite-chlorite vein. Fine grained white calcite with many thin dark green chlorite wall rock rip offs. No apparent wall rock alteration. One strong slip wall parallel to local slips. 337.00 - 412.00m Nipissing Diabase, Hypersthene Diabase medium grained: Uniform and massive, 1-3 mm crystalline, generally non-magnetic (minor sections weakly magnetic with 0.5-1.0 cm fall back of pencil magnet), moderately hard < chisel. Rock appears to be dominated by 2-3 mm hypersthene. Generally fresher than diabase above. Medium grey green. 343.70 - 343.98m 45 dca Chloritic slip zone with at least four strong chloritic slips. 348.54 - 348.59m 65 dca 4 cm Actinolite Fault. Banded quartz-act, chlorite-epidote fault (unbroken core) with one apparent slip face. Trace 0.5 mm pyrite crystals. From 348.31-348.69 dark green chlorite alteration of pyroxene. 361.00 - 361.01m Hole remeasured at 361 meter and drillers blocks below 361 are correct. Above 361.00 the drillers blocks should read 3 meters more than recorded on the blocks.

				367.57 - 367.58m 25 dca 0.5 cm Fault. Black chlorite fault with massive black chlorite and thin seam of medium green gouge on slip face. Locally chlorite slips perpendicular to this fault. 372.72 - 373.10m 35 dca Alteration Zone. Weak alteration as dark green alteration of pyroxene associated with one 0.3 cm dark green chlorite fracture filling and two 0.3 cm calcite fracture fillings. Five strong slips and fracture fillings at 35 dca. Apparent minor structure. 376.72 - 377.36m 30 dca Slip/Fault Zone. Six strong chloritic slips including faults described below. 376.84 - 376.85m 30 dca 0.5 cm Fault. Black chlorite fault with prominent black metallics on slip face. THESE METALLICS MAY BE MAGNETITE OR ARGENTITE 377.35 - 377.36m 20 dca 0.3 cm fault Loose black chloritic fault gouge with prominent black metallics on faces of thin chlorite gg flakes. 378.66 - 377.36m 50 DCA Slip Set. Set of 15 closely spaced strong, parallel chloritic slips. Very weak chlorite alteration of some of the pyroxene. 382.80 - 383.83m 50 dca Slip set. Set of 15 closely spaced chloritic slips at 50 dca. A few slips at 30 and one strong slip at 140 dca. Very weak chlorite alteration od pyroxene. 388.90 - 388.91m 58 dca 0.3 cm Fault. Dark green chlorite fault with lineament at 110 dca measured in upper core piece face up. 390.46 - 390.48m 62 dca 2.0 cm Fault. Actinolite fault with cat's eye schiller ranging from light to dark green. Fibre lineament 170 dca measured in upper core 397.97 – 397.98m 45 dca 1.0 cm Fault. 1.0 cm loose dark green chlorite disk with 15% quartz band in the chlorite. From 378.91-378.09m five closely spaced chloritic slips also at 45 dca. Weak dark green chlorite alteration of pyroxene in slip zone. 400.00 - 470.25m Competent ground with slip spacing 7-50 cm generally12-27 cm commonly 70-80 dca. 412.00 - 458.95m Nipissing Diabase, Two pyroxene diabase: Uniform and massive, 1-3 mm crystalline, Moderately hard < chisel. Rock appears to be approximately 15% 2-3 mm hypersthene decreasing to 5% near bottom end. Medium grey green. Arbitrary upper contact and lower contact. From 412.00-

				427.00 generally non-magnetic to weakly magnetic with 0.0-1.0 fall back of pencil magnet. From 427.00-454.00 generally moderately magnetic with 1.5-2.0 cm fall back of pencil magnet. From 454.00-468.00 moderately magnetic with 2.0-3.0 fall back of pencil magnet. 420.75 - 425.00m Arbitrarily logged as lost core to accommodate logging and sampling intervals. 420.90 - 421.00m Core dropped in hole and overground. 423.56 - 436.00m Numerous strong (some polished) chloritic slips at 25 dca and ranging from 15-50 dca. 423.96 - 424.00m Core dropped in hole and overground. 424.50 - 424.54m Core dropped in hole and overground. 426.32 - 426.37m 60 dca Fault: 4.0 cm actinolite fault with 75% cat's eye schiller ranging from light to dark green. Fibre lineament 165 dca measured in upper core piece face up. From 425.50-426.85 is non-magnetic and bleached pale grey. 438.58 - 438.79m 85 dca. Slip set of 6 straight slips at 85 dca. 439.39 - 440.20m 80 dca Slip set of 10 straight slips at 80 dca. 446.53 - 446.57m 75 dca 3.0 cm fault. Serpentine fault with slip lineament at 85 dca measured in upper core piece face up. From 446.10-447.10 16 strong slips at 60-85 dca at various orientations. At 446.47 m strong serpentine slip at 60 dca with lineament 100 dca measured in upper core piece face up 452.01 - 452.03m 90 dca 3.0 cm quartz-epidote band with contacts at 80 and 110 dca. 466.88 - 466.91m 70 dca 3.0 cm epidote. 50% epidote bands as fracture filling bands parallel to edges of zone. One slip wall with feathery crystal texture lineament. 473.01 - 473.05m 68 dca 3.3 cm Epidote quartz band. 10% quartz masses and 90% epidote as fracture filling textures. Frozen walls. 458.95 - 473.00m Nipissing Diabase: Uniform and massive, 1-2 mm crystalline, Moderately hard to hard </= chisel. Medium green. Non-magnetic to weakly

				magnetic with 0.0-1.0 cm fall back of pencil magnet. Arbitrary upper contact and lower contact. 473.00 - 474.89m Nipissing Diabase: Chill zone grading from 1.0mm to extremely fine grained at lower contact. Dark green. The lower contact could not be determined visually as both the chill zone and underlying sediments are massive and dark green. The contact was determined using SG measurements. The diabase SG dropped from 3.01 at 463.47 to 2.83 at 474.79. 474.80-474.89 had an SG of 2.76 and appeared to be a contact vague breccia. From 474.89 -475.00 has an SG of 2.67 which is consistent of Huronian Sediments below. 470.25 - 473.00m Broken ground with slip spacing 3-8 cm, generally 3-8 cm, generally 70 dca. 470.36 - 470.50m Arbitrarily logged as lost core to accommodate logging and sampling intervals. 470.85 - 472.00m Arbitrarily logged as lost core to accommodate logging and sampling intervals. 473.87 - 473.89m 1.0x2.0 patch of true width calcite filling open fracture. No apparent wall rock alteration. 474.00 - 474.81m Fault? Approximately 0.35 meters equivalent to core volume recovered as thin chloritic wedges. 474.81 - 475.00m Strongly broken ground.
CS-18-14	474.89	500.11	**Huronian Sediments**	HURONIAN SEDIMENTS: Siltstone, generally massive lacking evidence of bedding except as described below. Rare granitic drop stones. Non-magnetic. Dominantly moderately soft < chisel to moderately hard </= chisel, dark green, compact, massive silt with SG = 2.70-2.71.

				Short sections of very hard (> chisel), red to greenish red (silicified?) siltstone with SG = 2.64-2.65. 475.12 5.0 cm drop stone. 475.12-478.60 four 0.5 cm drop stones. 479.40 1.0 cm drop stone. 480.22 1.5 cm drop stone. 481.98 1.0 cm drop stone. 482.33 4.0 cm drop stone. 487.90 13.0 cm drop stone, and 497.36 3.0 cm drop stone. All drop stones are red granitic pebble and cobbles. 475.00 to 482.89 Moderately broken ground with slip spacing 2-26 cm commonly 60-70 dca. From 477.00 to 481.06 3% 1-3 mm dark green chloritic spotting. From 479.07 to 486.40 Minor hairline calcite fracture fillings. From 478.26 to 478.30 80 dca. 4.0 cm breccia zone with 35% calcite breccia filling. Upper contact frozen wall at 60 dca and lower contact slip face at 80 dca. From 481.06 to 481.33 Medium red very hard > chisel (silicification?). 1% hairline calcite fracture filling. Contacts irregular. From 481.17 to 481.18 45 dca 0.3 cm calcite fracture filling along strong slip. From 481.33 to 482.04. 3% 1-3 mm dark green chloritic spotting. From 481.73 to 481.95 Dark grey red, very hard > chisel (silicification?). Gradational contacts. From 482.61 to 484.03 Medium red, very hard > chisel (silicification?). From 482.89 to 500.11 Moderately competent ground with slip spacing 9-60 cm commonly 45 dca. From 483.17 to 483.36 40 dca 3% set of hairline to 0.3 cm short calcite fracture filling. (Gash Set?). From 484.03 to 484.48 Medium grey, very hard > chisel (silicification?). 3% 1-2 mm chloritic spotting From 480.48 to 484.67 Medium red, very hard > chisel (silicification?). From 484.67 to 485.00 3% 1-2 mm dark green chloritic spotting. From 485.00 to 485.23 Medium greyish red, very hard > chisel (silicification?). From 485.23 to 498.03 1-3% 1-2 mm Chloritic spotting. From 498.03 to 498.89 Dark red, very hard > chisel (silicification?). From 498.18 to 498.30 7% 3.5 mm vugs with bleached rims. From 498.30 to 498.89 3% white calcite spotting and rhombs to 4 mm concentrated along

				hairline calcite-quartz fracture fillings. From 498.89 to 500.11 Dark green, hard > chisel with 3% 1 mm chloritic spotting.

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-18-15

Property	Castle-East	Objective: Test the geophysic anomalies.
Claim/Lease Number	LEA-19680	
NTS Map Sheet	41P10	
UTM Zone	17	
UTM Easting	520747	
UTM Northing	5279538	
Elevation	400 m	
Drilling Company	Vic Progressive Diamond Drilling Inc.	
Start Date	21/09/2018	
Finish Date	18/10/2018	
Hole Length	600 m	
Core Size	NQ	
Date Logged	14/11/2018	
Geologists	Doug Robinson	

Test type : Reflex

Depth (m)	*Azimuth (°)*	*Dip (°)*
0	4	-50
21	4	-49,4
71	351,6	-49,2
173	351,4	-49,6
323	351,6	-50,2
415	351,6	-48,5
476	351,6	-48,7

HOLE NAME	FROM	TO	ROCK TYPE	COMMENTS
CS-18-15	0	2.79	OB	Casing
CS-18-15	2.79	66.61	GAB	From 2.79 to 5.17 Gabbro. Chaotic varied textured gabbro: Dominated by 60% medium grey to pink feldspathic phase mixed chaotically with 40% black gabbro. The grey to pink feldspathic phase consists of approximately 60% 2x5 mm. sharp euhedral plagioclase crystals randomly oriented in the 40% very dark green mafic groundmass. Hard, with plagioclase > chisel and mafic component < chisel. Non magnetic, lower contact 50 dca along quartz vein described below. From 2.79 to 5.17 5% calcite fracture filling. 5% very closely spaced white calcite micro fracture filling and minor calcite fracture fillings to 0.5 cm. 4% 1.5 mm pyrite with appearance of crude pyrite crystals concentrated in the hairline calcite fracture filling and calcite infilling between large pyroxene crystals. From 2.79 to 2.97 Broken ground due to surface exposure. From 2.97 to 4.37 Broken ground with nine slips. From 3.97 to 4.03 Overground core dropped and recovered from the hole. From 5.12 to 5.17 50 dca. 5.0 cm quartz vein. Upper contact irregularly embayed into the gabbro above. Lower contact sharp and frozen at 50 dca with 1.0 cm shear banded calcite-chlorite against finer grained gabbro below. From 4.37 to 15.15 Moderately competent ground with slip spacing 4-56 cm. generally 18-22 cm. Slips straight dominantly 45-50 dca parallel to igneous fabric. Also slips at 140 dca. From 5.17 to 26.66 Gabbro. Massive, fine grained: Uniform and massive 1 mm crystalline gabbro composed of >95 mafic minerals and <5% pale grey, intergranular plagioclase. The mafic crystals range from 1x3 to 1x5 mm crystals. The rock splits easily along flat planes at 45-60 dca. The core splits with difficulty to expose an apparent random net of mafic crystals defined by the prominent cleavage of each individual crystal. There is a week linear alignment of crystals at 45 dca which is not conformed on the but ends of broken core. The mafic minerals have a schiller that alters the apparent colour giving 3-5 mm long crystals a black colour in contrast to dark green mafic crystals that appear to be the same mineral. A thin section would be required to conform if this is a one or two mafic mineral rock. Moderately hard </= chisel, non magnetic. From 8.17 to 8.20 50 dca 2.0 cm quartz-calcite vein with 50? White calcite infilling between crude quartz crystals to 5 mm. Frozen walls with no alteration Minor Vein. From 9.14 to 9.45 30 dca 1.5 cm calcite-chlorite-quartz vein with one slip wall. Fine grained. No wall rock alteration. Minor vein. From 15.15 to 27.76 Moderately competent ground with slip spacing 10-34 cm generally 25-34 cm.

				Commonly 40-45 dca. From 15.30 to 15.39 130 dca 8.0 cm dike. Dark green, extremely fine grained (<0.2mm), moderately hard </= chisel, very weakly magnetic with 0.5 cm fall back of pencil magnet. 50% 1-2 mm spheres with medium grey cores and thin pinkish rims in a dark green chlorite groundmass. Three fine grained, dark green bands near upper contact and one similar band near lower contact. Frozen walls.See 34.79-35.39m. From 19.15 to 19.84 Pegmatoid: Pegmatoid dominated by ~40% randomly oriented, euhedral plagioclase crystals to 3x6 mm and 5% altered, to pale grey skeletal pseudomorph after oxides (possibly magnetite). Upper contact sharp frozen at 60 dca. Lower contact 15 dca along vein described below. 2% disseminated, euhedral pyrite crystals to 3mm throughout. From 19.84 to 19.91 15 dca 4.0 cm quartz-calcite-chlorite vein; Upper contact 0.5 cm below strong slip. Lower contact strong slip walls. Wall rock rip offs separate ribbons of quartz and ribbons of grain reduced white to grey calcite. 2% Very fine-grained grey mineral with appearance of arsenides or magnetite (moderately magnetic 2.0 cm fall back of pencil magnet) near upper contact. <0.5% Very fine-grained anhedral chalcopyrite in calcite. Faint red hematite films on slip walls. From 19.91 to 20.14 0.5% disseminated pyrite in groundmass. From 20.14 to 20.59 3% disseminated pyrite in groundmass. From 20.59 to 20.64 137 dca 4.0 cm calcite-quartz-chlorite vein with frozen walls. Vein dominated by three quartz-calcite bands separated by chloritic wall rock rip offs. 2% disseminated pyrite crystals to 2 mm concentrated along rip offs. Prominent 2 mm euhedral pyrite crystals in wall rock as described above. From 20.64 to 21.09 Net textured gabbro with 50% acicular pyroxene in a pale grey groundmass. From 20.09 to 20.10 4mm patch with 25% unidentified sulphide close to pyrite colour. From 20.29 to 23.06 2% disseminated pyrite crystals appear to be related to veining described below. From 21.00 to 21.89 <05 dca. 3.5 cm quartz-calcite-chlorite vein with one3 slip wall. Ribboned quartz-calcite and dark green chloritic wall rock rip offs. Calcite is opaque pink. 2% pyrite crystals to 2.0 mm and trace anhedral chalcopyrite and possibly trace other anhedral sulphides. The interval 21.00-21.89 includes much of the wall rock beside the vein. From 22.09 to 22.16 11-00 dca 10-3.0 cm calcite-quartz vein. 1-5 mm grey, crystalline calcite. The wide part of vein is 20% masses of quartz to 2.0 cm floating in grey calcite. Chloritic foliation along the frozen walls. 1-2 mm sharp euhedral pyrite crystals disseminated in wall rock to this vein. From 23.45 to 24.59 Well developed net texture with 40-60% net of black acicular pyrite crystals in a pale grey groundmass. The pyrite crystals are 0.5-1.0 mm diameter.

				From 24.38 to 24.91 1% disseminated pyrite crystals may be associated with vein described below. From 24.42 to 24.47 40 dca 3.0 cm calcite-chlorite vein with frozen walls. This 2-4 cm vein is 140 degrees to the crystal fabric it cuts. Dark green massive chlorite bands. Trace pyrite crystals. No wall rock alteration. Minor structure. From 25.43 to 25.45 40 dca 2.0 cm calcite-chlorite vein with massive dark green chlorite bands. 5% quartz masses, trace pyrite. Minor structure. From 26.66 to 31.00 Gabbro. Uniform and massive crystalline gabbro composed of >98 mafic minerals and magnetite, 2 grey, intergranular plagioclase. Approximately 40% black mafic crystals range from 1x4 to 2x8 mm in a dark green mafic groundmass. Moderately soft << chisel. 5% magnetite as magnetite clusters of 0.5-1.0mm magnetite (interstitial and/or dendritic), moderately to strongly magnetic with 3-5 cm fall back of pencil magnet. Occasional 3 mm pyrite crystals (<0.5%). From 27.76 to 76.67 Very competent ground with slip spacing 8-211 cm generally 40-75 cm. commonly 32-40 dca. From 31.00 to 46.08 Gabbro. Varied textured gabbro moderately. Weak banding of hard feldsapathic layers with 1 mm grey plagioclase grains and 1 mm magnetite crystals and moderately hard </= chisel mafic layers. Generally strongly magnetic with 4-5 cm fall back of pencil magnet. From 37.73-38.67 non magnetic to with 0.0-1.5 cm fall back of pencil magnet. 0.5% disseminated pyrite to 1 mm. From 33.40 to 44.00 m 5% magnetite as euhedral crystals, skeletal crystals, and thin laminations From 34.79 to 35.39 Dike? Probably dike, possibly a flow contact. Very fine-grained .0.2 mm. with a few 0.5-5.0- mm pinkish round masses. Massive dark green. Upper contact sharp at 60 dca. Lower contact Along strong slip at 62 dca and parallel to upper contact. 40.53 xxx Speed logged without normal checks and balances to accommodate press release. From 41.95 to 42.08 Arbitrarily logged as lost core to accommodate logging and sample intervals. From 42.64 to 43.00 Very fine-grained banded at 30 dca. 1-2% Very fine-grained disseminated pyrite. From 46.08 to 65.75 Gabbro. Very coarse pyroxene cumulate consisting of 90% 3.0-8.0 mm diameter dark green. almost black pyroxene grains with 10% pale grey to medium green intercumulus minerals Non magnetic. moderately hard </= chisel. Generally. < 0.5 % disseminated pyrite with locally 5% pyrite grains to 2 mm. From 49.81 to 53.75m irregular calcite fracture filling. From 50.52 to 50.74m 3% disseminated Pyrite to 1.0 mm. From 50.74 to 50.79m 7% disseminated pyrite to 2.0 mm.

				From 51.07 to 51.21 00-20 dca 1.0-2.5 cm coarse grained calcite vein with 5% chlorite. Pyrite to 2.0 mm in wall rock. From 51.83 to 52.94m 20% calcite fracture filling to 2.0 cm at low angle to the core axis. 2% disseminated pyrite to 2.0 mm. dominantly in the wall rock. From 54.86 to 56.78m 20% medium green stockwork of feathery mafic mineral. From 56.15 to 56.36m Hard =/> chisel banded red alteration band with lower contact and banding 45 dca. From 56.58 to 56.66m 5% 1 mm disseminated pyrite. From 59.04 to 59.37m Overall 2% disseminated pyrite to 1 mm. locally to 5% pyrite. From 61.20 to 61.44m 0.5% disseminated pyrite crystals to 3 mm. From 62.13 to 62.15m 30 dca 1.0 cm calcite vein with thin wispy chlorite banding From 62.18 to 62.21m 60 dca 3.0 cm dark green. banded silicate with 5% chalcopyrite concentrated in a single 1.0x2.5 patch. 5% Very fine-grained pyrite bands. From 63.18 to 63.55m 1% 0.5-1.0 mm disseminated pyrite grain in groundmass. From 63.56 to 63.60m 00-28 dca 1.5 cm calcite chlorite vein with 5% pyrite crystals to 10.0 mm. From 64.50 to 65.27m 1% disseminated pyrite to 2.0 mm. From 65.75 to 66.61m Gabbro. Fine grained 0.5 mm crystalline pyroxene and plagioclase. A single 2x5 c m patch with 50% of 2-3 mm plagioclase crystals. Crystal textures are continuous across apparent boundary. 1% disseminated pyrite. Lower contact along strong slip. 0.5 cm silicification alteration band along slip in unit below.
CS-18-15	66.61	67.56	TUF	SILICIFICATION ZONE: Possibly silicification of feldspar crystal tuff or feldspar porphyry. Massive very hard > chisel. non magnetic. Light greenish grey. Scattered fully healed chlorite fracture fillings. Lower contact sharp frozen at 50 dca.
CS-18-15	67.56	68.29	GAB	GABBRO: Fine grained gabbro. Uniform and massive with 3% disseminated pyrite. Lower contact sharp and frozen at 30 dca.
CS-18-15	68.29	70.07		SILICIFICATION: very hard > chisel, non magnetic alteration steaked at 20-40 dca. 0.5-1.0 cm spaced chloritic microfracture filling overprinted by bleached stockwork alteration. Core is fully healed.
CS-18-15	70.07	76.7	GAB	GABRRO: Uniform and massive. fine grained gabbro. Very dark green. moderately hard < =/chisel. non magnetic. Generally 80-90% 1.0-4.0 mm diameter pyroxene cumulus in light to dark grey intercumulus. Locally 1-2 mm plagioclase crystals. Up to 1% pyrite. Lower contact frozen at 30 dca.
CS-18-15	76.7	77.23	ALT	ALTERATION: Appears to be highly altered Gabbro cumulate with 50% bleach medium grey 1.0-2.0 mm grains in a 50% dark green chloritic groundmass, 5% disseminated pyrite to 3.0 mm, Moderately hard </= chisel, non magnetic, Contact are arbitrary points.

CS-18-15	77.23	78	ALT	ALTERATION: Alteration of uncertain rock type. Moderately soft < chisel, non magnetic, Medium grey, banded at 30 dca. Lower contact arbitrary.
CS-18-15	78	**79.5**	TUF	SILICIFICATION: Appears to be intense silicification of feldspar porphyry and or feldspar crystal tuff and very fine tuff. In part appears to by mylonitized with feldspar crystal augen (i.e. 81.78-83.09m). Banded (shear and bedding?) fabric 35-45 dca. Light grey, very hard > chisel.
CS-18-15	**85.5**	85.65	ARG	GRAPHITIC ARGILLITE: Black graphitic argillite based on black streak. Not conductive. Black with thin medium grey (tuff?) bands. Banded at 40 dca. Upper contact and lower contacts sharp at 40 dca. 2% pyrite streak and patches.
CS-18-15	85.65	88.93	TUF	SILICIFICATION: Appears to be intense silicification of feldspar porphyry and or feldspar crystal tuff and very fine tuff. In part appears to by mylonitized with feldspar crystal augen (i.e. 81.78-83.09m). Banded (shear) fabric 35. Light grey, very hard > chisel.
CS-18-15	88.93	89.06	ARG	GRAPHITIC ARGILLITE: Black graphitic argillite based on black streak. Not conductive. Black and medium grey bands alternating with thin medium grey (tuff?) bands. Banded (shear and bedding?) at 40 dca. Upper contact and lower contacts sharp at 50 dca.
CS-18-15	89.06	107.49	TUF	SILICIFICATION: Intense silicification, pale greys and pale pinks. Generally massive locally banded (relict bedding?), very hard > chisel, non magnetic. Appears to be alteration of feldspar porphyry and/or tuffs. Many hairline to 0.4 cm quartz fracture fillings with pyrite crystals. Background 0.5% disseminated pyrite crystals. From 90.02 to 90.03 70 dca 1.0 cm quartz vein with 15% pyrite. From 90.48 to 90.51 120 dca. (relative to rock fabric of 28 dca). Quartz vein with 5% pyrite crystals to 2.0 mm. From 90.51 to 90.97m 00 dca. Quartz veining to 3.0 cm parallel to and along black chlorite also at 00 dca. Zone is 10% pyrite in veining and wall rock. From 99.50 to 100.44m Healed breccia with angular fragment similar to alteration above and below. Appears to have brecciated previously existing alteration. From 101.46 to 101.71m Strong slip with 0.1 cm massive pyrite. This pyrite seam crosses the core at a very low angle. Slip face polished black. This seam has a sooty appearance. From 102.01 to 102.20m Strong slip with 0.3 cm seam of massive pyrite. Slip face polished black. This seam has a sooty appearance. From 103.58 to 105.04m intense quartz flooding.
CS-18-15	107.49	111.1	SYE	Silicification: Intense silicification of apparent syenite intrusive. Pale grey, almost white, intensely microfracture at mm scale. 7% pyrite in microfracture filling.

CS-18-15	111.1	137.41		SILICIFICATION: Moderate silicification, uniform and massive. Very fine-grained medium grey, hard, non magnetic, 0.5-1.0% fine disseminated pyrite. Lower contact sharp and frozen at 70 dca.
CS-18-15	137.41	138.59	HOR	HORNBLENDE PORPHYRY: Fine grained (<0.5 mm), uniform and massive. 5% black hornblende phenocrysts to 1.0 mm. Very weakly altered by silicification.
CS-18-15	138.59	141.27		Silicification: Weak silicification of various lithologies. From 140.76 to 141.27m Mafic Dike: Fresh appearing Very fine-grained dike at 70 dca. The dike appears fresh and unaltered. Soft << chisel. 25% dark green sphere in a medium green groundmass.
CS-18-15	141.27	**144.43**	ALT	CALCITE CHLORITE ALTERATION: Mottled dark green calcite chlorite alteration and pale green calcite alteration. Very soft <<< knife. non magnetic. Friable due to shearing. Possibly altered gabbro. Very incompetent ground. Upper contact along slip at 35 dca. Lower contact along strong slip at 20 dca.
CS-18-15	**144.3**	158.2	HOR	Intense red alteration zone typical of gold environments logged by Doug. It appears to be a peculiar matrix phase of hornblende feldspar porphyry lacking phenocrysts. May be to hot at time of injection to form phenocrysts. Very massive. Hard, not magnetic, the lower contact show more evidence of Hornblende porphyry with sharp hornblende phenocrusts to 0.5mm. From 144.43m to 150.34m 3-5% veins qz/carb oriented 50-60 dca haireline fractures with chlorite. 1% pyrite disseminated in the groundmass. From 150.34m to 158.2m less than 1% veins qz/carb 30-50dca minor pyrite and chlorite at walls. 0.5-1% pyrite disseminated in the groundmass.
CS-18-15	158.2	163.53	HOR	Hornblende porphyry, massive. 1-2mm black hornblende phenocrysts (augite?). locally weakly magnetic. with local red light alteration, contact progressive, less than 1% veins qz/carb 30-60dca haireline fractures with chlorite.
CS-18-15	163.53	169.96	ALT	Calcite chlorite alteration. massive. hard. magnetic upper contact at 40dca. 10% veins qz/carb at least 3 generation of veins locally folded. haireline fractures filled by calcite and chlorite. Locally brecciated angulat fragments of several facies (red hornblende porphyry the uper unit. graphitic argillite. grey hornblende porphyry). 5-10% pyrrhotite up to 9mm disseminated in the groundmass and following the dissolution seams plan. Possibly altered gabbro Hornblende porphyry Lower contact along strong slip at 35 dca.
CS-18-15	169.96	251.75	HOR	Hornblende porphyry, green-grey, massive, intense pervasive calcite alteration, weakly magnetic. 0.5 to 1% pyrite disseminated in the groundmass, upper contact with foliation plans 35dca more chloritized. From 169.96m to 177.8m 3% veins qz/carb up to 2cm large 30-40dca haireline fractures with

				chlorite and calcite. From 177.8m to 179.5m 5% qz/carb veins up to 3cm large oriented 10-40dca. haireline fractures filled with calcite. From 179.9m to 189.42m less than 1% veins. From 189.42m to 209.63m 3% veins qz/carb minor chlorite 20-60dca haireline fractures calcite and chlorite at 190.58m fracture 30dca filled by green chlorite and calcite. At 206.7m fracture of 3cm large filled by green chlorite and calcite. From 209.63m to 213.89m 1% qz/carb veins oriented 20-50dca. From 213.89m to 215.7m 5% veins qz/carb 10-50dca 0.5% pyrite disseminated in the groundmass. haireline fractures filled by calcite and chlorite. From 215.7m to 223.75m less than 1% veins qz/carb oriented 60dca 0.5% pyrite disseminated. From 223.75m to 237.4m 2-3% qz/carb veins 30-60dca some intervals look like intermediate tuf. From 237.4m to 250.53m 1-2% veins qz/carb oriented 20-50 dca. From 250.53m to 251.75m less than 1% veins with 0.5% pyrite in the goundmass.
CS-18-15	251.75	252.12	ALT	Calcite chlorite alteration, massive, hard, magnetic, contact at 30dca. 25% veins carb +/- chlorite at least 3 generation of veins locally folded, haireline fractures filled by calcite and chlorite.
CS-18-15	252.12	259.26	HOR	Hornblende porphyry, massive, soft to moderately hard, not magnetic, intense pervasive calcite alteration, more chlorite in the groundmass at the lower contact of the interval. From 252.12m to 257.3m 3-5% veins up to 5cm qz/carb +/- chlorite. From 257.3m to 259.26m less than 1% veins qz/carb.
CS-18-15	259.26	284.98	GAB	Gabbro dark grey, massive, magnetic some intervals of dark grey argillite and intermediate tuff?. SG 2.79 and 2.81 contact at 35dca. From 259.26m to 261.29m 10 - 15% veins qz/carb oriented 35-50dca and irregular 5% pyrite disseminated in the groundmass. From 261.29m to 274.7m 2-3% veins qz/carb oriented 10-70dca +/- chlorite. From 274.7m to 278.95m less than 1% veins. From 278.95m to 284.98m 2-3% veins up to 3cm qz/carb 30-60dca, fractured zones at 278.98m (21cm) and at 275.53m (20cm) at 284.8m (3cm). 1-2% pyrrhotite in the groundmass.
CS-18-15	284.98	286.92	ALT	Calcite altered zone, unknown pristine rock, magnetic. 10% veins qz/carb haireline fractures calcite, locally deformed (folded) 1% pyrrhotite in the groundmass.
CS-18-15	286.92	291.6	TUF	Fine grained tuff? Magnetic, massive, hard 2-3% veins qz/carb 10-70dca +/- chlorite.

CS-18-15	291.6	309.49	MPOR	Microporphyre, massive, magnetic, locally brecciated, local intense pervasive calcite alteration. (the lower part of the interval looks like hornblende porphyry). From 291.6m to 293.05m 5-10% veins qz/carb +/- chlorite at 292.3m breccia large of 76cm high calcite alteration +/- chlorite contact at 30dca. From 293.05 to 301.98m 3-5% veins 30-70dca +/- chlorite. From 294.7m to 295.3m 3% pyrrhotite in the groundmass. From 301.98m to 306.35m 5% veins qz/carb +/- chlorite 30-70dca. From 304.12m to 306.81m 2% veins qz/carb oriented 20-60dca. From 306.81m to 309.49m intense pervasive calcite alteration 5% veins qz/carb +/- chlorite. 3% pyrrhotite in the groundmass.
CS-18-15	309.49	315.08	HOR	Hornblende porphyry, massive, localy weakly magnetic, intensepervasive calcite alteration, 2% veins qz/carb 30-70dca.
CS-18-15	315.08	319.07	ALT	Intense silicification, pale greys and pale white, massive, very hard, non magnetic, Appears to be alteration of quartz porphyry and/or tuffs. Intense hairline fractures fillings with chlorite and calcite. 0.5% disseminated pyrite crystals.
CS-18-15	319.07	325.03	QZ	Quartz porphyry, massive, very hard, uniform, 1% qz/carb veins, 0.5% pyrite, haireline fractures chlorite.
CS-18-15	325.03	325.78	HOR	Hornblende porphyry, contact at 70dca, weak calcite alteration, massive, less than 1% veins qz/carb +/- chlorite.
CS-18-15	325.78	326.82	QZ	Quartz porphyry, massive, very hard, uniform, 1% qz/carb veins, 0.5% pyrite. haireline fractures chlorite.
CS-18-15	326.82	351	MPOR	Microporphyre and/or Hornblende porphyry, the upper contact irregular, more calcite alteration for the upper part of the interval, massive, not magnetic, less than 1% veins qz/carb show more chlorite alteration in the lower contact.
CS-18-15	351	351.98	ALT	Intense silicification, pale greys and pale white, not magnetic, massive, very hard, intense hairline fractures fillings with chlorite and calcite, 0.5% disseminated pyrite crystals. Appears to be alteration of quartz porphyry.
CS-18-15	351.98	357.73	MPOR	Microporphyre, massive, magnetic, locally apparetnt foliation plans 40dca. less than 1% veins qz/carb.

CS-18-15	357.53	361.54	QZ	Quartz porphyry, contact at 35dca, intense silica alteration pale greys and pale pink, massive, very hard. haireline fractures with chlorite.
CS-18-15	361.54	377.6	HOR	Hornblende porphyry and/or microporphyre, massive moderately magnetic, less than 1% veins.
CS-18-15	377.6	384.58	TUF	Dark grey fine tuff, magnetic, with sulphides evident as veinlet and sulphide patches mostly pyrrhotite in the groundmass. 3-5% veins qz/carb haireline fractures with chlorite.
CS-18-15	384.58	389.97	DIA	Nipissing diabase, massive magnetic, 1% veins qz/cab minro pyrrhotite, 0.5% pyrrhotite in the groundmass haireline fractures filled by chlorite.
CS-18-15	389.97	393.93	HOR	Hornblende porphyry? Massive, not magnetic, less than 1% veins.
CS-18-15	393.93	399.03	GAB	Varied textured gabbro, massive, moderately hard, generally strongly magnetic, 0.5% disseminated pyrite. contact at 50dca. The upper part of the interval show more haireline fractures filled by calcite and chlorite. less than 1% veins.
CS-18-15	399.03	399.7	FELP	Feldspar porphyry dike, contact at 50dca, intense haireline fractures filled by chlorite.
CS-18-15	399.7	430	GAB	Gabbro dark grey, massive, magnetic, less than 1% veins qz/carb 0.5-1% pyrite in the groundmass.
CS-18-15	430	443.98	TUF	Medium grained tuff, massive, weakly to moderately magnetic, some small fingers of gabbro at 434.92 (large of 29cm) and at 442.23m (large of 52cm). less than 1% veins qz/carb chlorite and minro chalcopyrite.
CS-18-15	443.98	446.4	TUF	Fine grained tuff, not magnetic, less than 1% veins, some haireline fractures with chlorite.
CS-18-15	446.4	487.54	DIA	Nipissing diabase (looks like Diorite) massive, locally very weakly magnetic, 1% veins qz/cab minro pyrrhotite. 0.5% pyrrhotite in the groundmass haireline fractures filled by chlorite.
CS-18-15	487.54	524.13	DIA	Coarse grained greenish-grey Nipissing diabase, not to locally weakly magnetic, 3 to 10 mm groundmass plagioclase, pyroxene and orthopyroxene? Rare pyrite and chalcopyrite within the matrix. Less than 1% veins. haireline fractures filled by chlorite.

CS-18-15	524.13	545.1	DIA	Medium grained Nipissing diabase grey to greenish not to very weakly magnetic some fingers of coarse grained diabase contact at 45dca. From 524.6m to 526.2m 2% veins qz/carb 30dca. From 526.2m to 545m.10m less than 1% veins.
CS-18-15	545.1	546	DIA	Dike or microporphyre? 0.5-1% pyrite in the groundmass, feldspar phenocrysts 0.5-1mm, less than 1% veins.
CS-18-15	546	585.6	DIA	Coarse grained greenish-grey Nipissing diabase, not to very weakly magnetic, 4 to 10 mm groundmass plagioclase, pyroxene, less than 1% qz/carb veins +/- chlorite sericite minro pyrite. haireline fractures filled with chlorite.
CS-18-15	585.6	600	DIA	Varied textured Nipissing Diabase (medium to coarse grained diabase) very weakly magnetic (especially coarse grained diabase) fresh groundmass massive, haireline fractures filled by chlorite. Less than 1% veins qz/carb +/- chlorite sericite minor pyrite within the vein walls.

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-18-16

Property	Castle-East	Objective: Test the geophysic anomalies.
Claim/Lease Number	LEA-19680	
NTS Map Sheet	41P10	
UTM Zone	17	
UTM Easting	520684	
UTM Northing	5279631	
Elevation	405 m	
Drilling Company	Vic Progressive Diamond Drilling Inc.	
Start Date	23/10/2018	
Finish Date	04/11/2018	
Hole Length	471 m	
Core Size	NQ	
Date Logged	15/11/2018	
Geologists	Doug Robinson P. Eng.	

Note : Wedge starting at 371,4m deep

Test type : Reflex

Depth (m)	*Azimuth (°)*	*Dip (°)*
0,00	169,00	-50,00
24,00	172,20	-49,10
75,00	182,60	-48,10
126,00	176,80	-46,90
175,00	180,60	-45,90
273,00	182,70	-43,90
328,00	186,30	-42,50
396,00	187,00	-42,20
471,00	188,60	-41,30

HOLE NAME	FROM	TO	ROCK TYPE	COMMENTS
CS-18-16	0	1.5	OVB	DRILL HEAD TO CASING
CS-18-16	1.5	7.46	OVB	CASING
CS-18-16	7.46	16.22	BST	BASALT: Uniform and massive. very fine-grained basalt. <0.2 mm crystalline. Dark green. and non magnetic and moderately hard < chisel. Lower contact saf at 40 dca. From 13.79 to 16.66m Calcite alteration effervesces in HCl. From 14.91 to 15.32m 0.2-0.5% very fine disseminated pyrite in groundmass. From 15.32 to 16.00m 1.0-4.0% very fine-grained disseminated pyrite as clusters to 2.0 mm. From 16.00 to 16.14m 4.0% very fine-grained disseminated pyrite as clusters to 2.0 mm and thin wisps of black argillite or chlorite. From 16.14 to 16.22m Sharp angular chunks of black argillite (rip-offs) infilling between 1.5 cm balls of massive basalt.
CS-18-16	16.22	16.59	ARG	GRAPHITIC ARGILLITE: Argillite as described below. Conductive on graphite slips only as described below. From 16.22 to 16.31m Argillite: 75% black. thin laminated argillite with 2% fine-grained pyrite. very hard > chisel and non magnetic. From 16.56 to 16.57m Strong shinny black graphite slip with patchy conductance. From 16.31 to 16.41m Dike? Tuff?: Very fine-grained dark grey. moderately hard < chisel. non magnetic. 2% fine-grained disseminated pyrite in groundmass From 16.41 to 16.59m Argillite: Brecciated massive black argillite. very hard > chisel. 5% fine-grained pyrite as breccia infilling. 10% combined quartz and calcite veining and fracture filling. From 16.25 to 16.26m Strong shinny black graphite slip with patchy conductance. From 16.58 to 16.59m Strong shinny black graphite slip with patchy conductance.
CS-18-16	16.59	17.04	SYE	Hornblende Syenite Dike. Uniform and massive. dark grey syenite dike with apparent feldspar phenocrysts and 5% sharp hornblende phenocrysts to 0.5 mm. Appears to be from Feldspar porphyry-syenite suite of dike (and tuffs?). 1% extremely fine grained disseminated pyrite in groundmass. Lower contact sharp along strong graphite slip.

CS-18-16	17.04	17.52	ARG	GRAPHITIC ARGILLITE: 75% black graphitic beds and 25% thin medium grey tuff beds. 8 strong polished black graphite slips. The argillite groundmass is conductive (more conductive than the graphitic slips). Weak calcite alteration. Lower contact sharp and frozen at 50 dca along quartz vein. Partially attached argillite fragments project into the quartz vein.
CS-18-16	17.52	18.72	BST	BASALT: flow textured. Very fine-grained. hard =/> chisel and non magnetic. 5% pyrite as euhedral crystals to 3.0 mm and fine-grained pyrite aggregates. Lower contact sharp and frozen at 60 dca. Thin black argillite band along lower contact. From 17.52 to 17.75m Quartz vein with convergent walls at 55 dca (parallel to argillite banding) and 150 dca. Massive. very coarse grained white quartz vein with 1% pyrite and trace chalcopyrite.
CS-18-16	18.72	20.03	BST	BASALT: Uniform and massive basalt flow (or dike). Medium grey. very fine-grained. moderately hard < chisel. and non magnetic. 3% pyrite as very fine-grained to 1.5 mm pyrite grains. From 19.78 to 19.83m Minor (tuff?) banding at 43 dca.
CS-18-16	20.03	22.77	ARG	GRAPHITIC ARGILLITE: 50% black graphitic argillite bands and 50% medium grey tuff beds. 5% pyrite concentrated in grey tuff beds. Very hard > chisel and non magnetic. Much quartz veining. From 20.03 to 20.74m 50% quartz veining to 2.5 cm. Pyrite concentrated in wall rock. From 21.37 to 21.75m 20% quartz veining to 34.0 cm at low angle to core axis and parallel to banding. From 22.37 to 22.57m 60 dca. Sheeted quartz vein with 5% wall rock rip off argillite bands (breccia) parallel to contacts. 5% pyrite.
CS-18-16	22.77	42.62	BST	Basalt: Uniform and massive. very fine-grained. dark green to grey green basalt lacking flow textures. Non magnetic moderately soft < chisel except as described below. Lower contact 30 dca along strong slip From 22.77 to 23.53m Dark green microfracture filling. From 22.77-23.15m hard =/> chisel. From 22.77 to 26.09m Pervasive calcite alteration. From 23.15 to 42.16m 0.5% calcite fracture filling to 1.0 cm. From 26.09 to 37.27m Not calcite altered. From 37.27 to 40.00m Weak pervasive calcite alteration. From 40.00 to 42.16m Strong pervasive calcite alteration. From 42.16 to 42.49m Quartz band with 50% wall rock. 25% grey quartz. 25 Feldspar? (or carbonate?). Possibly weak effervesce in HCL.
CS-18-16	42.62	48.26	SYE	SYENITE PORPHYRY: Uniform and massive. brick red hornblende syenite porphyry with ~5% altered. dark green hornblende phenocrysts to 1.0mm. generally <0.7 mm. Strong hematization with 5% prominent (typical) pale grey alteration speckles. Very little fine chlorite. Does not

				effervesce in HCL. Weakly magnetic with 0.5-1.0 mm fall back of pencil magnet. 1% extremely fine grained disseminated pyrite throughout. Lower contact sharp and frozen at 30 dca.
CS-18-16	48.26	63.74	BST	BASALT: Uniform and massive. dark green. very fine-grained basalt. Non magnetic. generally soft << chisel. locally moderately soft < chisel. Locally weak to moderate pervasive calcite alteration. From 48.26 to 49.82m 20 dca. Complexly folded with 30% pale grey and 70% dark green bands.
CS-18-16	63.74	64.54	FELP	FELDSPAR PORPHYRY: Uniform and massive. very hard > chisel. Has 10% 0.5-2.0 mm white feldspar phenocrysts in greenish pink groundmass. Phenocrysts have microfracture filling. Chloritic alteration fabric 40 dca parallel to contacts. Moderate calcite alteration of groundmass. 2% hairline to 0.4 cm calcite fracture fillings commonly 25-45 dca.. Minor fine disseminated pyrite concentrated along minor quartz alteration bands. Lower contact partially sharp and frozen at 30 dca and partially along strong slip at 60 dca. From 56.02 to 56.04m 25 dca 1.5 cm calcite vein. Fine grained white Ca with 3 % very thin red hematite band and 3% vert thin chlorite bands parallel to walls. Upper contact strong slip wall. Lower contact frozen.
CS-18-16	64.54	67.21	BST	BASALT: Arbitrability logged as basalt based on SG of 2.93 and high mafic index. This could be a thick tuff bed. Soft << chisel. Non-magnetic above 66.00m and weakly magnetic with 1.0 cm fall back of pencil magnet below 66.00m. Uniform and massive and fine grained with very weak (flattening?) fabric at 60 dca defined by extremely fine pale grey steaks. Weak calcite alteration in upper half grading to strong pervasive calcite alteration in bottom half. 3% hairline to 0.3 cm calcite fracture fillings commonly 35-45 dca. Minor coarse pyrite crystals. Lower contact sharp and frozen at 50 dca.
CS-18-16	67.21	67.47	HOR	HORBLENDE PORPHYRY: Dike of feldspar porphyry syenite suite. Uniform and massive except for slight apparent fine texture at lower contact. Medium green groundmass with 10% 1-2 mm black hornblende (augite?) phenocrysts. Non magnetic, soft << chisel with SG = 2.77. Strong pervasive calcite alteration of groundmass. Lower contact sharp and frozen at 45 dca and parallel to upper contact.
CS-18-16	67.47	69.14	BST	BASALT: Lower contact defined at abrupt change in SG from >2.80 above and <2.80 below. Rock type determination within a few meters above and below are difficult to determine and are questionable due to alteration and apparent shear banding above and below. Same unit as 64.54-67.21m arbitrability logged as basalt based on SG of 2.80-2.84, Moderately soft < chisel, and non magnetic. Grades from uniform and massive and fine grained with very weak (flattening?) fabric to strongly laminated pale grey and dark green banding at 55 dca. Strong pervasive calcite alteration. Minor coarse pyrite crystals. Lower contact sharp and frozen at 70 dca.

CS-18-16	69.14	69.75	FELP	FELDSPAR PORPHYRY?: Appears to be intensely altered feldspar porphyry. Medium green. extremely hard > chisel. non magnetic. Massive lacking identifiable texture except for 5% disseminated pyrite concentrated I bands at 35 dca that appear to be completely healed fractures (excluding pale alteration described below). From 69.14 to 77.98 m appears to be a strongly mineralized alteration sulphide zone associated with multiple ages of diking and alteration superimposed on each other. This is an important zone to follow-up booth a a zone and as a vector leading to a higher-level mineralization or vent. The identification of lithologies and cross cutting relationships are uncertain. From 69.41 to 69.75m: Intense white bleached alteration having the appearance of quartz vein. Has pervasive and very fine yellow microfracture filling. 2% pyrite in chloritic fracture fillings. It is uncertain if this is silicification or albitization. From 69.59-69.61 1.5 cm band of very dark green chlorite and semi-massive fine-grained pyrite along lower edge of 5 cm wall rock inclusion. Upper contact sharp and frozen at 45 dca. lower contact sharp along strong slip at 60 dca.
CS-18-16	69.75	70.24	FELP	FELDSPAR PORPHYRY?: Strongly banded, alteration logged as feldspar porphyry based on SG of 2.73 and medium grey appearance. Sharply defined and straight banding at 50 dca. Non magnetic, extremely hard > chisel. Appears to have two generations of alteration. An early pervasive alteration (silicification?) overprinted by healed fractures with 0.5 cm pale yellow bleached alteration that have the appearance of albitization(?). 2% fine (<0.5 mm) disseminated pyrite throughout. Fine pyrite within the very thin healed fractures. Lower contact sharp and frozen at 60 dca . This contact is offset by three healed by three 1 cm micro-faults at 140 dca.
CS-18-16	70.24	71.28	TUF	FELSIC TUFF?: Light grey, very fine-grained, banded and intensely altered. Nonmagnetic and very hard > chisel. Banded at 60 dca with prominent pale yellow alteration along some bed and along healed cross cutting fractures. 1% fine disseminated pyrite in groundmass. Lower contact sharp and frozen at 45 dca.
CS-18-16	71.28	73.09	TUF	FELSIC TUFF?: Light grey, very fine-grained, banded and intensely altered. Nonmagnetic and very hard > chisel. Vague contorted banding defined by dark green chlorite in and dominant pale grey bands. Non magnetic and very hard > chisel. 1% disseminated pyrite. Lower 20 cm prominent pale grey microfracture filling. Lower contact sharp and frozen at 40 dca.
CS-18-16	73.09	73.71	TUF	MAFIC TUFF?: Strongly banded at 50 dca. Pale grey and dark green banding is intensely pale grey micro-fractured . Prominent pervasive calcite alteration. 3% disseminated pyrite. Lower contact at 73.71m is sharp and frozen at 70 dca. The relict banding is truncated by the hornblende porphyry below. From 73.60 to 73.71 Pyrite-quartz-feldspar alteration zone focused on intrusive contact directly below. 5% pyrite cubes to 5.0 mm in a groundmass of coarse grey quartz and opaque white feldspar (albite?) feldspar.

CS-18-16	73.71	74.24	HOR	HORNBLENDE PORPHYRY: Hornblende porphyry of feldspar porphyry syenite suite with intrusive upper and lower contacts. 5% feathery black hornblende phenocrysts to 0.5x7.0 mm and 5% 1.0 mm pale grey calcite specks in a brick red fine-grained groundmass. The red hematization is of variable intensity. Thin quartz healed fractures bleached wall rock cross cut this unit. 1 % pyrite concentrated near strongest bleached fracture alteration. Lower contact sharp and frozen at 75 dca near strong slip. Cross cutting relationships not established at the lower contact.
CS-18-16	74.24	74.82	TUF	MAFIC DIKE?: Has general appearance of feldspar porphyry syenite suite but is logged as mafic tuff based on SG of 2.87. Apparent mineral texture 0.5-2.0mm on core and </= 0.5 mm on broken surface. Weak pervasive calcite alteration. Lower contact at strong slip at 60 dca.
CS-18-16	74.82	75.39	HOR	HORNBLENDE PORPHYRY: Dark brick red hornblende porphyry with 5% black hornblende crystals to 1.5mm in a brick red groundmass. Non magnetic. hard =/> chisel. Less than 1% fine pyrite concentrated along 1% thin quartz fracture filling. Lower contact sharp and frozen at 30 dca.
CS-18-16	75.39	75.49	HOR	HORNBLENDE PORPHYRY: 74.39 is an apparent sharp contact between to slightly different hornblende porphyry dikes. Lower contact sharp and frozen at 42 dca.
CS-18-16	75.49	75.92	BREC	HETEROLITHIC BRECCIA DIKE: 80% tightly packed. 1.0-7.0 cm sub-angular to rounded fragments dominated by brick red strongly hematized fragments from different units. 15% rock flour to 1.0 fragments dominantly <0.5 cm. 5% masses of massive black chlorite. Very little pyrite. Lower contact sharp and frozen at 42 dca and parallel to upper contact. s
CS-18-16	75.92	77.25	SYE	SYENITE DIKE: Apparent relict primary texture apears to have been 1.0 mm feldspathic crystalline texture (possibly 50% feldspar crystals in finer matrix?). The highly altered greenish orange groundmass is cut a stockwork of silicate fracture fillings with prominent pyritic, orange (colour of common feldspar) alteration. Both groundmass and cross cutting alteration are very hard > chisel, non magnetic. From 75.921 to 76.15 Chloritic fracture filling. Black chlorite similar to black chlorite in heterolithic breccia above.
CS-18-16	77.25	86.73	UM	ULTRAMAFIC: Widely variable textures as described below. From 77.25 to 77.34 Massive black chlorite similar to chlorite in breccia unit above. Barren. very soft <<< knife, non magnetic, Contacts 35 dca. From 77.34 to 77.81 1.0 mm lamination are dominant textural feature. SG 2.81, hard =/> chisel. moderately magnetic with 2.0 cm fall back of pencil magnet. A few scattered 1.0-2.0 mm pyrite crystals. From 77.81 to 77.95 45 dca 12 cm quartz vein. 60% coarse opaque white quartz and 40% coarse opaque white and translucent pink carbonate that does not respond to HCl. The upper 4.0 cm is

				dominated by carbonate and appears to be of different age rotated relative to rest of vein. Upper contact sharp and frozen at 45 dca. Lower contact not determined due to lost core. From 77.95 to 77.98 Arbitrarily logged as lost core to accommodate logging and sample intervals. From 77.98 to 80.36 Massive to moderately laminated at 45 dca. Medium grey, very soft <<< chisel, strongly magnetic with 5.0 cm fall back of pencil magnet. Trace 3.0 mm pyrite crystals. 5% white quartz vein to 1.5 cm as gash fractures that pinch out in core (20 dca), isolated boudans. and a folded vein. Lower contact gradational into sub-unit below. From 80.36 to 82.90 Distinctive spotted ultramafic. Appearance dominated by 1.0 cm black patches within a medium grey groundmass. Ignoring colour; both the black and medium grey rock appear to be otherwise similar 1.0 mm crystalline. Very soft <<< chisel (=fingernail). strongly magnetic with 5.0 cm fall back of pencil magnet. This 2% carb quartz veins of various orientations. Barren of pyrite. From 82.90 to 84.64 Fine-grained ultramafic. Medium greenish grey. very soft <<< chisel. strongly magnetic with 5.0 cm fall back of pencil magnet. Lower contact in broken core. From 84.64 to 85.78 Ultramafic dike. Uniform and massive. very soft <<< chisel and NOT MAGNEIC. Lower contact sharp and frozen at 72 dca. From 85.78 to 86.73 Fine-grained ultramafic. Massive with rock texture 2 mm and crystalline text <0.5 mm. Medium greenish grey. very soft <<< chisel. strongly magnetic with 5.0 cm fall back of pencil magnet. Lower contact sharp at 45 dca along carb vein and strong slip. From 86.03 to 85.05 80 dca 2.5 cm quartz vein. Massive. barren opaque white quartz. 85.92-86.06 3% disseminated pyrite concentrated along vein.
CS-18-16	86.73	87.26	CHE	FELSIC DIKE (CHERT?): Cherty appearance. Aphanitic. pale grey. Massive with strong foliation cleavage at 40 dca. Barren. Lower contact sharp and frozen at 40 dca parallel to foliation above and below. From 86.73 to 94.65 The appearance of the core logged as felsic dike (chert?) has the same appearance as a banded cherty appearing outcrop along the east edge of the north slope of the drill trail from the south-east (big trench area). In this outcrop the cherty rock has a white. granular (sugary) appearance similar to some Band Oxide Iron Formation in Nicol Tp.
CS-18-16	87.26	87.62	FELP	FELDSPAR PORPHYRY: Pale grey bimodal feldspar porphyry with 1% 2 mm feldspar phenocrysts and ~2% 0.5-1.0 mm feldspar phenocrysts in a light grey aphanitic groundmass. Gneissic texture due to light grey to medium green foliation at 40-45 dca. Barren. Lower contact sharp and frozen at 45 dca parallel to foliation above and below.
CS-18-16	87.62	90.64	CHE	FELSIC DIKE (CHERT?): Cherty appearance. Light grey with moderate gneissic appearance do to foliation defined by faint dark grey banding and strong parting along. both at 45-62 dca (core angle

				increases down the hole). Very hard > chisel and non magnetic. Barren. Lower contact sharp and frozen at 62 dca parallel to foliation above ands below.
CS-18-16	90.64	91.11	FELP	FELDSPAR PORPHYRY: Pale grey bimodal feldspar porphyry with 2% 2 mm feldspar phenocrysts and ~2% 0.5-1.0 mm feldspar phenocrysts in a light grey aphanitic groundmass (with a faint pinkish tint). Pervasive gneissic texture due to 15 %.light grey to medium green foliation at 62 dca. Less than 1% very fine-grained disseminated pyrite. Lower contact sharp and frozen at 62 dca parallel to foliation above and below. From 90.66 to 91.11 Four 0.5-1.0 cm quartz-calcite veins at 145 dca (oriented rotated relative to foliation). Grey quartz and opaque white calcite. 6.0 cm core length = 16% veining.
CS-18-16	91.11	94.65	CHE	FELSIC DIKE (CHERT?): Light grey to pale orange with moderate gneissic appearance do to foliation defined by faint dark grey banding and strong parting along. both at 60-70 dca (core angle increases down the hole). Very hard > chisel and nonmagnetic. Barren. Lower contact sharp and frozen at 58 dca parallel to foliation above ands below. From 92.71 to 94.65 Minor fine hairline quartz fracture filling with minor chalcopyrite and pyrite.
CS-18-16	94.65	95.8	FELP	FELDSPAR PORPHYRY: Pale grey with prominent with 5% 0.5-3.0 mm white feldspar phenocrysts. Prominent 2.0 mm gneissic banding. very hard > chisel. non magnetic. Very fine disseminated pyrite. 8% (9.0cm total core length) hairline to 1.5 cm quartz-calcite veining. Lower contact sharp and frozen at 70 dca
CS-18-16	95.8	95.86	CHE	FELSIC TUFF (CHERT?): Light grey gneissic appearance do to foliation defined by faint dark grey banding and strong parting along. both at 60-70 dca (core angle increases down the hole). Very hard > chisel and nonmagnetic. Barren. Lower contact sharp and frozen at 70 dca parallel to foliation above and below:
CS-18-16	95.86	96	FELP	FELDSPAR PORPHYRY: Strongly sericitic and strongly foliated feldspar porphyry with possible vague relict phenocrysts. Very soft << chisel and nonmagnetic. 3% disseminated pyrite aggregates aligned with foliation. Lower contact sharp and frozen at 70 dca near slip. Contact appears to cross cut or truncate structure in the argillite below.
CS-18-16	96	96.59	ARG	GRAPHITIC ARGILLITE: Black graphitic argillite. very hard > chisel. nonmagnetic. 5% laminated aggregates of pyrite. Fine deformed laminations at 70 dca. Lower contact sharp and frozen at 70 dca. At 96.15-96.17m. 96.25-96.28m and 96.40-96.50m are bands that are yellow. massive (sericitic?) soft << chisel. nonmagnetic (parallel to black foliation).
CS-18-16	96.59	100.13	FELP	DENSE FELDSPAR PORPHYRY: Dense phenocryst Feldspar porphyry. not similar to the dominant feldspar porphyry units logged in this hole. From 96.59 to 97.13 Pale yellow lacking apparent phenocrysts. soft < chisel. nonmagnetic. 1%

				very fine to 0.5 mm disseminated pyrite. This subunit is gradational into subunit directly below. From 97.13 to 100.13 Medium grey groundmass with 30% whiter feldspar phenocrysts in a medium groundmass. Uniform and massive with weak foliation at 50 dca. Breaks on foliation exposing fresh appearing feldspar. Moderately hard </= chisel. Less than 0.5% pyrite. Lower contact sharp and frozen at 52 dca. From 100.03-100.06 similar to unit below 100.13.
CS-18-16	100.13	100.48	FELP	FELDSPAR PORPHYRY: Feldspar porphyry with 2% 2-3 mm white feldspar phenocrysts as augen. pale yellow (weakly sericitic?). strongly foliated at 60 dca. 2% fine disseminated pyrite. Lower contact 50 dca along strong slip parallel to foliation.
CS-18-16	100.48	101	ARG	GRAPHITIC ARGILLITE: From 100.48 to 100.62 One piece of core as black graphitic argillite. Prominent black and pale grey laminations at 50 dca. Very hard > chisel. nonmagnetic. 5% coarse pyrite. From 100.62 to 100.69 One piece of core; pale yellow. strongly foliated with 10% deformed quartz veining as deformed foliation cross cutting primary foliation (possibly one foliating event). From 101.69 to 101.00 Many chips of black graphitic argillite including 3 cm quartz-calcite vein with 50:50 white calcite and grey quartz.
CS-18-16	101	101.13	FELP	FELDSPAR PORPHYRY: Feldspar porphyry similar to 100.13-100.48m Lower contact 30 dca along strong slip
CS-18-16	101.13	101.52	ARG	ARGILLITE: Pale grey to dark grey argillite. Laminations 30 dca with Soft << chisel-folds when view from upper left to lower right orientation. Lower contact sharp and frozen at 60 dca with small fold wrinkles.
CS-18-16	101.52	101.98	FELP	FELDSPAR PORPHYRY: Pale yellow with 5% 1-4 mm feldspar phenocrysts (variable along core length). SG = 2.70. Lower contact sharp and frozen at 55 dca.
CS-18-16	101.98	102.9	TUF	FELSIC TUFF?: Mixed: as medium and dark green laminations also interbedded aphanitic tuff) having appearance of felsic intrusive above. also fine grained tuff with visible grains with laminated section with appearance of feldspar porphyry. Lower contact sharp and frozen 60 dca parallel to foliation. Examination of this mixed unit indicates the felsic dike logged above may be very thick felsic tuffs and some or many of the feldspar porphyries may be feldspar crystal tuffs.
CS-18-16	102.9	103.02	FELP	FELDSPAR PORPHYRY: Feldspar porphyry with 3% rounded feldspar phenocrysts to 3.0 mm in a pale brownish grey groundmass. Barren of pyrite. Lower contact sharp and frozen at 70 dca parallel to foliation.

CS-18-16	103.02	103.33	TUF	FELSIC TUFF?: Medium grey. extremely fine grained and laminated. Lower contact sharp and frozen at 30 dca parallel to foliation.
CS-18-16	103.33	110.54	BST	BASALT: Uniform and massive. very fine-grained. dark green basalt with week foliation and parting at 60 dca. Very soft <<< chisel and nonmagnetic. SG 2.72 to 2.75. soft << chisel. nonmagnetic. Lower contact abrupt at 110.54 meters defined by texture and SG change. From 106.07 to 106.08 155 dca 0.3 cm calcite vein with 10% massive pyrite patches and thin wall rock pyrite veins projecting to 3.0 cm along foliation at 50 dca. Up to 1 cm weak bleached alteration along main vein. From 109.52 to 109.68 Interflow subunit. Aphanitic and appears bedded. dark green. SG 2.68. nonmagnetic. hard > chisel From 110.11 to 110.19 Interflow subunit. Aphanitic. massive. dark green. SG 2.67. nonmagnetic. hard > chisel
CS-18-16	110.54	120.89	UM	ULTRAMAFIC: Uniform and massive. fine-grained (</+ 1.0 mm crystalline. Dark green. nonmagnetic with variable hardness. Generally barren. Lower contact sharp and frozen at From 110.54 to 117.22 Moderately soft < chisel and little or no alteration. From 117.22 to 120.89 Stg pervasive calcite alteration. soft << chisel. From 119.61 to 119.83 30 dca 7.0 cm barren. white quartz vein with 5% hairline calcite fracture fillings and 5% hard. mass black mineral.
CS-18-16	120.89	123.69	FELP	(QUARTZ-) FELDSPAR PORPHYRY: 3% 3-4 mm feldspar porphyry and 15% 1-2 mm feldspar porphyry in a medium grey groundmass. The lowest 30 cm has 1% 2-3 mm clear glassy quartz phenocrysts. This unit lacks apparent foliation. 5% bleached stockwork alteration bleaching alo9ng hairline quartz fracture fillings. Trace pyrite. Lower contact irregular. sharp and frozen averaging 70 dca. From 120.89 to 121.46 Moderate to weak pervasive calcite alteration decreasing down the hole.
CS-18-16	123.69	131.41	UM	ULTRAMAFIC: Uniform and massive. dark green. medium grained (0.5 mm crystalline). Moderately soft < chisel. Generally nonmagnetic. locally with up to 1.5 cm fall back of pencil magnet. 3% calcite fracture filling to 1.0 cm. Minor barren quartz veining. Lower contact sharp and frozen at 155 dca. The unit below truncates the foliation of the ultramafic above (55 dca). From 130.16 to 131.69 1% 2.0 mm skeletal leucoxene.
CS-18-16	131.41	133.46	UM	ULTRAMAFIC DIKE: Lower contact sharp and frozen at 30 dca. From 131.41 to 132.55 Sericite altered ultramafic (dike?): Uniform and massive. moderately hard </= chisel. nonmagnetic. SG 2.83. Mostly pale yellowish grey with relict patches of medium greenish grey. Partially distinct lower contact at 30 dca on one side of core. Other side of core gradational change.

				From 132.55 to 133.46 Intensely sericite altered ultramafic dike: Pale yellowish grey. Hard =/> chisel. SG 2.85. 2% fine disseminated pyrite. Minor dark green hairline fracture fillings. Lower contact sharp and frozen at 30 dca. May be a separate dike from subunit directly above
CS-18-16	133.46	134.49	FELP	FELDSPAR PORPHYRY: Feldspar porphyry with 1% 2-3 mm and 1% 1-2 mm feldspar phenocrysts in a light grey groundmass. Weak foliation at 40 dca. 1% extremely fine grained and 0.5-1.0 mm disseminated pyrite. Lower contact sharp and frozen at 42 dca.
CS-18-16	134.49	138.2	UM	ULTRAMAFIC: Generally uniform and massive. fine-grained. 0.54 mm crystalline. Moderately hard < chisel. strongly magnetic with 2-4 cm fall back of pencil magnet. Hard > chisel near lower contact. Locally up to 1% 0.2-1.0 mm disseminated pyrite crystals. Lower contact sharp and frozen dca 55 dca.
CS-18-16	138.2	138.55	FELP	FELDSPAR PORPHYRY: Feldspar porphyry with 1% 2-4 mm rounded and 15% 0.5-1.0 mm feldspar phenocrysts in a pale tan coloured groundmass. Locally relict medium grey unaltered groundmass. Prominent foliation at 55 dca. Lower contact sharp and frozen at 60 dca.
CS-18-16	138.55	145.6	UM	ULTRAMAFIC: Dark green. with prominently foliation at 35-52 dca. Soft << chisel. nonmagnetic. Lower contact sharp and frozen at 40 dca. From 138.55 to 139.08 Partial bleaching cross cutting foliation. moderately hard < chisel. SG 2.79. From 144.94 to 145.60 Sericite bleaching. moderately soft < chisel. SG2.86.
CS-18-16	145.6	146.09	FELP	FELDSPAR PORPHYRY: 1% sharp euhedral feldspar phenocrysts and 5% 1-2 mm feldspar phenocrysts in pale orange groundmass. 12 % irregular quartz veining to 1.5 cm with parches of extremely chrome green fine grained. massive fuchsite. SG = 2.66. 1% hard. tan carbonate. <1% pyrite. Lower contact sharp and frozen at 50 dca.
CS-18-16	146.09	153.38	UM	ULTRAMAFIC: Uniform and massive. dark green. Soft < chisel. nonmagnetic except for sericitic alteration. Lower contact sharp and frozen along thin quartz vein at 10 dca. Apparent zone sericite calcite alteration centred on the feldspar porphyry (above and below) are described below. From 146.09 to 148.57 Sericite alteration: Moderate pervasive pale yellowish grey. moderately soft < chisel. From 148.57 to 148.85 Sericite alteration: gradation into unaltered ultramafic below. hard > chisel . From 148.85 to 152.00 5% hairline to 1.5 cm calcite veining. From 148.85 to 151.22 Moderate pervasive calcite alteration. From 149.29 to 149.55 25% irregular patches of quartz-calcite vein. Veining and wall rock cut by a set of hairline calcite fracture filling at 20 dca. Wall rock very soft chloritic. From 151.22 to 151.66 Does not respond to HCL. From 151.66 to 152.00 Moderate pervasive calcite alteration. From 155.00 to 152.38 Patchy sericite alteration grading to strong pervasive sericitic alteration

				centred on feldspar porphyry. Fuchsite within 1.5 cm of quartz vein at feldspar porphyry contact. Apparent Leucoxene evident and extends into calcite alteration above.
CS-18-16	153.38	154.46	FELP	FELDSPAR PORPHYRY: 1% 2-3 mm sharp euhedral to rounded feldspar phenocrysts and 10% 1-1.5 mm feldspar phenocrysts in a pale tan groundmass. Very hard > chisel. nonmagnetic. Euhedral phenocrysts in un-foliated and rounded phenocrysts in sericite foliated (SG 2.71) part of this unit. 9% irregular quartz veining to 2.0 cm with parches of extremely chrome green fine grained. massive fuchsite. Lower contact sharp and frozen at 65 dca.
CS-18-16	154.46	159.57	UM	ULTRAMAFIC: Dark green. fine grained. massive to strongly foliated. Soft << chisel. nonmagnetic. 0.5% 1 mm pale tan leucoxene throughout(?).Patchy and pervasive sericite alteration described below is hard > chisel. Lower contact sharp and frozen at 80 dca. From 154.46 to 154.80 50% patchy pale yellow green sericite and 50% relist dark green ultramafic. From 155.75 to 157.75 NB Fuchsite quartz vein zone. Intense Sericite fuchsite alteration centred on quartz veins. From 155.90 to 156.75 Quartz vein: Massive white quartz vein with 10% well rounded chrome green fuchsitic breccia fragments. 2% tan carbonate as fracture filling in the quartz. From 159.42 to 159.81 90 dca 39 cm quartz vein with both dark green ultramafic and chrome3 green fuchsitic breccia fragments. From 159.81 to 159.97 fuchsitic. strongest near vein above.
CS-18-16	159.57	160.35	FELP	FELDSPAR PORPHYRY: 1% 2.0 mm rounded and 5% 0.5-1.0 mm feldspar phenocrysts in pale orange groundmass. Very hard > chisel and nonmagnetic. Trace pyrite. Lower contact 45 dca along 0.5 cm quartz vein and slip.
CS-18-16	160.35	160.96	UM	ULTRAMAFIC; Uniform and massive. dark green. to pale green. . hard =/> chisel uniform and massive. dark green. to pale grey. hard =/> chisel. nonmagnetic.
CS-18-16	160.96	161.7	FELP	FELDSPAR PORPHYRY: 3% 3 mm sharp euhedral and 3% 1.0-2.0 mm feldspar phenocrysts in a medium grey groundmass. %0% of groundmass bleached to pale orange along quartz fracture filling. veining and quartz flooding. Lower contact sharp and frozen at 80 dca.
CS-18-16	161.7	202.97	UM	ULTRAMAFIC: Uniform and massive. fine-grained (0.5mm crystalline). dark green. Moderately hard </= chisel. and nonmagnetic. Locally foliated as below. Not altered except as described below. 1% white Ca fracture filling to 1.0 cm generally 0.1-0.4 cm. Lower contact at 70 dca along strong slip. From 161.70 to 164.81 Strong foliation generally 25 dca. Locally folded and bent. Weak sericite bleaching. Moderately hard </= chisel. From 167.96 to 168.03 45 dca 5.0 cm quartz vein with 10% white calcite. Frozen contact with

				slip 1.0 cm above the vein. From 178.26 to 178.37 20 dca. 4.0 cm quartz vein. 10% coarse grained calcite. Frozen walls. From 181.56 to 182.98 Chloritic fracture filling. From 182.03-182.32 moderate foliation at 45-50 dca. From 193.90 to 194.93 Strong foliation at 60-37 dca. From 196.13 to 193.81 00 dca 4.0 cm quartz-calcite vein. From 198.24 to 198.46 00 dca 4.0 cm quartz calcite vein in and out off same side of core. Probably same vein as above. From 201.47 to 201.52 05 dca 1.5 cm white calcite vein. From 201.71 to 201.92 00 dca 5.0 cm quartz calcite vein in and out same side of core. Possibly same quartz calcite vein as above. From 202.59 to 202.90 Foliation: Strong foliation grading into intense foliation down the hole with isoclinal fold at 202.84m. This shearing appears to be related to the competency contrast between the rock above and below which is a common feature in this hole.
CS-18-16	202.97	206.4	HOR	HORNBLENDE PORPHYRY: Uniform and massive with 15% 0.5-2.0 mm feldspar phenocrysts and <1% 1 mm hornblende phenocrysts in a dark greenish red groundmass. Moderately hard < chisel. nonmagnetic. SG 2.80. Strongly chloritic throughout with weak pervasive calcite alteration. 0.5% fine pyrite crystals. Lower contact sharp and frozen at 60 dca. From 202.90 to 203.17 Mafic dike of the feldspar porphyry syenite suite: Uniform and massive. dark-green with no apparent phenocrysts. 40% 3 mm dark red. wispy (feldspathic) patches in 60% dark green (chloritic) groundmass. Hard =/> chisel. nonmagnetic. with SG = 2.81. Moderate pervasive calcite alteration. Both contacts along strong slips at 60 dca From 203.17 to 203.42 Ultramafic: Strongly foliated at 60 dca parallel to contacts above and below. Extremely soft <finger nail. nonmagnetic and does not respond to HCL except for hairline calcite fracture filling. From 205.86 to 205.95 Mafic dike of the feldspar porphyry-syenite suite: Uniform and massive. Dark-green with no apparent phenocrysts. 40% 3 mm dark red (feldspathic) patches in 60% dark green (chloritic) groundmass. Moderate pervasive calcite alteration. Hard =/> chisel. nonmagnetic. with SG = 2.81. Both contacts along strong slips at 60 dca.
CS-18-16	206.4	216.89	UM	ULTRAMAFIC: Uniform and massive. medium green. fine-grained moderately hard </= chisel and nonmagnetic. Locally foliated. Lower contact along slip at 30-55 dca. From 206.40 to 207.63 Moderately hard < chisel with red overprint of grey feldspathic component and strong dark green chloritic overprint. Has appearance of mafic syenite but appears to be contact alteration along dike set above.

				From 206.51 to 206.54 Mafic Syenite Dike: Massive. medium reddish green. very fine-grained. very hard > chisel and nonmagnetic. Both contacts frozen at 70 dca. From 207.63 to 208.29 Very fine-grained chloritic alteration centred on calcite-quartz veining at 207.66-207.88m. From 209.31 to 210.57 Moderate to weak calcite alteration. From 209.59 to 209.64 40 dca 3 cm quartz vein: Massive coarse-grained white quartz. From 210.15 to 210.24 30 dca 7.0 cm quartz vein. Massive coarse-grained white quartz.
CS-18-16	216.89	219.34	FELP	FELDSPAR PORPHYRY: Sheeted diking of the Feldspar porphyry syenite suite as below. From 216.89 to 217.17 Feldspar porphyry: 5% 3-4 mm euhedral feldspar phenocrysts and 2% 1 mm feldspar phenocrysts in a pale orange groundmass. Very hard > chisel. nonmagnetic. Lower contact sharp and frozen at 50 and 135 dca oriented to foliation above and below. From 217.17 to 217.62 Ultramafic: Uniform and massive. fine-grained. medium hard > chisel. Nonmagnetic. Appears to be from ultramafic/mafic suite but could be from feldspar porphyry syenite suite. Lower contact at 70 dca From 217.62 to 218.69 Feldspar porphyry: 3% 3-4 mm feldspar phenocrysts and 2% 1.0-1.5 mm feldspar phenocrysts in a medium grey groundmass overprinted by 50% orange alteration centred on hard =/> chisel quartz fracture filling commonly at 130 dca. Very hard > chisel. not magnetic. Lower contact at 70 dca along strong slip. From 218.69 to 219.02 Mafic Syenite: Uniform and massive. fine grained. reddish green. Hard =/> chisel. nonmagnetic. with SG = 2.77. Groundmass is 60% medium reddish. 30% dark green and 10% pale grey. Lower contact at 70 dca with small adhesion across the slip. From 219.02 to 219.34 Feldspar porphyry: 2% 2-4 mm feldspar phenocrysts and 2% 1.0-1.5 mm feldspar phenocrysts in a medium grey-green groundmass overprinted by medium orange alteration centred on hairline quartz fracture fillings. Weak chloritic foliation at 60 dca. Minor pyrite. Lower contact 55 dca along strong slip with small adhesion across the slip.
CS-18-16	219.34	225.83	UM	ULTRAMAFIC: Uniform and massive. fine-grained groundmass texture. moderately hard < chisel and nonmagnetic. 0.5% hairline to 0.3 cm chloritic fracture filling. Lower contact sharp and frozen at 70 dca with several 135 dca micro-faults. From 220.72 to 220.95 Mafic Syenite Dike: Uniform and massive. dark green Moderately hard < chisel. weakly magnetic with 2 cm fall back of pencil magnet. Upper contact 85 dca. Lower contact along slip with quartz vein below. From 220.95 to 229.98 90 dca 3.0 quartz vein. Massive white quartz with one strong slip wall. From 221.19 to 222.85 Mafic Syenite Dike: Uniform and massive. Fine-grained with <0.5 mm groundmass texture. Appears to have internal contacts and self diking. Moderately hard </= chisel.

				Nonmagnetic. Upper contact sharp and frozen and irregular at 30 dca. Lower contact sharp with 1.0 cm dark green in unit below. From 223.25 to 223.53 NB 35 dca 15.0 cm quartz-chalcopyrite pyrite vein: 5% equal parts chalcopyrite pyrite. 5% chlorite inclusions. 20% opaque pale pink calcite effervesces strongly in HCL. Minor open vug in the calcite Slip wall at 05 and 35 dca. From 221.51-225.40 strong pervasive calcite alteration. From 225.71 to 225.83 Intense chlorite. and sericite and red cherty and quartz-carbonate alteration associated with contact below.
CS-18-16	225.83	226.66	FELP	FELDSPAR PORPHYRY: 3%3.0-4.0 mm feldspar porphyry and 2% 0.5-2.0 mm feldspar phenocrysts in medium orange groundmass with weak dark green chloritic foliation. Hard > chisel. and nonmagnetic. Lower contact quartz vein at 60 dca. From 226.49 to 226.66 60 dca 17.0 cm quartz vein: coarse grained. massive white quartz with ultramafic inclusions and wispy fuchsitic bands. Song pervasive calcite alteration from 221.51-225.40m.
CS-18-16	226.66	232.01	UM	ULTRAMAFIC?: Ultramafic(?). possibly mafic syenite of feldspar porphyry syenite suite. Generally uniform and massive with 0.5 mm groundmass texture. Moderately soft << chisel. not magnetic. From 228.04 to 2238.09 30 dca 3.0 cm quartz pyrite vein: Coarse grained quartz with 5% coarse grained pyrite. From 228.68 to 228.70 60 dca 1.5 cm quartz vein parallel to weak foliation. From 228.74 to 228.94 Syenite: Syenite or extremely silicified rock. Apears aphanitic.. Unit is pale orange. extremely hard > chisel. nonmagnetic. 15% quartz fracture filling and veining to 1.5 cm. 2% pyrite. From 228.94 to 229.24 Moderate pervasive calcite alteration. From 229.24 to 229.30 Syenite: Syenite or extremely silicified rock. Similar to 228.74-228.94m. Appears aphanitic.. Unit is pale orange. extremely hard > chisel. nonmagnetic. 15% quartz fracture filling and veining to 1.5 cm. 2% pyrite. From 229.30 to 231.31 Intense pervasive calcite alteration. From 231.31 to 231.60 Intense alteration: Intense alteration having appearance of mafic syenite. Dark green variable hardness < chisel. nonmagnetic. 85% red groundmass texture and 15% dark green chloritic foliation.
CS-18-16	232.01	232.2	SYE	MAFIC SYENITE?: Foliated with 80% reddish grey and 20 % dark green foliation giving rock a reddish green appearance. 2% disseminated pyrite.

CS-18-16	232.2	232.45	CHE	CHERT?: Chert or strongly silicified fine sediment banding or foliation of unknown rock. 75% aphanitic red cherty bands and 25% dark green bands. 5% thin pyrite laminations and 5% quartz veining parallel to foliation. This may be silicified laminated rock of uncertain origin. This apparent Chert Bed appears to mark the transition from Ultramafic/mafic suiter and a feldspar porphyry syenite suite to the north and a sediment and feldspar porphyry syenite suite to the south. The presence of a complex feldspar porphyry syenite suite of sheeted diking appears to be favourable environment for gold mineralization. both a a source of favourable volcanics stratigraphically above and as a thermo and chemical gradient localizing motivating force causing alteration and moving sulphides and or gold into the country rocks. particularly. particularly along the intrusive contacts. These dike also appear to cause irregular stress release causing fracturing enhancing fluid flow in fractured rocks. The identification of the more mafic diking of the feldspar porphyry syenite suite above and below is difficult. This is complicated by contact alteration associated with along this diking.
CS-18-16	232.45	233.06	SYE	SYENITE: Dark green syenite as 80-% pale grey bands and 20% dark green foliation giving this rock a dark green overall appearance. Hard =/> chisel. nonmagnetic.
CS-18-16	233.06	233.47	TUF	TUFFS: Banded and foliation at 55 dca. Very fine-grained. variable pale yellow-grey to dark grey. Lower contact sharp and frozen at 55 dca and has an apparent cross cutting relationship to foliation.
CS-18-16	233.47	236.7	SYE	VARIABLE DIKING: Appears to bew variable diking of the feldspar porphyry syenite suite. Moderately hard < chisel. nonmagnetic. SG = 2.73. From 233.88 to 234.55 1.0 mm groundmass texture as 80% pale grey and 20% dark green giving medium green overall appearance From 235.88 to 236.15 Foliated section.
CS-18-16	236.7	237.92	SYE	SYENITE: Uniform and massive. medium grey with 1.0 mm groundmass texture. Hard > chisel. nonmagnetic. SG 2.68.. Lower contact sharp and frozen at 65 dca with wavy surface.
CS-18-16	237.92	239	TUF	TUFF: Thin to thick bedded tuff ranging at 55 dca. from pale yellow grey to medium grey. SG = 2.77. 2% 1.0-4.0 mm pyrite crystals. Lower contact in artificially broken ground.
CS-18-16	239	240.54	SYE	SYENITE DIKE: Uniform and massive. 0.2-0.5 mm crystalline with groundmass consisting of 20 % dark green hornblende and 80 % feldspathic mineral of equivalent grain size. Fresh appearance lacking foliation. Hard =/> chisel and nonmagnetic with SG = 2.67. 2.69 and 270. Lower contact sharp and frozen at 55 dca parallel to bedding below. From 240.54 to 240.97 Tuff. Extremely fine grained to fine grained bedding ranging from dark

				greyish red to dark green. Silicified. very hard > chisel. nonmagnetic. Upper contact sharp and frozen at 70 and lower contact 65 dca along strong slip. From 241.22 to 240.27 Tuff: very fine-grained. bedded at 62 dca. Very hard > chisel. nonmagnetic. Upper contact 62 dca along strong slip parallel to bedding bellow. Lower contact sharp and frozen at 62 dca parallel to bedding above.
CS-18-16	240.54	244.06	TUF	TUFF: Uniform medium grey with little or no compositional banding. Strongly foliated at 62 dca. Soft to moderately hard <</< chisel. nonmagnetic. Lower contact sharp and frozen at 62 dca very close to slip above.
CS-18-16	244.06	244.64	SYE	SYENITE DIKE: Syenite dike Lower contact sharp and frozen at 85 dca subparallel to
CS-18-16	244.64	244.94	TUF	TUFF: Strong compositional banding and strong foliation at 62 dca. Aphanitic medium red and dark green fine-grained compositional banding appears to be bedding. 7% pyrite with 2.0 mm crystals concentrated in dark green bands and very fine-grained pyrite concentrated in pale reddish grey bands and appears to be controlled by intrusive contact. Section with highest proportion of pyrite has SG = 2.82. Lower contact sharp and frozen at 70 dca parallel to foliation.
CS-18-16	244.94	247.21	SYE	SYENITE DIKES: This appears to be a series of syenite dike cutting older syenite dikes with internal contacts marked by abrupt colour. groundmass texture changes. Generally 2.0 mm groundmass texture marked by 20% dark green chlorite mixed with 80% pale reddish grey felsic minerals to fine </==0.5 mm groundmass texture dominated by felsic minerals. SG = 2.72. Lower contact sharp and frozen at 45 dca and cross cutting
CS-18-16	247.21	247.52	TUF	TUFF: Strong compositional banding and strong foliation at 70 dca. Aphanitic medium red and dark green fine-grained compositional banding appears to be bedding. 5% pyrite concentrated in fine grain green beds and appears to be controlled by intrusive contact. Lower contact sharp and frozen at 60 dca truncating foliation and compositional banding.
CS-18-16	247.52	248.84	SYE	SYENITE DIKE: From 247.52 to 248.84 SYENITE DIKE: Generally 2 mm groundmass texture marked by 30% dark green chlorite mixed with 70% pale reddish grey felsic minerals. There are some narrow internal foliated sections. Hard </> chisel. nonmagnetic. Apparent lower contact sharp and frozen at 75 dca.
CS-18-16	248.84	251.73	SYE	SYENITE DIKE: Generally 2 mm groundmass texture marked by 65% dark green chlorite mixed with 30% pale reddish grey felsic minerals. Hard > chisel. nonmagnetic. There are some narrow internal foliated sections. SG = 2..70 b& 2.72. Lower contact in artificially shattered core. From 249.00 to 252.52 Pervasive Calcite alteration increasing down the hole.

				From 250.97 to 251.30 Strongly altered Feldspar porphyry as 5% white feldspar phenocrysts in a pale orange grey groundmass with 25% quartz veining to 2.0 cm at 20 dca. Tre pyrite. This may be a thin feldspar porphyry dike; however. the absence of distinct contacts indicated the alteration is preserving conspicuous relict feldspar porphyry texture.
CS-18-16	251.73	252.13	ALT	SERICITE ZONE: Strong pervasive. pale yellow sericite. very soft <<< chisel. SG 2.78 and nonmagnetic. Pervasive finely foliation at 80 dca. Very little pyrite. Lower contact sharp and frozen at 90 dca and truncating foliation at low angle.
CS-18-16	252.13	252.52	SYE	SYENITE DIKE: Uniform and massive. with 1 mm groundmass texture. 1% apparent vague white feldspar phenocrysts in a medium grey groundmass with 20% chloritic mineral. Lower contact vague and frozen at 80 dca.
CS-18-16	252.52	268.09	TUF	TUFF?: Generally massive. featureless. very fine-grained. dark grey-green. not magnetic. Intense pervasive calcite alteration throughout. Nonmagnetic. From 252.52 to 252.70 PYRITE ZONE: 15% pyrite generally <0.5 mm. Banded: dark green and medium to light grey banding at 75 dca. very hard > chisel. nonmagnetic with SG 2.86. From 252.70 to 254.84 Locally 1% disseminated pyrite. From 253.69 to 254.84 Soft << chisel. Foliated. From 253.23 to 253.27 2.5 cm recumbently folded quartz-calcite vein in strongly foliated rock From 252.72 to 254.84 Very soft <<</<< chisel. From 253.93 to 253.96 45 dca 3.0 cm quartz vein in foliated rock. From 254.02 to 254.05 50 dca. 5.0 cm strongly foliated rock with 50% quartz veining. From 254.86 to 255.00 PYRITE ZONE: 7% pyrite. Banded: light to medium green banding at 65 dca. generally very hard > chisel with some softer bands. nonmagnetic. From 255 .41 to 255.48 Pyrite Zone: 10% disseminated pyrite. From 255.61 to 256.20 Pyrite Zone: 4% disseminated pyrite. Hard > chisel. From 255.36 to 258.62 2% hairline calcite fracture filling at 110 dca. From 256.05 to 256.20 5% pyrite in very hard > chisel folds rock with many pale grey bands. In part looks like strongly foliated feldspar porphyry. From 256.70 to 256.86 2% pyrite. Moderately hard < chisel. Pyrite in foliation seams. From 256.86 to 256.95 PYRITE ZONE: 15% pyrite. Banded: light to medium green banding at 65 dca. generally very hard > chisel with some softer bands. 15% fine-grained disseminated pyrite. From 257.18 to 257.27 PYRITE ZONE: 15% pyrite. Dark medium green banding at 60 dca. very hard > chisel. 15% fine-grained disseminated pyrite. From 257.27 to 258.45 2% very fine-grained disseminated pyrite. Patchy strong calcite alteration. Hard =/> chisel.

				From 258.45 to 258.68 Calcite-chlorite alteration banding. 5% disseminated pyrite concentrated in the dark green chlorite-calcite bands. Dark green. moderately hard </= chisel. From 258.68 to 258.86 PYRITE ZONE: 15% very fine to fine disseminated pyrite concentrated in chlorite-calcite bands. Appears to be very hard > chisel. intense silicification. Separation of silica during carbonatization event could cause this texture without an addition of silica. The carbonate-chlorite banding is conspicuous with HCL flooding. From 258.86 to 259.70 PYRITE ZONE: 7% pyrite. 30% strongly carbonated grey bands and 70% dark green chloritic bands lacking calcite. Pyrite concentrated in grey carbonated bands. Hard =/> chisel. From 259.70 to 261.30 2% 2.0-3.0 mm pyrite cubes and locally very fine-grained disseminated pyrite in pale grey carbonated bands. From 262.07 to 262.55 00 dca 7.0 cm quartz calcite vein with 2% coarse grained pyrite and 49% crude grey quartz crystals and masses to 2.0cm and 49% very coarse grained grey calcite. From 263.00 to 267.57 <1% pyrite. Generally massive. dark green. with <0.3 mm groundmass texture. Variable hardness. generally </> chisel. From 267.57 to 268.09 4% pyrite. Highly variable colour and variable hardness. generally </> chisel. nonmagnetic.
CS-18-16	268.09	275.91	FELP	FELDSPAR PORPHYRY WITH QUARTZ-FLOODING: (Wedge Zone). 1% 3-4 mm feldspar phenocrysts in a pale grey almost white groundmass with 1% <1.0 mm dark green chloritic specks. The groundmass appears to be quartz flooded. 5% quartz veining generally 00-30 dca. <1% disseminated pyrite. From 268.09 to 268.40 Highly variable silicification banding. Thick buff. pale grey and dark green band Hard > chisel. 2-3% disseminated pyrite. From 268.28 to 268.30 40dca 1.0 cm grey quartz vein in contact with Ca vein below. From 268.30 to 268.32 40 dca 1.5 cm Calcite Arsenide vein with 3.5x0.5 cm band of grey arsenides along one side of the core. Grey arsenides are nonmagnetic. Banded with extremely fine grained grey calcite and pale pink fine-grained calcite and 10% black chlorite bands. Upper contact frozen at 40 dca. Lower contact strong slip wall. From 268.35 to 268.40 40 dca. 4.0 cm quartz vein with thick dark green chloritic selvages and chloritic bands in the vein. 3% disseminated pyrite concentrated in the chloritic salvagers and bands. From 269.13 to 269.16 65 dca FAULT with extremely thin. loose brittle chlorite disks and many rock chips. From 269.67 to 270.27 Mafic Syenite: Uniform and massive. dark green moderately soft < chisel. nonmagnetic. SG 2.80. Contacts not defined.

				From 270.27 to 270.32 Chloritic chips and 1.5 cm quartz vein disk. From 270.50 to 270.53 70 dca? FAULT recovered as chloritic disks ands 1.5 cm quartz vein chunk. Probably 70 dca. From 271.00 to 271.08 70 dca 8 cm quartz vein. Massive white quartz vein with at least 6 medium green chloritic wall rock rip offs. From 271.29 to 271.35 Recovered as chlorite bounded angular chips to 2.0 cm. generally as <1.0 cm angular fragments. Some larger fragments have typical curvature od cored rock. From 271.35 to 271.83 Arbitrarily logged as lost core to accommodate logging and sample intervals. It is uncertain where the core was lost in this zone. Some was probably lost from other severely broken ground also logs in this area. From 271.83 to 271.97 Recovered as chlorite bounded angular chips to 2.0 cm. generally as <1.0 cm angular fragments. Some larger fragments have typical curvature od cored rock. From 271.97 to 272.84 40% quartz veining to 4.0 Ca at low angle to core axis. Wall rock is highly altered (quartz flooded) feldspar porphyry. Very hard > chisel. 1% coarse grained pyrite dominantly in black chlorite masses. From 272.84 to 273.52 Very hard > chisel. dark green. and appears to be strongly silicified with residual hairline giving dark green color. From 272.84 to 273.19 Recovered as core chips to 4.0 cm long fragments with strong chloritic slips parallel to core axis. From 273.52 to 274.59 HEALED BRECCIA ZONE: This is a possible marker feature defining the silicified wedge zone. Breccia fully healed by intense silicification. This healed breccia and the late brittle faulting above indicates this Wedge zone has a complex and lengthy structural history possibly including some hydraulic fracturing and rapid fluid-breccia transport. From 274.31 to 274.44 PYRITE ZONE: 10% fine pyrite in strong foliation at 60 dca. From 274.59 to 275.91 Mafic Syenite: Uniform and massive. dark green with fine <0.5 mm groundmass texture. SG = 2.73. Lower contact not defined.
CS-18-16	275.91	284.68	TUF	TUFF: Appears too be dominantly mafic tuff. Generally Soft << chisel. medium grey green with foliation at 60 dca. Locally hard. pale grey tuff beds at 60 dca. From 277.54 to 277.69 50% quartz veining with fine quartz fracture fillings at 55 dca. 1.5 cm quartz vein at 155 dca and 2.0 cm quartz vein at 105 dca. 0.5% coarse grained pyrite and a 1.5x0.5 cm patch of massive chalcopyrite. From 280.25 to 280.41 Feldspar porphyry with strong folded foliation. Very hard > chisel. pale grey with 1% 4.0 mm feldspar phenocrysts and 1% 1.0-2.0 mm feldspar phenocrysts. Upper contact sharp and frozen averaging 50 dca. Upper contact has healed 2.0 cm fault offset. Lower contact

				sharp and frozen at 70 dca. From 293.63 to 293.85 SG 2.75. This was verified and is unnaturally heavy for feldspar porphyry which should be less the 2.70. This could be explained by a sericite alteration. If this sample is unnaturally heavy by alteration other rocks in this area could be likewise affected.
CS-18-16	284.68	285.08	SYE	SYENITE DIKE: Syenite dike of feldspar porphyry syenite suite. Pale grey very hard > chisel. with moderate foliation at 70 dca defined by pale grey foliation and 1% thin. dark green specks Lower contact sharp and frozen at 75 dca.
CS-18-16	285.08	286.7	TUF	FELDSPAR CRYSTAL TUFF?: Massive dark green. extremely fine grained with appearance of being dominated by altered feldspar crystal tuff and or fine mafic tuff. Lower contact not defined. From 285.22 to 285.25 Intense sericite alteration of extremely fine foliated rock.
CS-18-16	286.7	288.47	TUF	FELDSPAR CRYSTAL TUFF: Uniform and massive. strongly foliated at 60 dca. Very soft <<< chisel. SG 2.73. From 287.90-288.47 foliation destroys apparent primary granular texture. Lower contact sharp and frozen at 70 dca parallel to foliation
CS-18-16	288.47	289.8	TUF	TUFF: Alternating pale grey felsic tuff and mg mafic tuff beds. both generally hard =/> chisel. Lower contact sharp and frozen at 80 dca parallel to foliation.
CS-18-16	289.8	289.99	FELP	FELDSPAR PORPHYRY: 2% 3-4 mm euhedral and 2% 1-2 mm feldspar phenocrysts in a dark grey groundmass with faint reddish tint. Very hard > chisel. nonmagnetic. with SG = 2.68 (with 1cm tuff adhesion). Lower contact sharp and frozen at 65 dca
CS-18-16	289.99	292.58	TUF	Tuff: Massive to bedded tuff. Lower contact 80 dca along 0.5 cm calcite vein and strong slip. From 289.99 to 290.60 Tuff with the appearance of alternating felsic and mafic tuff. Sharp and distinct pale grey very hard > chisel felsic beds and soft < chisel. dark green mafic beds at 65 dca. SG 2.75 with 80% felsic beds and SG 2.75 with 25% felsic beds. From 290.60 to 292.58 Massive mafic. dark green tuff. soft to very soft <</<<< chisel with minor felsic beds to 1.0 cm. Strongly foliated 65 dca.. SG 2.73. not magnetic. From 291.22 to 291.85 3% disseminated 0.5-2.0 mm pyrite crystals. From 291.75 to 291.85 10% 2.0 mm pale grey calcite (-quartz) bands at 65 dca.
CS-18-16	292.58	292.79	SYE	MAFIC SYENITE: Mafic syenite of the feldspar porphyry syenite suite. Uniform and massive. fine grained dark green. moderately hard < chisel with crystalline groundmass dominated by dark green mafic minerals. SG = 2.76. Lower contact 80 dca along strong slip.
CS-18-16	292.79	**305.47**	TUF	FELD PHENOCRYST TUFF: Appears to be a sequence of several thick tuff beds dominated by a high feldspar grain component. Generally uniform and massive with 1 mm groundmass texture defined by vague 1 mm feldspar grains. Medium greyish green. moderately hard </= chisel. nonmagnetic. Moderate foliation at 60 dca common. SG measurements of 2.72. 2.75. 2.76 and 2.76 are too

				high for feldspar porphyry. If this were strongly sericitic it could explain the high SG: however the foliation is to weak to have enough sericite to explain the apparently anomalous SG. This SG is better explained if this is a different type of porphyry or a crystal tuff. Based on the anomalous SG and a few apparent very fine grained and thin interlayered tuffs. this is logged as thick bedded crystal tuffs. possibly proximal to a vent. Lower contact sharp and frozen at 65 dca parallel to bedding and foliation below. From 294.50 to 294.52 70 dca. 2.0 cm quartz vein with calcite microfracture filling of vein and wall rock at 140 dca. From 295.93 to 296.00 70 dca 60% quartz veining with calcite fracture filling of veining and wall rock at 140 dca. From 299.40 to 299.45 70 dca 5.0 cm quartz vein with frozen walls. Vein and wall rock cut by hairline calcite fracture filling at 150 dca. Trace pyrite. From 296.91 to 297.27 Tuff beds: Sequence of moderately soft to hard </> chisel. pale grey and medium green with bedding parallel to sharp and frozen upper contact and lower contact. all at 70 dca. From 300.35 to 300.40 Tuff Beds: Several thin tuff beds at 63 dca. From 300.57 to 300.63 70 dca 7.0 cm quartz vein with frozen walls. From 301.08 to 301.17 60 dca 9.0 cm quartz vein near to parallel to foliation. White quartz with calcite microfracture filling and a 1.0cm calcite fracture filling in the vein. Trace pyrite. Frozen walls at 60 dca From 302.68 to 303.07 Total of 14.0 cm of quartz veining. all with calcite microfracture filling of the quartz. Frozen walls. From 304.65 to 304.66 65 dca Tuff bed: Thin extremely fine grained. very hard > chisel tuff bed. From 304.84 to 304.85 65 dca Tuff Bed: Thin extremely fine grained. very hard > chisel tuff bed.
CS-18-16	**305.47**	311.97	FELP	Feldspar porphyry. medium greyish green. massive. moderately hard nonmagnetic. Moderate foliation at 60 dca common. SG measurements of 2.71 - 2.76. some small intervalls of microporphyry dyke. 3% veins qz/carb at least three generation of veins oriented 50-70 dca. At 309m banded zone chlorite and calcite large of 25cm with 1% pyrite disseminated preferentially within the foliation plans.
CS-18-16	311.97	312.55	MPOR	Microporphyric feldspar. 30-40% veins up to 14cm oriented 70dca at least three generations of veins haireline fractures filled by chlorite. 0.5-1% pyrite
CS-18-16	312.55	313.18	SYE	Syenite dyke. nonmagnetic. SG 2.92. massive moderately hard.

CS-18-16	313.18	317.6	TUF	Fine grained tuff. locally foliated. green to grey. locally very weakly magnetic. upper contact at 60 dca. SG 2.77; From 313.18m to 313.68m large zone with 50-60% veins 60dca and irregular with haireline fractures filled by chlorite. 5% pyrite preferentially within the chlorite well cristallized up to 5mm. From 313.68m to 317.6m 3 to 5% veins qz/carb 30-60 dca haireline fractures with chlorite.
CS-18-16	317.6	359.02	TUF	Fine grained tuff. locally banded green to darg grey. SG 2.77 to 2.8. locally very weakly magnetic. massive. moderately hard. foliation at 60dca. From 320.3m to 321.31m and from 324.7m to 326.87m more chlorite and sericite. locally folded. 2% veins qz/carb 60dca haireline fractures with chlorite 0.5 to 1% pyrite disseminated with minor pyrrhotite. At 322.85m smal interval of feldspar porphyry of 6cm large contact parallel to foliation plan. 2% pyrite +/- chalcopyrite rare galena. From 326.87m to 328.93m 1-2% veins qz/carb . At 328.3m and 328.89m qz/carb veins 50dca +/- chalcopyrite and pyrrhotite within the walls. From 328.93m to 332.6m 20% veins qz/carb up to 11cm large +/- chlorite chalcopyrite and minor pyrrhotite 3% pyrite disseminated. at 330.7 tectonic breccia large of 41cm with qz/carb +/- pyrite with haireline fractures with chlorite. From 332.6m to 339.12m less than 1% veins at 333m 335.5m 336.9m small veins of 2cm large with pyrrhotite minor galena and pyrite. From 339.12m tp 350.3m 3-5% veins qz/carb 50-70dca some are irregular pyrrhotite and pyrite haireline fractures filled generally with chlorite. At 344.16m microporphyric feldspar large of 11cm contact at 60dca; at 350.42m microporphyric feldspar large of 30cm. From 350.3m to 353.7m less than 1% veins with pyrite and +/- chalcopyrite at 351.2m and 353.57m. From 353.7m to 358.05m 2-3% veins qz/carb +/- pyrite oriented 40-70dca haireline fractures with chlorite filling. From 358.05m to 359.02m less than 1% veins 30-60dca.
CS-18-16	359.02	368.52	HOR	Hornblende porphyry? SG 2.78 and 2.8. massive very hard. greenish-grey groundmass. locally moderately magnetic. from 359.02m to 368.52m less than 1% veins qz/carb 0.5% pyrite disseminated. 2-3% pyrrhotite and 1% pyrite disseminated in the groundmass
CS-18-16	368.52	378.98	TUF	Fine tuff green to grey. massive. foliated. moderately magnetic. locally pervasive calcite alteration. foliation plan 60-70dca. less than 1% veins generally filled by chlorite. 1% pyrrhotite disseminated in the groundmass.
CS-18-16	378.98	385.7	HOR	Hornblende porphyry. green to grey. contact at 60dca. massive. nonmagnetic. moderately hard. moderately magnetic. 1 to 2% pyrite and pyrrhotite in the groundmass. less than 1% qz/carb veins oriented 60-70dca.
CS-18-16	385.7	391.95	DIK	Mafic dike. moderately hard. locally weakly magnetic. 0.5 to 1% pyrite and pyrrhotite in the groundmass. less than 1% qz/carb veins oriented 60-70dca.

CS-18-16	391.95	405	HOR	Hornblende porphyry. massive. moderately magnetic. less than 1% veins 30-60dca haireline fractures filled by chlorite. 0.5 to 1% pyrite disseminated. at 399.87m fault zone 40dca withh calcite cement and green chlorite.
CS-18-16	405	406.35	ARG	Argillite dark grey to black locally laminated with foliation plans at 60dca. Less than 1% veins mostly irregular with calcite and chlorite.
CS-18-16	406.35	406.9	FELP	Feldspar porphyry. massive. not magnetic. contacts at 60 dca. Folation parallel to contacts. rare pyrite disseminated in the groundmass. less than 1% veins SG 2.69.
CS-18-16	406.9	442.4	ARG	Argillite dark grey to black. contact at 60dca. locally laminated with foliation plans at 60dca. Small intervals of feldspar porphyry at 408.52m (35cm). and at 409.22m (12 cm) From 409.92m the foliation plans are folded. very hard and locally silicified with more pyrite at 411m. From 418.2m to 423.7m 5% qz/carb veins +/- chlorite oriented 30-60dca 3% pyrite and pyrrhotite. more sulfures at 418.5m. 419.25m. 419.7m. 420.15m. From 423.7 to 432.2m zone highly altered with high content of sulfures mostly pyrrhotite. 10-15% pyrrhotite +/- pyrite and minor chalcopyrite with 5% qz/carb veins up to 11cm at 424.16m locally brecciated (angular fragments) with more silica. the alteration of this interval overprint the pristine rock facies. at least two foliation plans 35 and 50dca. From 432.2m to 442.4 argilite with some fingers of feldspar porphyry. 3% veins qz/carb +/- chlorite pyrrhotite and +/- pyrite 35 to 50dca with 2% pyrrhotite disseminated in the groundmass.
CS-18-16	442.4	457.86	TUF	Intermediate tuff. massive. locally magnetic. foliation 50dca. 0.5% pyrite 2% veins qz/carb up to 2cm at 448.53m minor pyrite and pyrrhotite haireline fractures filled with calcite and chlorite. Fingers of feldspar porphyry at 442.4 (5cm) and at 443.1 (16cm). From 449.7m to 451.21m 3% pyrrhotite disseminated in the groundmass more foliated at the lower contact.
CS-18-16	457.86	461.49	MPOR	Microporphyric feldspar. local pervasive calcite alteration. massive. 1% pyrrhotite. at least three generations of veins haireline fractures filled by chlorite. Foliation at 30dca. more pyrrhotite at 459.4m. 460.35m and 461.38m.
CS-18-16	461.49	463.83	DIK	Dike intermediate/mafic? Banded show alternance of red-brown and grey-green alteration. very hard. highly silicified. foliation at 30dca locally folded. locally magnetic. 3% veins qz/carb up to 2cm large +/- chlorite chalcopyrite and pyrrhotite.
CS-18-16	463.83	471	DIA	Matachewan Diabase? mafic dike?. uniform. massive. fine-grained (<0.5 mm). dark green hard and locally magnetic related to pyrrhotite content. locally silicified. 3-5 % pyrrhotite disseminated from 463.83m to 466.27m at 464.35 large breccia 28cm qz/carb +/- chlorite chalcopyrite and minor pyrrhotite. presence of somesmall intervalls of argillite locally banded. From 465.65m to 466.04m 5% pyrrhotite disseminated in the groundmass.

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-18-16W

Property	Castle-East
Claim/Lease Number	LEA-19680
NTS Map Sheet	41P10
UTM Zone	17
UTM Easting	520687.4
UTM Northing	5279451.7
Elevation	213.3
Drilling Company	Laframboise drilling
Start Date	06/11/2018
Finish Date	15/11/2018
Hole Length	323.75
Core Size	NQ
Date Logged	11/01/2019
Geologists	Doug Robinson P. Eng.

Objective: To test the extension to the south of the E-W structure.

Wedge start from 262.8m end of hole at 586.55m from the surface.

Test type : Reflex

Depth (m)	*Azimuth (°)*	*Dip (°)*

HOLE NAME	FROM	TO	ROCK TYPE	COMMENTS
CS-18-16W	262.8	266.4	TUF	TUFF: Very fine-grained. medium grey. Soft <<?< chisel. Weak to moderate foliation at 60 dca Intense pervasive calcite alteration. Lower contact sharp and frozen at 42 dca and subparallel to foliation above. From 262.80 to 263.58 2% 0.2-1.0 mm disseminated pyrite. From 265.92 to 266.40 20% calcite-quartz stockwork: Very fine-grained. pale grey calcite-quartz stockwork with preferred orientation of 30 dca. From 266.37 to 266.50 3% 0.5 mm disseminated pyrite.
CS-18-16W	266.4	270.95	FELP	FELDSPAR PORPHYRY: <0.5% 3.0 mm rounded feldspar phenocrysts and 1% 1.0 mm feldspar phenocrysts in a pale grey groundmass. Quartz flooded with 5% random quartz veining with vague to gradational walls. Late. dark green hairline chlorite fracture filling with weak walls. Very hard > chisel. 0.5% disseminated pyrite except as described above and below. Lower contact in ground fault fragments. From 266.40 to 267.97 Moderate healed microfractures. From 266.50 to 266.57 45 dca 6.0 cm quartz vein with 3% coarse grained disseminated pyrite concentrated in dark green chlorite fracture filling and along associated with chlorite along the walls. From 267.97 to 268.52 Dike: Dark green. very fine-grained. moderately soft < chisel dike probably of feldspar porphyry syenite suite. Contacts possibly 60 dca along slips. From 268.42 to 268.52 Recovered as thin chips to 5.0 cm core lengths. From 268.52 to 270.53 Broken into 1.5-10.0 core lengths by strong slips at 60 dca. From 268.52 to 270.62 Intense healed microfractures best observed in dry core. From 269.25 to 269.35 45 dca. 6.0 cm quartz-chlorite vein with loose walls at 45 dca. 10% dark green chlorite patches and seams of chlorite. 2% extremely fine grained and coarse grained (bimodal) disseminated pyrite conductive in chlorite. From 269.54 to 270.16 00 dca 1.5 cm quartz vein along edge of core (does not cross the core). From 270.26 to 270.28 Fault. Recovered as chloritic chips. Possibly 70 dca (uncertain due to vague walls and broken ground. From 270.53 to 270.62 Fault recovered as very small to 1.5 cm chunks of core. From 270.62 to 270.95 Arbitrarily logged as lost core to accommodate logging and sample intervals.

CS-18-16W	266.4	270.95	FELP	FELDSPAR PORPHYRY: <0.5% 3.0 mm rounded feldspar phenocrysts and 1% 1.0 mm feldspar phenocrysts in a pale grey groundmass. Quartz flooded with 5% random quartz veining with vague to gradational walls. Late. dark green hairline chlorite fracture filling with weak walls. Very hard > chisel. 0.5% disseminated pyrite except as described above and below. Lower contact in ground fault fragments. From 266.40 to 267.97 Moderate healed microfractures. From 266.50 to 266.57 45 dca 6.0 cm quartz vein with 3% coarse grained disseminated pyrite concentrated in dark green chlorite fracture filling and along associated with chlorite along the walls. From 267.97 to 268.52 Dike: Dark green. very fine-grained. moderately soft < chisel dike probably of feldspar porphyry syenite suite. Contacts possibly 60 dca along slips. From 268.42 to 268.52 Recovered as thin chips to 5.0 cm core lengths. From 268.52 to 270.53 Broken into 1.5-10.0 core lengths by strong slips at 60 dca. From 268.52 to 270.62 Intense healed microfractures best observed in dry core. From 269.25 to 269.35 45 dca. 6.0 cm quartz-chlorite vein with loose walls at 45 dca. 10% dark green chlorite patches and seams of chlorite. 2% extremely fine grained and coarse grained (bimodal) disseminated pyrite conductive in chlorite. From 269.54 to 270.16 00 dca 1.5 cm quartz vein along edge of core (does not cross the core). From 270.26 to 270.28 Fault. Recovered as chloritic chips. Possibly 70 dca (uncertain due to vague walls and broken ground. From 270.53 to 270.62 Fault recovered as very small to 1.5 cm chunks of core. From 270.62 to 270.95 Arbitrarily logged as lost core to accommodate logging and sample intervals.
CS-18-16W	272.5	287.83	TUF	TUFF: Dominantly mafic tuff with feldspathic beds as described below. From 272.50 to 276.42 Mafic Tuff: Appears too be mafic tuff with little compositional banding. Dark green with variable hardness </= chisel. Foliation 75 dca. Blocky ground. Lower contact arbitrary placement. From 272.50 to 282.50 Weak to moderate pervasive calcite alteration decreasing in strength down the hole. Hairline calcite fracture fillings common (1%). From 272.50 to 285.37 Mafic Tuff: Appears too be mafic tuff with little compositional banding. Dark green. soft << chisel. dark green. Foliation 70 dca. Competent ground. Lower contact sharp and frozen and at 72 dca at first pale grey feldspathic bed. From 277.20 to 277.27 65 dca. 7.0 cm quartz vein: Massive white quartz approximately parallel to foliation. Vein appears to dip ~70 degrees north and strike approximately 90 degrees

				to the section line. The average foliation appears to dip 30 degrees north and strike 90 degrees to the section line. Both assume the core is oriented correctly. At block 279m the core below is rotated 58 degrees clockwise relative to the core above. This oriented data is not reliable and should be disregarded. From 281.33 to 281.86 Syenite dike: Very hard > chisel. light grey. almost white dike with 2-3 mm groundmass texture of feldspathic mineral within strong foliation texture. Upper contact along strong foliation slip at 65 dca. Lower contact along strong foliation slip at 65 dca. Core below contact does not match the contact. From 282.14 to 282.57 110 dca 5% calcite gash fracture filling at 110 dca measured rotated relative to foliation. From 282.50 to 287.l83 Hairline calcite fracture fillings common (1%). From 283.08 to 283.26 15% quartz veining at \various angles (and generations?) associated with strong chlorite slip at 30 dca. From 285.37 to 287.83 Mixed mafic and feldsapathic tuff: Alternating dark green. soft << chisel mafic beds and hard =/> chisel pale grey feldspathic beds.
CS-18-16W	287.83	302.58	TUF	FELDSPAR CRYSTAL TUFF: Generally massive with week foliation fabric at 70 dca. Generally medium greenish grey. moderately hard < chisel. Mixed thick section of very fine-grained. dark tuff and coarser medium grey tuff with distinct feldspatic fabric defined by foliation. Locally thin fragments stretched into foliation fabric (i.e. 290.39-290.52. 290.83-290.93 and 294.78-294.93m). Locally thin bedded. extremely fine grained. hard pale grey bedding at 293.59-293.91. 298.99-299.13 & 300.53-300.56m. Hairline calcite fracture filling (<1%) common throughout. Lower contact sharp and frozen at 80 dca. From 288.38 to 288.49 Pyrite Zone: 5% fine disseminated pyrite in banded zone consisting of regular banding at 60 dca and contorted banding. Calcite alteration bands. Moderately hard </= chisel. Appears to have some silicification along this zone.. From 289.97 to 290.23 Mafic Syenite dike: Feldspar porphyry syenite suite. Uniform and massive. dark pinkish green. Soft << chisel and nonmagnetic. Fine-grained (<1.0 mm) groundmass consisting of approximately 40% dark green chlorite and 60% dark pinkish feldspathic minerals. Strong pervasive calcite alteration. Upper contact 60 dca along strong slip and 0.3 cm calcite-chlorite stringer. Lower contact 60 dca along strong slip and 0.3 cm calcite-chlorite (black) stringer. From 291.23 to 291.25 63 dca 2.0 cm calcite vein parallel to foliation. Frozen walls parallel to foliation. From 291.45 to 291.46 75 dca 1.0 cm calcite vein with slip walls parallel to foliation.

				From 292.50 to 292.51 70 dca 1.0 cm calcite vein with one slip wall and one frozen wall parallel to foliation. From 293.02 to 293.11 55 dca. NB 6.5 cm quartz vein. Massive white quartz with two large angular pale pink feldspar porphyry fragments to 3.0 cm and two 2.0 mm pyrite cubes. From 292.87 to 293.38 chloritic-feldspathic alteration with 3% hairline calcite fracture fillings. Weak calcite alteration with calcite concentrated in the fracture fillings. Vein parallel to rock fabric. From 296.34 to 296.57 60 dca NB 17.0 cm quartz vein. With 5% dark green chlorite patches and 10% Wall rock fragments identical to wall rock above and below. From 297.74 to 297.82 147 dca 4.0 cm tightly repeat folded vein with frozen walls. From 288.08 to 290.20 60 & 140 dca. NB 9.0 cm quartz vein with converging walls. Massive white quartz with 5% aphanitic dark green chlorite patches. Quartz and chlorite cut by 2% hairline calcite fracture fillings.. Upper contact sharp and frozen at 60 dca subparallel to rock texture (foliation). Lower contact sharp and frozen at 140 dca at high angle to rock texture. From 299.81 to 299.83 120 dca 1.0 cm quartz-calcite vein at high angle to foliation. Vein has appearance of many thin microfolds on contact that are probably embayments along foliation. From 299.86 to 299.88 65 dca. 2.0 cm quartz vein with strong slip walls parallel to foliation. Minor intergranular calcite.
CS-18-16W	302.58	351.08	DEF	DEFORMATION ZONE dominated by apparent mafic volcanics(?). Extremely fine-grained. generally moderately hard to hard. </= chisel. generally nonmagnetic with minor sections of weakly magnetic with 0.5 cm fall back of pencil magnet. This is harder than expected for mafic volcanics. Prominent fine laminations lacking foliation parting. 10-25 cm slip spacing dominated by chloritic slips along lamination banding. From 302.58 to 302.62 75 dca Very fine laminated cherty tuff bed. Extremely hard > chisel. pale colored. From 305.50 to 305.67 70 dca Very fine laminated cherty tuff bed. Extremely hard > chisel. pale colored. From 305.95 to 306.74 20% pale grey calcite rich laminations at 60-70 dca.. Barren ofr sulphides From 309.48 to 309.58 70 dca. 30% quartz veining to 1.5 cm parallel to laminations. 2% fine-grained disseminated pyrite between veins. From 309.70 to 309.80 65 dca NB 9.0 cm quartz vein with 5% chlorite wall rock rip off bands. One 4.0 mm pyrite grain. Frozen walls parallel to laminations. 3.0 cm pale orange lamination with 3% disseminated pyrite. From 310.25 to 310.32 65 dca NB 8.0 cm quartz vein with 7% dark green chloritic fracture

				filling. 3% coarse grained pyrite concentrated in chloritic fracture filling. From 310.08-310.47 bleached alteration of laminations with 1% disseminated pyrite. From 317.00 to 326.74 Chlorite alteration Zone: NB 2% very fine-grained dark green chloritic fracture filling cross cutting laminations at low angles and high angles. This alteration is prominent in dry core only. Pyrite appears to be associated with this chlorite. particularly in association with minor grey quartz alteration bands. From 312.42 to 313.09 16% quartz veining and fine-grained quartz alteration banding at various angle including parallel to laminations. Appear to be multiple generations of quartz. Quartz fractured and cemented by calcite fracture filling. Chloritic alteration increases in this zone. From 316.00 to 316.22 05 dca NB 0.1-1.5 cm calcite-chalcopyrite fracture filling with 10% various sulphides dominated by anhedral chalcopyrite. A few black. apparent crystals appear to be magnetite. Possibly some pyrrhotite. and possibly other sulphides. From 316.56 to 316.68 Feldspar crystal tuff: Massive. dark grey green groundmass with 2% 0.5-3.0 apparent feldspar grains/phenocrysts. Fine chloritic microfracture filling. From 317.05 to 317.13 5% pyrite concentrated as massive. very fine-grained pyrite in calcite fracture filling at low angle to core axis and high angle to laminations. From 320.34 to 320.37 5% very fine-grained massive pyrite concentrated in quartz-calcite alteration. From 323.17 to 323.48 00 dca 0.5-1.5 cm breccia seam with 50% breccia fragment in a dark green chloritic groundmass. From 324.98 to 325.06 Feldspar porphyry(?): Medium orange. 1.5 mm groundmass defined by thin foliation. 324.89-3254.98 soft << chisel. Hard below 325.06m. Contacts sharp and frozen at 120 and 80 dca. From 325.06 to 325.76 Extremely hard > chisel. silicified. black and laminated. From 325.76 to 326.05 Extremely hard > chisel. silicified and/or feldspathised with 3% fine-grained to 1.0 mm disseminated pyrite. From 326.05 to 326.74 Massive. dark green. moderately hard < chisel. From 326.74 to 330.13 NB Quartz flooded – quartz vein – breccia zone. Multiple generations and styles of quartz veining and quartz flooding. In part brecciated with interlocking. strongly silicified breccia fragments cemented by dark green. very hard cherty quartz. Quartz veining ranges from sharp walled to vague walled and straight walled and deformed/microfractuted walls. 3% fine-grained to 3.0 mm disseminated pyrite crystals dominated by 1.0-3.0 mm pyrite crystals. From 330.13 to 334.00 Extremely hard > chisel. silicified (?) dark green. very fine-grained

				massive. From 334.00 to 351.08 Prominently laminated. medium grey and dark green. Moderately hard to hard </> chisel. Minor pale grey quartz alteration patches and bands with chloritic fracture filling. Lacks cab alteration. From 341.18 to 341.22 Feldspar porphyry with 3% 0.5-2.0 mm pale grey feldspar phenocrysts in silicified. pale grey groundmass. Weak foliation. Contacts sharp and frozen at 70 dca parallel to laminations above and below. From 341.63 to 341.93 Feldspar porphyry with 3% 0.5-2.0 mm pale grey feldspar phenocrysts in silicified. pale grey groundmass. Chloritic microfracture filling. Contacts sharp and frozen at 90 and 60 dca parallel to laminations above and below. From 341.93 to 342.43 Contorted/folded laminations with well established fold axis.. Prominent dark green. aphanitic chlorite fracture filling along (parallel to) lamination plains.
CS-18-16W	351.08	**363**	BST	BASLALT(?): Massive. very fine-grained. dark green generally lacking apparent laminations and foliation. but has prominent parting at 70 dca that appears to mark rock fabric such as foliation. Moderately hard < chisel. Minor deformed and boudinages quartz veining with associated wispy. dark green chlorite. Focused sulphide fracture filling appears to be randomly spaced as described below. From 351.22 to 369.31 NB. Minor sulphide zone: This diffuse zone host 1% combined sulphides including chalcopyrite. pyrite apparent pyrrhotite and possibly other sulphides hosted in minor quartz veinlets. These veinlets appear to be deformed. From 351.30 to 351.31 145 dca 0.0-0.5 quartz stringer (very straight) with 20% sulphides including chalcopyrite and an unidentified bronze colored sulphide possibly pyrrhotite. Wall rock is black and strongly magnetic. From 351.31 to 352.27 Black magnetic alteration with minor sulphides including chalcopyrite and possibly pyrrhotite. Minor quartz alteration bands. From 353.60 to 354.23 Weak hematization. From 354.23 to 354.58 Feldspar porphyry with change at 354.30m. Above 354.30 has rare feldspar phenocrysts in grey groundmass. Below 354.30m 2% 1-2 mm feldspar phenocrysts in pale grey to pale pink groundmass. Very hard > chisel. Upper contact sharp and frozen at 75 dca. Lower contact frozen at 60 dca with associated quartz veining. From 354.62 to 354.65 Feldspar porphyry: 3% feldspar phenocrysts <0.5 mm and a few 1.0-1.5 mm feldspar phenocrysts. Very hard > chisel. Upper contact and lower contact sharp and frozen at 63 dca parallel to rock fabric. From 355.39 to 355.46 Minor quartz fracture filling with chalcopyrite and pyrrhotite(?). Weakly

				magnetic From 355.93 to 356.60 5% quartz veining with chalcopyrite and pyrrhotite (0.5% overall). Veining is deformed and associated with medium green chlorite along and within the veining. From 363.54 to 363.80 1.5 cm quartz vein. Highly deformed quartz vein at low angle to core axis. 2% coarse grained pyrite concentrated in and along vein within this core interval. From 364.05 to 364.19 NB 0.5-4.0 cm quartz vein. Deformed quartz vein at low angle to core axis. 3% pyrite concentrated along edge of narrow part of this vein. Frozen walls. From 364.36 to 364.46 75-110 dca NB 8.0 cm quartz pyrite vein with 7% dark green chlorite patches and 3% extremely fine grained pyrite masses along vein walls and within and along chlorite patches. Frozen walls. From 365.30 to 365.32 80 dca. 1.0-2.5 cm quartz-pyrite vein with 10% dark green chlorite patches and 5% fine-grained masses of pyrite along walls and associated with chloritic patches. Deformed vein with frozen walls.
CS-18-16W	**366.74**	373.95	BST	DEFORMATION ZONE: Possibly basalt or mafic tuff. Dominant feature is prominent 0.5-2.0 mm. medium green and black laminations at 70-80 dca (locally contorted). 20-30% aphanitic. very hard black laminations and 70-80% extremely fine grained medium green chloritic laminations. No calcite alteration evident. lacks veining. Trace pyrite. Generally moderately magnetic with 2.0-3.0 cm fall back of pencil magnet that does not appear to be related to the colour of the banding.
CS-18-16W	373.95	398.96	DIA	ABITIBI DIABASE (DIKE): Symmetrically zoned diabase dike. Dark green. No phenocrysts observed in the chills or in the crystalline diabase. From 373.95 to 374.04 Dark green to black aphanitic chill. darkest along contact. Upper contact sharp and frozen at 60 dca. Contact is slightly irregular and lacks shearing. Above 374.30 is nonmagnetic. Gradational increase in magnetic strength down the hole. From 374.04 to 376.50 Massive. grades from aphanitic to fine-grained 0.5 mm groundmass diabase. From 376.50 to 395.00 Uniform and massive. dark green with 0.5 mm crystalline groundmass with 2% intergranular magnetite grains. Moderately magnetic with 3.0 cm fall back of pencil magnet. Moderately hard. slightly less than chisel. From 395.00 to 398.90 Grades from 0.5 mm crystalline to almost aphanitic below. Massive. dark green. From 398.90 to 398.96 Almost aphanitic. Weakly magnetic at contact increasing upwards to 2.5 cm fall back of pencil magnet at 398.90m. Lower contact sharp and frozen at 30 dca. A parent

				attitude of contact is 70 degrees (from left to right) to trace of hole with a 60 degree dip to the south. The orientation of the core is not reliable in this hole.
CS-18-16W	398.96	420.63	BST	DEFORMATION ZONE: Possibly basalt or mafic tuff. Dominant feature is prominent 0.5-2.0 mm. medium green and black laminations at 55-60 dca (locally contorted). 10-30% aphanitic. very hard black laminations and 70-90%. extremely fine grained medium green moderately hard <</< chisel chloritic laminations No calcite alteration evident. lacks veining except as described below. Trace pyrite. Nonmagnetic to moderately magnetic with 0.0-3.0 cm fall back of pencil magnet that does not appear to be related to the colour of the banding. Two shear fabric locally identified as described below. From 401.14 to 402.64 In part appears to be locally feldspar crystal tuff(?) with lacking distinct bed contacts. From 402.64 to 402.93 Feldspar porphyry: Appears to be strongly foliated feldspar porphyry with 2% 2.0 mm white feldspar phenocrysts in a an extremely hard (> chisel). strongly foliated groundmass. Groundmass greenish pink. 10% vague. short. quartz flooding style veins. From 403.68 to 403.83 10-45 dca 1.5 cm quartz vein: Deformed and brecciated and healed quartz vein cross cutting laminations. Frozen walls From 404.21 to 404.25 55 dca 3.5 cm quartz v.: Massive white. quartz vein in weakly foliated to massive section of core. 1% disseminated pyrite over 1.5 cm of wall rock. Frozen walls appear to cross cut laminations. From 411.29 to 411.63 Prominent crenulation fabric at 120 dca and defined by dark green linear fabric at 2.0-7.0 cm spacing with penetrative lamination fabric folded between the individual crenulation features. From 413.28 to 413.85 Dominant. penetrative lamination fabric (30-65 dca) strongly folded between a distinct crenulation fabric features defined by thin dark green at 120 dca. From 413.91 to 420.63 Silicification?: NB very hard. dark green with indistinct lamination fabric. Locally up to 20% medium pink laminations. From 414.50 to 414.68 Feldspar porphyry: with 5% 2-3 mm. white feldspar phenocrysts and 5% 0.5-2.0 mm white feldspar phenocrysts in a medium pink groundmass. Upper contact frozen wall at 65 dca parallel to laminations. Lower contact frozen wall at 40 dca parallel to laminations. From 416.06 to 420.31 Pyrite zone (NB) with 2% clustered masses of very fine-grained pyrite including a 2.0x4.0 cm mass of pyrite at 417.40-417.42m. From 417.19 to 417.52 Appears to be 25% light grey. nonmagnetic volcanic fragments or breccia fragments in a dark green extremely magnetic. magnetite rich matrix.

CS-18-16W	420.63	431.49	DEF	DEFORMATION ZONE MINERALIZED: From 420.63 to 425.93 Silicification: NB Appears to be strong pervasive silicification (possibly feldspar alteration). Very hard > chisel. Apparent laminations are much thicker than above suggesting silicification during flattening event or stretching of volcanic fragments. 3% disseminated pyrite dominated by coarse grained pyrite to 10.0 mm cubes. Locally fine-grained disseminated pyrite. From 425.93 to 431.49 Silicification: NB Variable. apparent hard =/> chisel to moderately hard </= chisel and dark green silicification. 1-2% disseminated. fine-grained clusters of pyrite. From 428.79 to 428.88 45 dca Quartz vein: massive white quartz vein with minor chloritic fracture filling. Straight frozen walls. From 431.89 to 431.91 50 dca 2.0 cm quartz vein with frozen walls. From 431.89-432.16 1% 1.0 mm unidentified pale tan alteration mineral. From 433.87 to 444.07 Galena on slips. From 433.84-434.22 appears altered and soft (<< Chisel). No calcite alteration. 433.92 galena on slip at 122 dca. From 433.94 to 433.97 55 dca NB 3.0 quartz galena sphalerite vein: 5% dark green chlorite. 5% galena (single cleavages) to 0.5x1.8 cm and 5% coarse yellow sphalerite to 1.5 cm (single cleavages). This vein. and associated fault and alteration may have significance to Co-Ag exploration associated with the Nipissing Diabase below.
CS-18-16W	431.49	436.99	DEF	DEFORMATION ZONE: Possibly volcanic fragments stretched to 10 to 1 ratio which appears to be less deformed than above. Medium grey with deformation fabric defined by 5% wispy. soft (<< chisel). dark green patches.
CS-18-16W	436.99	437.36	DIA	NIPISSING DIABASE: Uniform and massive. aphanitic. dark green with no variation. Hard =/> chisel. strongly magnetic with 5.0 cm fall back of pencil magnet thought-out from contact to contact. Rock above and below is not magnetic. Upper contact sharp and frozen at 55 dca. Lower contact sharp and frozen at 60 dca and parallel to upper contact. This dike appears to be Nipissing diabase. This structure may have significance in Co-Ag exploration in diabase below.
CS-18-16W	437.36	437.52	DIA	Nipissing Diabase?: Uniform. aphanitic. dark green with weak groundmass texture as wispy darker green patches with trace chalcopyrite. Hard > chisel. and nonmagnetic throughout. Lower contact sharp and frozen at 60 dca subparallel to upper contact.
CS-18-16W	437.52	479.67	TUF	MIXED VOLCANICS AND TUFFS: Appears to be dominantly massive silicified basaltic or intermediate flows or dikes. mafic and felsic tuffs and A few apparent iron formation which are difficult to differentiate in logging. The dominant feature if this unit is it's extreme hardness and black to very dark green colour indicating silicification and or more felsic than normal units.. From 437.52 to 440.00 Uniform and massive. fine-grained (<0.5 mm). hard > chisel. <0.5% fine-

				grained disseminated pyrite in groundmass. From 439.20 to 439.21 38 dca 0.5 cm chloritic band with a 1.0x3.0 cm mass of fine-grained pyrite invading wall rock. From 439.50 to 439.57 5% disseminated and masses of very fine-grained pyrite associated with feldspathic veining to 1.0 cm. From 440.00 to 443.33 Laminated mafic tuff or laminated basalt/gabbro. Very hard > chisel. with medium green and dark green laminations. From 441.59 to 441.61 120 dca 2.0 cm quartz vein. massive wqh quartz with 0.5% galena. Frozen walls. At high angle to laminations. From 442.95 to 443.10 Strongly magnetic with 3.0 cm fall back of pencil magnet. 2% fine-grained bands and disseminated patches of pyrite. From 443.33 to 443.57 feldspar porphyry: 30% 1.0x3.0 mm feldspar porphyry in a pale to medium pink sold groundmass with vague quartz veinlets and masses. Massive. very hard > chisel. Upper contact sharp and frozen at 50 dca and lower contact sharp and frozen at 40 dca. Both contact parallel to rock fabric above and below. From 443.57 to 479.67 Appears to be dominantly massive silicified basaltic or intermediate flows or dikes. mafic and felsic tuffs and A few apparent iron formation which are difficult to differentiate in logging and these thin units are not individually described below. From 446.21 to 447.61 Silicified. laminated. dark green with pink tinge. From 447.61 to 447.90 Uniform and massive (dike?). dark green. very hard > chisel. Has 3.0 cm xenolith of red feldspathic/silicified alteration. From 447.90 to 448.41 Silicification as quartz flooding. Extremely hard > chisel. From 448.41 to 448.87 Black strongly magnetic with 4.0 cm fall back of pencil magnet. Very hard > chisel. 3% fine-grained disseminated pyrite. From 448.37 to 454.02 Massive to weakly laminated. very fine-grained. very hard > chisel. nonmagnetic to weakly magnetic. Barren of sulphides. From 454.02 to 455.41 Silicification: medium green. aphanitic. very hard > chisel. barren of sulphides. From 454.67 to 455.15m strongly lamination at 55 dca with pink tint. From 455.41 to 457.92 Black. massive to weakly laminated. Very hard > chisel. 0.5% coarse grained disseminated pyrite. From 457.92 to 458.89 Silicified. black strongly magnetic with 4.0-5.0 cm fall back of pencil magnet. 4% fine-grained disseminated pyrite. Extremely hard > chisel. From 458.79-458.89 laminated pale grey and black laminations with 10% fine-grained to coarse grained pyrite. No magnetite or pyrrhotite observed.

				From 458.89 to 461.51 Medium green laminated with 15% dark green laminations at 35 dca. Variable hardness </> chisel. Barren of sulphides except as described below. From 459.86 to 460.16 150-180 dca 3.5 cm quartz-chalcopyrite vein: Massive white quartz with 1% chalcopyrite. 1% fine-grained disseminated pyrite within 2.0 cm of vein. Vein at low angle to core axis. From 461.51 to 461.99 Dark greenish black. Strongly magnetic with 4.0 cm fall back of pencil magnet. Very hard > chisel. 3% very fine-grained disseminated pyrite and 0.5% coarse grained pyrite crystals. From 461.99 to 462.85 Medium to dark green. very thin laminations at 30-40 dca. Very hard > chisel. 2% fine-grained disseminated pyrite. From 462.85 to 464.34 Variable harness </> chisel and variable alteration. Medium grey green with banding 35 dca. Minor pyrite. From 464.34 to 465.58 Feldspar porphyry: 2% 2.0 mm feldspar phenocrysts in medium grey to greenish grey groundmass. Dominant feature dark green chloritic microfracture filling. Silicified with quartz flooding near lower contact. Upper contact silicified and frozen at 80 dca. Lower contact sharp and frozen at 80 dca. From 465.53 to 465.57 20 dca 2.0 cm quartz vein: Massive white quartz. Frozen walls. From 465.57 to 474.79 Massive dike or flow. Fine-grained (0.5 mm crystalline) to very fine-grained. massive. very hard > chisel. From 469.63 to 469.71 60 dca NB 6.0 cm calcite vein: 1-2 mm crystalline light green calcite. Actinolite may give the vein it's green colour. Upper contact is a strong slip at 60 dca. Lower contact irregular and frozen at 60 dca. This vein appears to cross the hole from left to right at 75 degrees to the horizontal trace of the hole and dip 70 degrees south (orientation of core measured down from 468m. Core orientation in this holes are very inconsistent and should be used with caution. The orientation mark at 471 appears to be in serious error and was not used. Marks at 468m and 474m are close. This vein should be considered in Co-Ag exploration. From 469.84 to 469.87 60 dca NB 2.3 cm calcite vein: 1-2 mm crystalline light green calcite. Actinolite may give the vein it's green colour. Upper contact and lower contact sharp and frozen at 50 dca. This vein appears to cross the hole from right to left at 70 degree to the horizontal trace of the hole and dip 80 degrees north. This vein should be considered in Co-Ag exploration. From 474.24 to 474.79 Intense calcite-quartz alteration possibly associated with Co-Ag environment. From 474.79 to 475.07 Feldspar porphyry: 2% 1.0 mm feldspar phenocrysts and 0.5% 2mm feldspar phenocrysts. Quartz flooded with vague quartz patches. Extremely hard > chisel

				From 475.07 to 475.18 60 dca Calcite alteration. From 475.07 to 476.01 Very fine-grained. foliated. hard > chisel From 476.01 to 476.79 Feldspar porphyry: 3% feldspar phenocrysts to 3.0 mm. Quartz flooded with prominent dark green chloritic microfracture filling. Trace pyrite. Upper contact slip at 60 dca. Lower contact in broken ground. From 476.79 to 479.67 Massive to laminated (50 dca). dark green. Where laminated 5-10% medium green laminations are moderately hard < chisel.
CS-18-16W	479.67	586.55	DIA	NIPISSING DIABASE: Most of this core is outside waiting logging. January 09. 2018. All core intervals above 479.67m were reconciled. The core below 479.67 was deemed low priority core and only the core samples was reconciled to the nearest drillers block. All drillers blocks in this hole were within 10 cm of true position relative to the blocks above and below. The reconciled core has a high degree of reliability within the reconciled interval meaning all samples are within 2 cm of true position relative to the core above and below and the samples are within 1 cm of true width. Much of the diabase below was logged on cold core. The drillers oriented core marks at the blocks were generally random rotated relative to the drillers oriented core marks at the blocks above and below and were generally not considered in logging unless noted in this log. Logging of this hole was interrupted by frequent events including power outages and it was difficult to maintain continuity of logging. From 479.61 to 479.72 Aphanitic chill: dark green. aphanitic chill with three thin hairline bleached streaks along apparent healed fractures. 0.5-1.0 cm pale grey green bleaching along the contact. These features are typical of diabase contact chills. 1.0 cm above the contact is bleached. From 479.70 to 479.72 has a few 1.0 black patches that may be mafic phenocrysts. There is no other evidence of phenocrysts in the contact area. The contact is weakly magnetic and magnetic signature gradually increases 3.0-4.0 cm fall back of pencil magnet at 479.70m. From 479.72 to 482.00 Transition from aphanitic chill to 1.0 mm crystalline one pyroxene diabase. Upper and lower contacts arbitrary distinctions. Massive medium greenish grey. nonmagnetic to weakly magnetic with fall back of pencil magnet up to 1.5 cm.. From 482.00 to 516.95 One pyroxene diabase: Uniform and massive. medium greenish grey. Generally nonmagnetic. From 516.46-to 16.95 section of 3.0 mm crystalline diabase. From 494.93 to 494.95 28 dca. 0.8 cm epidote seam along strong slip at 28 dca. Slip fabric 40 degrees to core axis. From 500.97 to 500.19 50 dca NB Epidote Fault (low angle style). From 500.97-500.12 bleached

				wall rock fragments floating in pale green epidote. From 501.12-501.19 20% breccia fragments to 0.3 cm floating inn dark green groundmass. Epidote bleaching extends from 500.65-501.65m. Steeply dipping silver-cobalt veins are commonly associated with these low angle faults. From 492.50-503.00 is prominent 2-10 cm chloritic fracture set commonly 40 and 60 dca. From 516.95 to 568.00 Hypersthene diabase: Uniform and massive. 1-2 mm crystalline. medium greenish grey. Locally 2-5% 3-4 mm dark green patches appear to be altered pyroxene. From 516.95 to 532.00 7-40 cm slip spacing generally 10-15 cm with weakly developed chlorite on slips. From 531.43 to 531.51 Coarse grained granophyric diabase with 85 % pale grey granophyre interstitial to 15% 1x3 mm black pyroxene. From 532.39 to 541.90 Broken ground with slip spacing 3-15 cm commonly with strong smooth chlorite faces. Appears to b e associated with faulting and veining diabase. From 532.50 to 532.54 NB 62 dca 1.5-3.5 cm actinolite (epidote. calcite-quartz) fault. Pale yellow and pale green slip fibre giving cats eye schiller. Slip fibre 70 dca with slip up and core flat on table. From 532.45 to 533.315% 3-4 mm dark green chlorite spotting and dark green chlorite fracture filling to 0.3 cm Pt fault. From 533.17 to 533.21 NB 42 dca 3.0 cm actinolite calcite fault vein with actinolite slip fibre in calcite. Frozen walls parallel to fault above. From 534.61 to 534.84 20 cm quartz-calcite vein. NB Possibly two intersection veins as 534.61-534.80 m (55 dca) vein as 50% sharp hexagonal quartz prisms to 1.0x2.0 cm projecting into 50% coarse grained white calcite (cleavages to 2.0 cm. From 534.80-534.84 m (110 dca) 60% grey quartz crystals to 0.5 cm with 40% calcite as vein filling. From 534.30-535.20 m strong chlorite alteration (that appears to lack calcite alteration very cold). Alteration is soft << chisel. Alteration is in part dark green and in part salt and pepper pale grey and dark green that accentuates the original igneous crystal texture. From 545.00 to 545.03 60 dca 1.5 cm actinolite fault with dark green to pale green cats eye schiller. From 544.80 to 545.45 Bleached pale grey with 10% 3-4 mm dark green chlorite spots. From 545.39 to 545.40 65 dca 0.5 cm actinolite fault. From 551.46 to 551.48 28 dca 0.5 cm calcite vein. Fine-grained grey calcite. From 551.46 to 551.61 m moderate calcite alteration; bleached with no chlorite spotting. soft << chisel. From 561.62 to 561.63 70 dca 0.5 cm gouge fault recovered as powdery gouge. From 561.63 to 561.62 Recovered as 1.0-4.0 cm bleached chips. From 561.62 to 561.63 70 dca 0.5 cm gouge fault recovered as powdery gouge. From 567.58 to 567.61 40 dca 1.5 cm actinolite (quartz) fault with slip fibre 80 dca.

				From 568.00 to 575.62 One Pyroxene diabase: Uniform and massive. 1-2 mm xline3 diabase. No hypersthene identified. From 569.36 to 569.39 15 dca 1.5 cm calcite-chlorite vein with weak walls. Little or no alteration. From 569.52 to 569.54 165 dca 0.0-0.5 cm calcite-quartz vein. Same vein as above? Little or no alteration. From 569.85 to 569.90 15 dca 1.5 cm calcite-chlorite vein with weak walls. Same vein as above? Little or no alteration. From 573.87 to 573.90 0.5 cm grey and white calcite vein frozen walls. Moderate chlorite alteration from 573.87-573.90. At 573.80 m hairline calcite fracture filling. From 575.62 to 583.20 Varied textured diabase: From 575.62 to 586.55 One Pyroxene diabase: Uniform and massive. 1-2 mm xline3 diabase. No hypersthene identified. From 579.62 to 581.50 Uniform and massive 1-4 mm crystalline diabase with 50% black pyroxene and 50 % pale green plagioclase. Upper contact 40 dca and vague with crystal grain continuous across contact. Lower contact gradational. From 581.24 to 581.32 5% pale pink interstitial granophyre. From 581.50 to 581.50 Mixed 1-2 mm crystalline one pyroxene diabase and 3-4 mm crystalline one pyrite diabase with vague boundaries. From 584.75 to 584.76 35 dca 1.0 cm Calcite vein: Fine-grained white calcite vein with thin silicate selvage along walls. No apparent alteration. From 586.55 to 586.55 END OF HOLE

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-18-17

Property	Castle-East	Objective: Define the Robinson zone
Claim/Lease Number	LEA-19680	
NTS Map Sheet	41P10	
UTM Zone	17	
UTM Easting	520690	
UTM Northing	5279579	
Elevation	408 m	
Drilling Company	Laframboise drilling	
Start Date	11/12/2018	
Finish Date	14/12/2018	
Hole Length	356 m	
Core Size	NQ	
Date Logged	14/01/2020	
Geologists	Doug Robinson P. Eng. & Merouane Rachidi P.Geo.,	

Test type : Reflex

Depth (m)	*Azimuth (°)*	*Dip (°)*
0	175	-50
50	173.8	-47.7
101	173.2	-47.1
152	172.9	-46.8
200	173.2	-46.5
251	173.7	-45.8
356	174.9	-45,00

HOLE NAME	FROM	TO	ROCK TYPE	COMMENTS
CS-18-17	0	2.98	OVB	
CS-18-17	2.98	11.41	ARG	Grey to green fine grained thin laminated argilite non magnetic moderately hard. highly foliated (20. 50. 70 to the core axis). locally boudans filled by qz/carb and folded veins. 2% fine grained pyrite disseminated within the groundmass and veins (up to 5mm pyrite crustals). +/- chalcopyrite (more at 4.3m). patches of green sericite. Pyrite preferentially within the folitation plans. 2.98m to 5m 5% qz/carb veins oriented 20. 50 and 70 to the core axis. 5m to 11m less than 2% veins qz/carb oriented 20. 50 and 70 to core axis ° to core axis. foliation plan affecting veins.
CS-18-17	11.41	16.84	HOR	Hornblende porphyry uniform and massive. green to light grey. very fine-grained <0.2 mm crystalline. non magnetic. hard to moderately hard. The upper contact at 50 dca and the lower contact at 35 dca. Disseminated pyrite 0.5 to 1%. Less than 2% veins qz/carb. SG 2.73 and 2.75
CS-18-17	16.84	19.86	FEL	Felsic Dyke ? grey-green banded fine grained non magnetic with moderately gnessic apperance with fine grained pale green banding (20 to 00 dca). moderately hard. Pyrite crystals in groundmass 3 to 4% more concentrated at the inf contact (up to 5mm large). Less than 2% qz/carb veins.
CS-18-17	19.86	20.41	DIK	Quartz porphyry dyke? Medium grained tuff? uniform and massive. very hard with quartz phenocrysts in groundmass. minor pyrite disseminated 0.2 to 0.5%. Less than 2% qz/carb veins 30 to 40 dca. The inferior contact at 35 dca.
CS-18-17	20.41	22.9	FEL	Felsic dyke ?. Green to light grey fine grained banded and intensly altered. Non magnetic moderately hard. locally fractured. contact at 45 dca. 0.2-0.5% pyrite disseminated in the groundmass. more pyrite at 22.75m preferentially within the foliation plan.
CS-18-17	22.9	23	ARG	Dark grey to black argilite.contact at 25 dca 15% pyrite concentrated non magnetic. micrfolded. foliations parallel to the inferior contact 25 dca.
CS-18-17	23	23.33	TUF	Medium grained tuff. massive. foliation 0 to 20 dca. 5% pyrite in the groundmass
CS-18-17	23.33	23.88	MDY	Mafic dyke green pale. high concentration of sericite SG 2.88. from 23.33m to 23.6 less than 1% veins. From 23.6m to 23.88m 5% Qz/carb veins folded. pyrite within the walls veins.
CS-18-17	23.88	24.22	ARG	Dark grey to black argilite.contact at 20-30 dca preferentially with pyrite (0.2 - 0.5%) fine grained.
CS-18-17	24.22	24.57	TUF	Medium grained tuff. traces of soft sediment deformations. contact at 30 dca.
CS-18-17	24.57	25.45	ARG	Dark grey to black argilite.contact at 20-30 dca preferentially with pyrite (0.2 - 0.5%) fine grained. Locally banded less than 1% Qz/carb veins oriented 50-70 dca.

CS-18-17	25.45	26.78	QZ	Altered zone overprint the quartz porphyry?. green pale. massive. sharp contact at 30 dca. Some small intervals of argilite at 26m (10 cm large) and at 26.26m (7cm large). 0.5 to 1% pyrite disseminated. less than 1% qz/carb veins.
CS-18-17	26.78	28.03	ARG	Dark grey to black argilite.contact at 25 dca. locally foliated folded. pyrite (1 - 2%) fine grained preferentially within the foliation plan. Less than 1% Qz/carb veins oriented 50-70 dca.
CS-18-17	28.03	31.02	HOR	Green hornblende porphyry. massive. hard to extremely hard. non magnetic. The upper contact at 35 dca and the lower contact at 35 dca. Disseminated pyrite 1-2%. More pyrite between 29.7m to 30.25m. Less than 2% veins qz/carb oriented 50 to 70 dca minor pyrite within the walls.
CS-18-17	31.02	32.17	FELP	Feldspar porphyry. massive very hard. SG 2.67. contact at 65 dca. White feldspar in greenish pink groundmass. locally intense silicification. At least 3 generations of veins 35 80 dca and veinlets irregular orientations. Minor pyrite disseminated concentrated along veinlets. Lower contact sharp at 35 dca.
CS-18-17	32.17	32.91	HOR	Altered hornblende porphyry. locally banded. massive. very to extremely hard. foliation 30-40 dca. sharp contact at 40 dca. Non magnetic less than 1% veins.
CS-18-17	32.91	36.97	TUF	Highly silicified tuff. extremely altered. banded massive. 1-2% pyrite preferentially within the foliation plan. From 33.26m to 35.6m less than 1% veins 35.6m to 36m 3% veins qz/carb oriented 35 dca. and irregular. 36m to 36.97m less than 1% veins more pyrite at 35.15. 35.5 and 36.7m
CS-18-17	36.97	38.52	TUF	Fine grained grey to dark grey tuff. SG 2.75. locally fractured. foliated contact at 35 dca. Traces of shear. low pervasive calcite. locally hematized. less than 1% veins.
CS-18-17	38.52	40.1	GAB	Gabbro dyke. contact at 35 dac.. moderately to highly magnetic. massive. 3% veins qz/carb 30 dca and irregular. 3 to 4% pyrite disseminated very rare chalcopyrite.
CS-18-17	40.1	41.48	FELP	Feldspar porphyry. massive very hard. non magnetic. minor pyrite disseminated (0.2%). less than 1% veins.
CS-18-17	41.48	44.15	GAB	Gabbro dyke. locally moderately to highly magnetic. massive. 2-3% veins qz/carb 30 dca and irregular. Concentration of pyrite (3 to 5%) disseminated from 43m to 44.15m.
CS-18-17	44.15	47.96	HOR	red to brown hornblende porphyry. massive. non magnetic. hard to moderately hard. The upper contact is irregular and the lower contact at 65 dca. Disseminated pyrite 1 to 2% in the groundmass. 3% veins qz/carb oriented 30 to 50 dca. Locally brecciated at 45.46m large of 5cm. intersected by quartz porphyry at 45.48m (large of 76cm).

CS-18-17	47.96	50.07	UM	Ultramafic dyke. massive. weakly magnetic with 1cm fall back of the pencil magnet. 3 to 5% pyrite disseminated in the groundmass less than 2% qz/carb veins contact at 65 dca.. isolated boudans and folded veins. lower contact gradational into sub-unit below.
CS-18-17	50.07	50.33	FU	Fuchsite dyke. non magnetic. moderately to extremely hard. contact at 65 dca. Some spot yellow mat 1-2mm size?
CS-18-17	50.33	50.88	FELP	Feldspar porphyry 3% qz/carb veins 1% pyrite disseminated. Less than 1% qz/carb veins
CS-18-17	50.88	53.24	TUF	Intermediate tuff. massive. not magnetic. locally highly silicified (shert zones?) rare pyrite in the groundmass lessthan 2% veins.
CS-18-17	53.24	56	QZ	Quartz porphyry dyke. massive. very hard with quartz phenocrysts in groundmass. minor pyrite disseminated 0.2 to 0.5%. Less than 1% qz/carb veins 30 to 40 dca. The contact at 60 dca.
CS-18-17	56	58.4	ARG	Banded dark grey argilite. lamination 50-60 dca. 5% pyrite within the lamination plan. locally folded. some intervals of intermediate tuff? At 56.45m (5cm) and at 57.77m (15cm).
CS-18-17	58.4	59.76	TUF	Green pale intermediate tuff. massive. not magnetic. SG 2.88. less than 1% veins. rare pyrite in the groundmass less than 1% veins.
CS-18-17	59.76	59.95	FELP	Feldspar porphyry. less than 1% veins qz/carb veins very rare pyrite disseminated. Cross cutted by the interval before (intermediate tuff).
CS-18-17	59.95	61.42	ARG	Dark grey argilite. lamination 30 - 50 dca. 3-4% pyrite (5 mm crystals) locally folded.
CS-18-17	61.42	61.95	FELP	Feldspar porphyre. contact 55 dca. Foliation parallel to the contacts. rare pyrite disseminated.
CS-18-17	61.95	62.33	ARG	Darg grey Argilite. contact at 55 dca.. locally folded. 2% qz/carb veins oriented 20-30dca. And some irregular.
CS-18-17	62.33	62.93	FELP	Feldspar porphyry. massive. not magnetic. contacts at 50 dca. Folation parallel to contacts. rare pyrite disseminated in the groundmass. less than 1% veins SG 2.69.
CS-18-17	62.93	65.13	TUF	Fine grained green pale intermediate tuff. locally fractured. foliated contact at 50 dca. 2-3% qz/carb veins 20-60 dca.. rare pyrite disseminated in the groundmass.

CS-18-17	65.13	65.62	FELP	Feldspar porphyry. contacts at 50 dca.. at least two generations of veins 2-3% veins 20-60 dca.. rare pyrite locally oxidized.
CS-18-17	65.62	70.82	TUF	Intermediate tuff. massive. not magnetic. moderately hard. SG 2.67. contacts at 50 dca.. some intervals of feldspar porphyry. rare pyrite in the groundmass. from 65.62m to 68.7m less than 1% veins. from 68.7m to 70.82m 2-3% veins 20-70 dca.. some veinlets irregular rare pyrite locally oxidized.
CS-18-17	70.82	85.03	GAB	Gabbro. massive and uniform. rare pyrite 0.2-0.5% in the groundmass. From 70.82m to 74.96m less than 1% veins. From 74.96m to 76.53m 3% qz/carb veins up to 8cm large rare pyrite within the walls. From 76.53m to 87.46m less than 1% veins oriented 20-30 dca. at 82.46m large qz/carb vein of 30 cm rare pyrite within the walls. From 82.83m to 85.03m less than 1%.
CS-18-17	85.03	86.3	QZ	Quartz porphyry. massive extremely hard. rare pyrite. locally very weakly magnetic. very rare hematite in the groundmass. 2-3% qz/carb veins 40-60 dca.
CS-18-17	86.3	89.8	GAB	Gabbro. massive and uniform. rare pyrite 0.2-0.5% in the groundmass. less than 1% veins. very rare hematite within the vein walls.
CS-18-17	89.8	90.92	QZ	Quartz porphyry less than 1% qz/carb veins. folded. contacts at 50 dca.. more pyrite at the contacts.
CS-18-17	90.92	114.84	GAB	Gabbro. massive and uniform. moderately hard. rare pyrite 0.5% in the groundmass. 2-3% qz/carb veins minor pyrite within the walls and very rare hematite oriented 30-50 dac.. more sericite between 106.7m to 107m very rare hematite within the vein walls. at 114.1m shear zone large of 5cm crosscuting veins. SG 2.8 to 3.
CS-18-17	114.84	115.19	FELP	Feldspar porphyry. contact at 60 dca.. less tha 1% qz/carb veins. the upper contact brecciated.
CS-18-17	115.19	120.71	GAB	Gabbro. massive. moderately hard. locally weakly magnetic. 3% qz/carb veins 30-70 dac.. contact at 70 dca.. rare pyrite in the groundmass.
CS-18-17	120.71	121.12	FELP	Feldspar porphyry. contact at 25 dca.. rare pyrite (0.2-0.5%) in the groundmass. less than 1% qz/carb veins 1%. SG 2.66.
CS-18-17	121.12	123.54	GAB	Gabbro. moderately hard. locally weakly magnetic. at least two foliation plan 20 and 35dca.. locally folded. 0.5 to 1% pyrite in the groundmass. more pyrite between 121.6m and 122.15m up to 4mm. 2% qz/carb veins oriented 60-70dca.. more chlorite within the walls.

CS-18-17	123.54	124.08	FELP	Feldspar porphyry. contact at 50 dca.. 0.2-0.5% pyrite in the groundmass. SG 2.68. less than 1% veins.
CS-18-17	124.08	127.53	GAB	Gabbro. massive locally foliated. 3 to 4% pyrite in the groundmass. foliation plans 30 dca. 2% quatz/carbonates veins with minor pyrite within the walls.
CS-18-17	127.53	128.93	HOR	Hornblende porphyry uniform and massive. green to light grey. not magnetic. very fine-grained <0.2 mm crystalline. moderately hard. Contact at 50 dca disseminated pyrite 0.5 to 1%. Less than 1% veins qz/carbonates. From 128.28m to 128.5m 25 to 30% veins qz/carb 50 dca at least two generations of veins with more chlorite within the walls.
CS-18-17	128.93	129.25	FELP	Feldspar porphyry . looks like tuff? Contact at 50 dca. some dissolution seams 50 dca less than 1% veins.
CS-18-17	129.25	130.35	HOR	Hornblende porphyry. massive. moderately magnetic. pervasive calcite in the groundmass. 1% pyrite in the groundmass. less than 1% veins.
CS-18-17	130.35	130.82	FELP	Feldspar porphyry. massive. uniform. hard. 0.5 - 3 mm white feldspar phenocrysts in greenish pink groundmass. contact at 50 dca with chloritic fabric parallel to contacts. some dissolution seams 50 dca less than 1% veins. hairline fractures.
CS-18-17	130.82	134.33	HOR	Hornblende porphyry. massive. locally weakly magnetic. contact at 30 dca. with more pervasive calcite in the groundmass at the upper contact. 1% pyrite in the groundmass. less than 1% qz/carb veins 30-50 dca some irregular. 0.5% pyrite in the groundmass.
CS-18-17	134.33	134.52	FELP	Feldspar porphyry. massive. uniform. hard. up to 5 mm white feldspar phenocrysts in greenish pink groundmass. contact at 55 dca with chloritic fabric. some dissolution seams 50 dca less than 1% qz/carb veins.
CS-18-17	134.52	144.33	HOR	Hornblende porphyry. massive. locally weakly magnetic. contact at 30 dca. with more pervasive calcite in the groundmass at the upper contact. 1% pyrite in the groundmass. less than 1% qz/carb veins 30-50 dca some irregular. 0.5% pyrite in the groundmass.
CS-18-17	144.33	145.7	FELP	Feldspar porphyry. very hard. 0.5-3 mm white feldspar phenocrysts in greenish pink groundmass. 0.5% pyrite in the groundmass. less than 1% veins 70 dca.
CS-18-17	145.7	156.12	HOR	Hornblende porphyry. contact at 70 dca. massive. not magnetic. 0.5 - 1% pyrite in the groundmass. From 145.7m to 148.52m 5 to 10% qz/carb veins 35 to 70 dca at least three generation of veinsminor chlorite and +/- pyrite within the walls. 148.52m to 154.78m 2 to 4% veins 35 to 60 dca. 154.78m to 156.12m 5% veins qz/carb 35 - 60 dca up to 1cm large. haireline fractures. From 154.1m to 156.12m more pervasive calcite in the groundmass.

CS-18-17	156.12	159.5	HOR	Hornblende porphyry. massive. foliated plans 35 dca with more sericite qz and carbonates. less than 1% veins. At 159.2m qz veins of 4cm large 70 dca.
CS-18-17	159.5	167.92	HOR	Hornblende porphyry. massive. from 159.5 to 161.61m 3% veins 20-70 dca up to 1cm large. From 161.61m to 163.65m 15% veins qz/carb at 161.66m large breccia of 22cm qz/carb +/- chlorite 3 - 5 % pyrite. At 163.47m shear zone qz/carb +/- chlorite. 163.65m to 166.5m less than 2% veins qz/carb. 166.5m to 167m large vein milky quartz irregular contact minor chlorite at the contact minor pyrite within the walls. From 167m to 167.92m less than 1% veins more carbonates in the groundmass.
CS-18-17	167.92	170.17	FELP	Feldspar porphyry. very hard. contact at 70 dca. 0.5-3 mm white feldspar phenocrysts in greenish pink groundmass. 0.5% pyrite in the groundmass. 2 - 3% veins oriented 30 - 60 dca more pyrite at 168.13m with foliation plans.
CS-18-17	170.17	170.33	HOR	Hornblende porphyry. contact at 70 dca. very hard. massive. not magnetic. highly silicified. 0.5% pyrite in the groundmass. less than 1% veins
CS-18-17	170.33	170.7	HOR	Hornblende porphyry. contact at 70 dca. massive. not magnetic. locally hematized. less than 1% veins
CS-18-17	170.7	171.12	HOR	Hornblende porphyry. locally pervasive calcite in the groundmass. 5% veins qz/carb up to 3cm large oriented 70 dca
CS-18-17	171.12	175	HOR	Hornblende porphyry. massive. locally batch of hematite. locally weakly magnetic. From 171.12m to 172.73m less than 1% veins qz/carb From 172.73m to 172m large vein oriented 60 dca minor chalcopyrite within the walls. 172 to 173.3m less than 1% veins 173.3m to 174.07m 20% veins qz/carb ankerite% oriented 50-70 dca minor pyrite some veins are irregular and folded. 174.07m to 175m less than 1% veins 0.5-1% pyrite in the groundmass.
CS-18-17	175	175.83	FELP	Feldspar porphyry. massive. contact at 65 dca. 0.3 to 5 mm white feldspar phenocrysts in pink groundmass. less than 1% veins qz/carb. locally dissolution seams with minor chlorite.
CS-18-17	175.83	176.28	HOR	Hornblende porphyry. massive. pervasive calcite. looks like fine grained tuff? Less than 1% veins.
CS-18-17	176.28	176.63	FELP	Feldspar porphyry. massive. contact at 65 dca. 0.3 to 5 mm white feldspar phenocrysts in pink groundmass. less than 1% veins qz/carb. locally dissolution seams with minor chlorite.

CS-18-17	176.63	181.42	HOR	Hornblende porphyry. contact at 70 dca. looks like fine grained tuff? Pervasive calcite in the groundmass. massive. locally weakly magnetic. 2 to 3% veins qz/carb up to 2cm large.
CS-18-17	181.42	183.29	FELP	Feldspar porphyry. massive. contact at 50 dca. 0.3 to 5 mm white feldspar phenocrysts in pink groundmass. less than 1% veins qz/carbonates.
CS-18-17	183.29	189.44	TUF	Grey green fine grained tuff? Pervasive calcite in the groundmass. From 189.44m to 184.65m less than 1% veins From 184.65m to 189.44m 3 to 5% veins quartz/carbonates 30 - 50 dca minor pyrite within the walls.
CS-18-17	189.44	192.02	TUF	Intermediate tuff? Contact at 35 dca. massive. foliation plans. more sericite. locally weakly magnetic. very hard. locally silicified. From 189.44 to 191.05m 3 to 5% qz/carb veins 35 - 60 dca up to 1.5cm large. more pyrite in the groundmass between 190.3m to 190.55m preferentially within the foliation plans. at 191.05m large vein of 24cm quartz/carbonates crosscuting the foliation plans. At 191.45m veins of 6cm large with minor pyrhotite and +/- pyrite at the walls.
CS-18-17	192.02	194.53	TUF	Felsic tuff? Fine grained light grey-green. locally altered. nonmagnetic. and hard. 1 - 2% disseminated pyrite in the groundmass. sharp contact at 55 dca. SG 2.8.
CS-18-17	194.53	205.63	TUF	Intermediate tuff? irregular contact. massive. very hard and intensely altered. it is difficult to determine rock type due to the alteration and veining. Foliation plans 35 dca. more pyrite within the fliation plans. with more chacopyrite at 200.32m 5 to 10% pyrite disseminated in the groundmass. 3 - 5% veins qz/carb at least two generation of veins.
CS-18-17	205.63	209.86	TUF	Dike. cherty tuff? Almost white. highly silicified. very hard. localy weak pervasive calcite alteration. presence of well cristallized pyrite up to 6mm 5% pyrite in the groundmass. 5 - 10% veins qz/carb 35 - 60 dca. at least 3 generations of veins. haireline fractures.
CS-18-17	209.86	217.96	TUF	Intermediate tuff? Very hard. nonmagnetic. top contact irregular. contact inferior 65 dca. intensely foliated at the beginning of the interval. 3-5% pyrite in the groundmass preferentially within the foliation plans oriented 30 - 50 dca. more pyrite between 208.86m to 209.65m and 212.4m to 213m. some smal intervals of feldspar porphyry at 213.68m (large of 25cm contact at 35 dca) and at 214m (10 cm) Fault with breccia fabric (heterolithic breccia). at 215.5m (large of 105cm) breccia with angular clasts. groundmass cutted by haireline fractures filled by qz/carb cements.
CS-18-17	217.96	221.3	MFEL	Microporphyric feldspar dike. contact at 60dca. massive. porphyroblasts white and black mostly automorph size 1 to 3mm. sub to euhedral feldspars twinning visible in many grains. nonmagnetic. 2-3% qz/carb veins 30 - 50 dca. 1 - 2% pyrite disseminated in the groundmass. the inferior contact show red color alteration (hematization?) between 220.97m to 221.3m.

CS-18-17	221.3	222.75	TUF	Fine grained tuff?. Grey to green color. locally banded 50 dca. some smal intervals showing red color (hematization?) 1% fine pyrite crystals in the groundmass preferentially within the bedding plans. 2% veins parallel to the bedding 50 dca. at least two veins generations.
CS-18-17	222.75	225.1	MFEL	Microporphyric feldspar dike. massive. contact at 50 dca. porphyroblasts white. black and pink mostly automorph size 1 to 3mm. nonmagnetic. 3% qz/carb veins 35 - 60 dca up to 2cm large. 1% pyrite disseminated in the groundmass
CS-18-17	225.1	230.33	TUF	Fine grained tuff?. Grey to green color. contact at 40 dca. nonmagnetic. locally banded 35-40 dca. local pervasive carbonates alteration. 0.5-1% fine pyrite crystals in the groundmass preferentially within the foliation plans. 3-5% veins oriented 30 - 50 dca at least two veins generations.
CS-18-17	230.33	238.78	TUF	Fine grained tuff? SG 2.71. locally banded. locally weak pervasive carbonates alteration in the groundmass. nonmagnetic. From 230.33m to 231.5m less than 1% veins. From 231.5m to 234m 2 - 3% veins qz/carb oriented 30-50 dca some are folded at least two generations of veins. haireline fractures 0.5 - 1% pyrite. at 234m smal interval of hornblende porphyry large of 34cm. from 234.34m to 238.78m 3% qz/carb veins 30-50dca. minor pyrite. the inferior contact show red color alteration (hematization?) a weak magnetic.
CS-18-17	238.78	239.42	SYE	Hornblende Syenite? Dominant feature dark brick red colour and 5 - 10 % black and grey apparent hornblende phenocrysts to 1.0 mm. extremely hard groundmass and soft phenocrysts. strong pervasive calcite alteration. very weakly magnetic. less than 1% qz/carb veins
CS-18-17	239.42	261.2	TUF	Fine grained grey green tuff? SG 2.72. hard to locally very hard. locally banded. intense pervasive carbonates alteration in the groundmass. nonmagnetic. 3 - 5% veins qz/carb oriented 5-50 dca some are folded at least three generations of veins. the subparralel veins are the recent generation. haireline fractures 0.5 - 1% pyrite.
CS-18-17	261.2	262.62	MFEL	Microporphyric feldspar. massive. moderately hard. nonmagnetic. intense pervasive carbonates alteration. 3 to 5% quartz carbonates veins oriented 30 to 60 dca. 0.5-1% pyrite in the groundmass.
CS-18-17	262.62	270.66	MFEL	Microporphyric feldspar. massive. moderately hard. nonmagnetic. some intervals of feldspar porphyry at 264.24m (large of 11cm) and 264.58 (large of 14cm). foliation plans oriented 40 - 50 dca. alternance of fine grained tuff with 0.5% pyrite in the groundmass. From 262.62m to 266m less than 1% veins. From 266m to 269m 3% veins qz/carb 20 to 50 dca. From 269m to 270.66m less than 1% veins.
CS-18-17	270.66	271.52	FELP	Feldspar porphyry contact at 50 dca. hard. 3% veins qz/carb 30 dca.

CS-18-17	271.52	278.9	TUF	Fine to medium grained grey-green tuff. moderately hard. locally banded. pervasive calcite alteration in the groundmass. small interval of feldspar porphyry at 271.27m (large of 10cm contact at 55 dca). 0.5% pyrite in the groundmass. From 271.52m to 274.4 2% qz/carb veins. From 274.4m to 278.9m 5% qz/carb veins oriented 30 - 50 dca at least three generation of veins. haireline fractures.
CS-18-17	278.9	299.95	TUF	Intermediate and fine grained tuff. locally intensely altered (sericite. silicification). From 278.9m to 286.7m 5 to 10% qz/carb veins up to 7cm large oriented 30-60 dca at least three generations of veins 3-5% pyrite in the groundmass veins locally folded. From 286.7m to 290.05m 2% qz/carb veins oriented 35-50 dca. From 290.05m to 295.9m 5% veins patches of carbonates. From 295.9m to 298.92m 5 to 10% veins oriented 40-60 dca 5-10% pyrite in the groundmass and preferentially within the foliated plans and the vein walls locally folded. From 298.92m to 299.95m intermediate banded tuff? 5% qz/carb veins foliation plans 40-50 dca 2-3% pyrite.
CS-18-17	299.95	302.26	DIK	Dike with some small intervals of fine grained tuff. highly altered. very hard. (green-beige color and red color alteration) 5 to 10% veins irregular and 60 dca. 5% pyrite minor chalcopyrite minor pyrrhotite. Brecciated zone at 299.97 large of 142cm locally weakly magnetic
CS-18-17	302.26	304.32	TUF	Fine to medium grained tuff?. highly altered. 5% veins. breccia at 303.44 large of 18cm with qz/carb. pyrite. pyrrhotite. angular clasts. breccia at 303.7m large of 14cm large qz/carb pyrrhotite and pyrite.
CS-18-17	304.32	318.52	ARG	Graphitic argilite dark grey to black. locally banded. finely laminated. hard. locally weakly magnetic. From 304.32m to 307.62m 2% veins qz/carb 25-70 dca 1% pyrite in the groundmass. From 307.62m to 318.56m less than 1% veins hematized zone with the foliation plans between 316.5m to 317m.
CS-18-17	318.52	318.76	FELP	Feldspar porphyry dike. contact at 50 dca. less than 1% qz/carb veins.
CS-18-17	318.76	323.72	ARG	Graphitic argilite dark grey to black. locally banded. finely laminated. hard. locally weakly magnetic. Less than 1% veins haireline fractures filled by chlorite.
CS-18-17	323.72	356	DIA	Matachewan Diabase. uniform. massive. fine-grained (<0.5 mm). dark green hard and moderately magnetic. presence of pale green plagioclase phenocryst in the groundmass distinguishes this interval as Matatchewan diabase. 0.5-1 % pyrite in the groundmass and along bedding. SG = 3.04.presence of somesmall intervalls of graphitic argillite dark grey to black. locally banded.

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-18-18

Property	Castle-East
Claim/Lease Number	LEA-19680
NTS Map Sheet	41P10
UTM Zone	17
UTM Easting	520643
UTM Northing	5279570
Elevation	406 m
Drilling Company	Laframboise drilling
Start Date	14/12/2018
Finish Date	17/12/2018
Hole Length	350 m
Core Size	NQ
Date Logged	17/01/2020
Geologists	Doug Robinson P. Eng. & Merouane Rachidi P.Geo.,

Objective: Test the western extension of the mineralized zone.

Test type : Reflex

Depth (m)	*Azimuth (°)*	*Dip (°)*
0	176	-50
17	175.8	-49.7
50	172.9	-49.2
104	172.9	-49,00
152	177.4	-49,00
200	177.9	-48.9
250	179.1	-47.9
299	180.5	-47.2
350	180.4	-46.7

Hole name	From	To	Rock type	Comments
CS-18-18	0	1.35	OVB	CASING
CS-18-18	1.35	11.58	DIA	Matachewan Diabase: Uniform and massive. fine-grained (<0.5 mm). dark green hard and moderately magnetic with 2.5 cm fall back of pencil magnet. At 11.26 a 4.0 cm pale green plagioclase phenocryst distinguishes this as Matatchewan diabase. Badly broken ground due to brittle fracturing. Slip spacing 3-22 m. generally 5-15 cm. SG = 3.01-3.02 From 9.30 to 11.58 Chill zone. soft << chisel. dark green almost black. Chill zone not magnetic. Lower contact location arbitrability placed in severely broken core.
CS-18-18	11.58	18.8	UM	ULTRAMAFIC: Strong pervasive calcite alteration throughout. SG = 2.80-2.91. From 11.58 to 17.70 Fine-grained with apparent 0.5 mm grain size. Soft << chisel. extremely magnetic with 5-6 cm fall back of pencil magnet. Dominant feature is 40-60% pale grey mottled (patches) in a dark green groundmass. Pale grey rock is soft << chisel and dark green is moderately hard </= chisel. Feels soapy. From 17.70 to 18.80 Very fine-grained. 50% dark green patches in pale grey groundmass. Both dark green and pale grey are extremely soft <<< chisel. Moderately magnetic with 3.0 cm fall back of pencil magnet. From 14.00 to 16.70 5% calcite fracture filling typical of altered ultramafic rocks. From 18.75 to 18.80 Aphanitic black chlorite band along contact.
CS-18-18	18.8	19.94	SYE	Syenite: Dominant feather is pale grey 0.5-2.0 mm groundmass texture with 5% 0.5 mm mafic mineral specks. Moderately hard < chisel. nonmagnetic. Lacks calcite alteration.
CS-18-18	19.94	20.58	BREC	Breccia: Breccia zone dominated by dark green chlorite and 20% quartz flooding. Angular chloritic fragments floating in both quartz flooding and chloritic breccia filling. This breccia zone has been healed and has more recent gouge shearing at lower edge. A few 2.0 mm chalcopyrite grains noted.
CS-18-18	20.58	23.94	BST	BASALT: Somewhat similar to ultramafic above. Arbitrarily logged as basalt based on its SG of 2.88. Nonmagnetic to moderately magnetic with 0.0-3.0 cm fall back of pencil magnet. extremely soft <<< chisel. From 22.00 to 20.75 Lacks calcite alteration. Has a few calcite fracture fillings. From 22.00 to 22.24 Mafic Syenite: Uniform and massive. with 20% 0.5-1.0 mm dark green chloritic patches in a pale grey groundmass. Both are soft. Nonmagnetic. moderately soft </<< chisel. Appears to be from feldspar porphyry syenite suite. Moderate pervasive calcite alteration. Barren of sulphides. From 20.75 to 23.94 Strong pervasive calcite alteration strongest down the hole.

CS-18-18	23.94	31.49	TUF	CHERTY TUFF: Silicified. From 23.94 to 25.27 Medium grey. extremely hard > chisel silicified tuff with weak calcite alteration. From 25.27 to 31.49 Pale grey. almost white. extremely hard > chisel. silicified tuff Bedded 48-50 dca. No calcite alteration. Barren of sulphides.
CS-18-18	31.49	31.8	TUF	GRAPHITIC TUFF: Finely laminated. extremely hard > chisel. nonmagnetic. 30% aphanitic appearing pale grey beds and 70 % very fine grained. dark green to black beds to 1.0 cm. 5% fine grained pyrite along bedding planes. (May have amorphous carbon component?) This unit is not conductive. Upper contact sharp and frozen at 45 dca. Lower contact sharp and frozen at 60 dca. Both contacts parallel to foliation.
CS-18-18	31.8	33.54	TUF	FELDSPAR CRYSTAL TUFF: Logged as feldspar crystal tuff bases on appearance and SG 2.73 which is heaver that feldspar porphyry. Dominant feature 5% grey rounded feldspar grains to 2.0 mm in a medium greenish grey groundmass. Groundmass does not appear foliated. Strong pervasive calcite alteration. Barren of sulphides.
CS-18-18	33.54	33.61	TUF	Graphitic Tuff: Fine laminated. moderately hard < chisel. Dominant feature is the black extremely fine grained laminated argillite. This unit is conductive on polished slip faces only. Upper contact sharp and frozen at 60 dca. Lower contact sharp and frozen at 55 dca. From 33.57 to 33.58 55 dca Fault recovered as 1.0 cm powdery gouge. The slip faces are conductive.
CS-18-18	33.61	33.96	TUF	FELDSPAR CRYSTAL TUFF: Pale grey. extremely hard > chisel with weak pervasive calcite alteration. Weak foliation fabric 45 dca. Silicified with healed microfracture filling. Barren of sulphides.
CS-18-18	33.96	34.5	TUF	GRAPHITIC TUFF: 75% moderately hard < chisel black. thin argillite beds. 25% extremely hard > chisel. extremely fine grained thin pale grey laminated beds. Upper and lower contacts along strong slips. From 33.96 to 34.08 60 dca Fault recovered as fine powdery gouge on sheared/friable rock chips to 2.0 cm thick. Not conductive.
CS-18-18	34.5	38.44	TUF	TUFF: Thin laminated very hard > chisel. pale to medium grey. aphanitic appearing felsic tuff beds and apparent thick medium green moderately hard <. thick mafic tuff beds. Trace calcite alteration in upper mafic beds. Barren of sulphides. From 38.26 to 38.33 Feldspar Porphyry: Logged as feldspar porphyry based on SG </= 2.69 (some adhering tuff from below). Dominant feature laminations at 40 dca and 3% 1.0-2.0 mm black specks that may be mafic phenocrysts. Barren of sulphides. Upper contact 45 dca along strong slip. Lower contact sharp and frozen at 60 dca.

CS-18-18	38.44	38.98	FELP	FELDSPAR PORPHYRY: Logged as feldspar porphyry based on appearance and SG = 2.67. 5% white feldspar phenocrysts to 3.0 mm. Minor pyrite on slips. Chloritic foliation developed. Upper contact sharp and frozen at 55 dca. Lower contact 35 dca along strong slip parallel to foliation.
CS-18-18	38.98	47.58	BST	BASALT: From 38.98 to 44.90 Uniform and massive. dark green with ~0.1 mm groundmass texture. Soft << chisel. Nonmagnetic. SG = 2.76. From 44.90 to 47.58 Uniform and massive. dark green with ~0.5 mm groundmass texture. Soft << chisel. Nonmagnetic. SG = 2.83. From 45.12 to 46.32 Weak pervasive calcite alteration.
CS-18-18	47.58	48.5	SYE	HORNBLENDE SYENITE: Dominant feature dark brick red colour and 5% black and grey apparent hornblende phenocrysts to 1.0 mm. Extremely hard > chisel groundmass and soft phenocrysts. Strong pervasive calcite alteration. Strongly brittle fractured at low angle to the core axis. Upper contact sharp and frozen and irregular. Lower contact 20 dca along straight slip.
CS-18-18	48.5	56.86	BST	BASALT: Dominant feature is the dark green. uniform and massive feature. Moderately soft < chisel with SG 2.93. The SG at 38.98-47.58 appears to be less due to greater alteration indicated by difference in hardness. Nonmagnetic with local very weakly magnetic sections with 0.5 cm fall back of pencil magnet. Lacks calcite alteration. Minor calcite as minor microfracture filling. Barren of sulphides. From 50.38 to 50.29 40 dca 1.0 cm fine-grained white calcite with 10% red-green hematite chlorite band. Upper contact strong slip. Lower contact frozen. From 50.72 to 50.75 32 dca 2.0 cm quartz-calcite vein: 80% broken quartz cemented by 20% fine-grained white calcite. Contacts frozen. From 50.89 to 51.22 Fault: Badly broken ground recovered as pieces to 2.0 cm thick (00-20 dca walls) and as vein described below. From 50.98 to 51.11 30 dca. 6.0 cm quartz vein: Quartz vein recovered as loose vein in badly broken ground. Massive white quartz. From 53.09 to 53.15 70 dca 6.0 cm quartz vein. Massive white quartz with 5% white calcite interstitial to broken quartz. From 52.96-53.27 strong banded calcite-chlorite alteration grading into massive unaltered basalt above and below. Oriented core estimate. This vein is too irregular for a good orientation determination. The best guess is the vein trends 70 degree to the trace of the hole from left to fight (strike SW). From 53.22 to 56.00 Minor red hematite on slips.
CS-18-18	56.86	58.62	FELP	FELDSPAR PORPHYRY: Dominant feature bright pink groundmass and feldspar phenocrysts. 10% feldspar phenocrysts to 5.0 mm. This is an unusually dense distribution of feldspar phenocrysts.

				Very hard > chisel nonmagnetic. Prominent brittle fracturing makes this very incompetent ground. Prominent pitting appears to have resulted from dissolved calcite. No calcite survives in the groundmass. Both upper and lower contacts in broken ground. From 58.38 to 58.62 LOST CORE: Arbitrarily logged as lost core to accommodate logging and sample intervals.
CS-18-18	58.62	59.55	DIK	DIKE: Dike of feldspar porphyry syenite suite. Massive medium green. very fine-grained groundmass with 10% dark green spotting. Moderately soft < chisel nonmagnetic. From 58.82 to 58.84 50 dca 1.5 cm calcite vein: Coarse grained calcite white calcite with 10% quartz crystals.
CS-18-18	59.55	59.87	FELP	Feldspar porphyry: Similar to 56.86-58.38 m without the brittle fracturing. Dominant feature 15% feldspar phenocrysts to 5.0 mm in a red groundmass. This groundmass appears coarse than normal for feldspar porphyry. Extremely hard > chisel silicified. Nonmagnetic. Very fine-grained disseminated pyrite and quartz flooding. Upper contact sharp and frozen at 65 dca. Lower contact sharp and frozen at 125 dca.
CS-18-18	59.87	76	BST	BASALT: Dominant feature massive dark green appearance. Uniform and massive. dark green with 0.5 mm groundmass texture. moderately hard = chisel. Nonmagnetic above 70m and moderately magnetic below 70.00m (2.0 cm fall back of pencil magnet). From 59.87 to 65.88 Weak to strong pervasive calcite alteration. From 63.00 to 67.91 3% hairline to 1.0 cm calcite fracture fillings. From 63.93 to 64.25 1% 1.0 mm disseminated pyrite crystals concentrated along a 1.0-2.0 cm calcite quartz vein at 15 dca. From 65.49 to 65.72 15 dca 9.0 cm quartz vein: 75% massive white quartz. Top 25% of vein is network of bladed 1.0x5.0 mm bladed calcite crystals (25%) with grey quartz (75%) infilling between the calcite crystals. One lose and one frozen wall. From 65.72 to 66.00 the wall rock is strongly foliated parallel to the low contact of the vein. From 68.00 to 68.02 25 dca 1.0 cm quartz-hematite vein: Very fine-grained red calcite and hematite. From 68.00 to 68.68 40 dca Strongly foliated and chloritic with hairline calcite fracture fillings with red hematite. From 68.29 to 68.32 40 dca 2.0 cm calcite vein: Fine-grained. with minor hematite and a single 6.0 mm pyrite cube. From 68.84 to 68.86 38 dca 1.5 cm calcite vein with 10% quartz masses and minor red hematite patches From 72.71 to 72.90 12 cm quartz vein: as white quartz: Frozen walls are not parallel.

CS-18-18	76	76.95	DIA	MATATCHEWAN DIABASE: Uniform and massive. black. aphanitic chilled diabase. Very hard > chisel. moderately magnetic with 2.0 cm fall back of pencil magnet. Upper contact sharp. frozen and irregular at 20 dca. Lower contact harp. frozen and irregular at 20 dca. Four 2.0-4.0 mm pale green plagioclase phenocrysts within 10.0 cm of upper contact.
CS-18-18	76.95	79.53	BST	BASALT: Uniform and massive. dark green. moderately hard </> chisel. From 76.95 to 78.00 Moderately magnetic with 2.0 cm fall back of pencil magnet. Appears weakly altered or unaltered. From 78.00 to 79.53 Moderately magnetic with 2.0 cm fall back of pencil magnet and 5% epidote fracture filling at 40 dca.
CS-18-18	79.53	102.54	DIA	MATATCHEWAN DIABASE: Uniform and massive. very dark green. almost black with 0.5 mm crystalline groundmass with 1% 0.5 mm magnetic grains. Hard </> chisel. moderately magnetic with 2.0-2.5 cm fall back of pencil magnet. At 93.03 m one 2.0 cm pale green plagioclase phenocrysts. At 97.48 m one 0.5 mm plagioclase phenocryst. From 79.53 to 79.70 Almost aphanitic. very dark green chill with a few plagioclase phenocrysts to 4.0 mm. From 79.70 to 84.50 Grades from almost aphanitic to 0.5 mm crystalline. From 100.88 to 102.33 Gradational into aphanitic chill below From 102.33 to 102.54 Black aphanitic chill with six 2-4 mm pale green plagioclase phenocrysts and a 5.0 cm breccia fragment of basalt. Thin fingers of diabase intrude into the Archean rocks below. Lower contact sharp and frozen and irregular at 40 dca.
CS-18-18	102.54	103.79	BST	BASALT: Aphanitic. black. intense chlorite alteration of basalt. Very soft <<< chisel. nonmagnetic. Barren of sulphides. At 102.93 break in continuity. From 103.19 to 103.69 65 dca 48.0 cm quartz vein: Massive. white quartz vein with 5% wispy basalt wall rock fragments. Wispy dark green chloritic wall rock rip offs. Upper contact sharp. irregular and frozen at 62 dca. Lower contact slip 82 dca. Barren of sulphides. Oriented core notes Upper contact dip not reliable due to irregular contact at ~15 degrees south with strike ~90 degrees to the trace of the hole. Lower contact reliable due to flat planar slip face. Dip 60 degrees north at 90 degrees to the trace of the hole. From 103.69 to 103.79 VEIN: 85 dca 11.0 cm calcite vein: red calcite vein with 20% massive white quartz. Barren of sulphides. Upper contact 85 dca. Lower contact 80 dca. Oriented core data. Upper contact 85 dca. as reliable dip ~60 degrees north at ~90 degrees to the trace of the hole. Lower contact 80 dca Dip 65 degrees North from right to left at 85 degrees to the horizontal trace of the hole.
CS-18-18	103.79	108.99	FELP	FELDSPAR PORPHYRY: Dominantly feldspar porphyry as described below. Each feldspar phenocrysts is distinctly different from each other.. Short basalt sections as described below.

				Feldspar porphyry The basalt is massive. dark green. very soft <<< chisel. chlorite alteration barren of sulphides. In all subunits. Calcite alteration absent. Silicification and chlorite alteration are dominant as described below. Generally broken ground. From 103.79 to 105.35 Feldspar porphyry: 3% 0.5-2.0 mm feldspar phenocrysts and a few 2.0-3.0 mm feldspar phenocrysts in a pale grey groundmass with pink tint. Very hard > chisel. silicified quartz flooding with 1% fine-grained disseminated pyrite. Five parallel quartz veins as described below. Lower contact slip at 70 dca. From 104.12 to 104.15 60 dca 2.0 cm quartz vein. \mas white. Oriented core data dip 80 degrees N from right to left at 75 degrees to the horizontal trace of the hole. Both contacts frozen. From 104.30 to 104.33 60 dca 4.0 cm quartz vein massive white with frozen walls From 104.49 to 104.50 65 dca 1.0 cm quartz vein. massive. white. Frozen walls From 104.52 to 104.53 65 dca 0.5 cm quartz vein. massive white with frozen walls. From 104.79 to 104.81 40 dca 1.5 cm quartz vein. massive white with frozen walls. From 105.35 to 105.59 Mixed feldspar porphyry and basalt: From 105.59 to 105.77 50 & 95 dca. 10.0 cm quartz vein. massive white. Barren of sulphides. Oriented core data not reliable due to different core angles but vein appear to ~90 degrees perpendicular to the horizontal trace of the hole. From 105.59 to 106.19 Basalt. From 106.19 to 106.44 Feldspar porphyry: 2% 2.0-3.0 mm feldspar phenocrysts and a few 0.5-1.0 mm feldspar phenocrysts in a light pinkish groundmass. Very hard > chisel. Quartz veinlets parallel to contacts and black chlorite veinlets perpendicular to contacts. Barren of sulphides. Upper contact and lower contact parallel and both are vague and frozen at 40 and 45 dca respectively. From 106.44 to 106.80 Basalt. From 106.80 to 107.32 Feldspar porphyry: 5% 1.5-3.0 mm feldspar porphyry and 5% 0.5-1.5 mm feldspar phenocrysts in a light greyish pink groundmass. The phenocrysts are sharp and distinct except from 106.80-107.10 m where intense silicification ands (hematization?) obscure the phenocrysts. Upper contact vague and frozen at 30 dca parallel to dike above. Lower contact cut Matatchewan diabase. From 107.19 to 107.46 00 dca NB Matachewan diabase (dark green aphanitic chill) along east side of the core (in and out of same side) This hole may be skirting the west edge od a N/S diabase dike. From 107.32 to 107.55 Basalt. From 107.55 to 108.99 Feldspar porphyry: 1% 1.0-2.0 mm feldspar phenocrysts and 1% 0.5-1.0 mm feldspar phenocrysts in a pinkish grey groundmass. Very hard > chisel silicified with hermitized rims

				on feldspar phenocrysts. Barren of sulphides. Upper contact 50 dca in part along slip and in part frozen. Lower contact along strong slip at 75 dca. From 108.00 to 108.12 40 dca Matatchewan diabase: dark green aphanitic chill. Broken ground.
CS-18-18	108.99	126.59	BST	BASALT: Uniform and massive. fine-grained. fine-grained 0.5 mm groundmass crystalline texture. Commonly 0.5% 0.5 mm long white flakes. Moderate to strong pervasive calcite alteration. From 108.99 to 110.00 Foliated at 30-00 and 00-150 dca. Dark green chlorite bands and light bgey calcite altered bands From 111.72 to 111.79 35 dca. 3.0 cm Quartz calcite vein: Massive white quartz and mixed quartz-calcite. Frozen walls. From 116.58 to 116.89 Dike: Dike from feldspar porphyry syenite suite. Medium green. uniform and massive. fine-grained <0.5 mm groundmass texture with no evidence of phenocrysts. medium green Strong pervasive calcite alteration. Upper contact sharp and frozen at 62 dca subparallel to foliation. Lower contact sharp and frozen at 60 dca at 60 dca. From 116.90 to 118.45 15 dca Foliation: banded dark green chloritic and 5% white calcite laminations. With 1% calcite fracture filling to 0.2 cm. From 118.22 to 118.27 28 dca 2.5 cm calcite-quartz vein: 25% massive and ribbons of white quartz and 25% fine-grained 0.5 mm crystalline calcite. Frozen walls. From 118.33 to 118.43 15 dca 1.0-4.0 cm quartz vein: Massive white quartz with 5% calcite fracture filling. Frozen walls From 119.85 to 122.39 00-05 dca 10% quartz-calcite veining: 30% quartz fragments cemented by fine-grained grey calcite.
CS-18-18	126.59	127.1	DIK	FELSIC DIKE: Dike of feldspar porphyry syenite suite. Uniform and massive. very fine-grained <0.2 mm groundmass texture. Weak calcite alteration. Upper contact along strong slip at 70 dca. Upper contact sharp and frozen at 60 dca.
CS-18-18	127.1	130.93	BST	BASALT: Uniform and massive. fine-grained. fine-grained 0.5 mm groundmass crystalline texture. Locally 0.5% 0.5 mm long white flakes. Moderate to strong pervasive calcite alteration. From 129.57 to 127.84 Foliated: 10 dca Chlorite-calcite foliation. At 129.59-129.62 m 28 dca 1.8 cm quartz calcite vein Pt foliation. From 130.50 to 130.93 Foliated: 25 dca. Chlorite calcite foliation with 30% pale grey calcite foliation. Two 1.0x5.0 cm spindle shaped quartz vein boudins. Soft << chisel.
CS-18-18	130.93	132.64	DIK	DIKE: Dike Feldspar porphyry syenite suite. Uniform and massive. dark greenish red with 0.5 mm groundmass texture defined dark green chloritic fabric at 40 dca. Trace disseminated pyrite. Upper contact slip at 42 dca. Lower contact slip at 50 dca.

CS-18-18	132.64	140.24	BST	BASALT: Uniform and massive. fine-grained. fine-grained 0.5 mm groundmass crystalline texture. In least altered parts the primary feldspar mafic crystal texture well preserved. Locally 0.5% 0.5 mm long white flakes. Weakly calcite alteration except as described below. From 132.64 to 134.25 Foliation: Chlorite calcite foliation at 35-45 dca. Three boudin quartz veins to 2.0 cm thick. Soft << chisel. From 136.18 to 136.25 55 dca 7.0 cm massive white fractured quartz vein with no calcite fracture filling. Irregular walls and thickness. Frozen walls. From 137.66 to 137.76 60 dca Foliation: with 2.0 cm quartz vein and two strong slips. From 137.89 to 137.94 00-20 dca 1.0-2.5 cm quartz vein with 10% calcite fracture filling.
CS-18-18	140.24	142.46	FELP	FELDSPAR PORPHYRY: Uniform and massive. 2% 2.0 mm feldspar phenocrysts and 2% 0.5 mm feldspar phenocrysts in medium grey groundmass. SG = 2.68. Hard > chisel (probably softer than most)feldspar porphyry) barren of sulphides. Weak calcite alteration. Upper contact slip at 70 dca. Lower contact sharp and frozen at 35 dca.
CS-18-18	142.46	146.6	BST	BASALT: Uniform and massive with 0.5 mm groundmass crystalline texture that appears fresh and unaltered. Dark green. moderately hard < chisel. nonmagnetic. Barren of sulphides.
CS-18-18	146.6	149.08	FELP	FELDSPAR PORPHYRY: Uniform and massive. with 10% 1.0 mm feldspar phenocrysts in a dark grey groundmass. SG 2.81-2.82 which is anomalously heavy and probably due to high mafic content in the groundmass. Hard > chisel. nonmagnetic. Barren of sulphides. Upper contact 65 dca along flat slip. Lower contact 60 dca along slip and narrow alteration band.
CS-18-18	149.08	157.44	BST	BASALT: Uniform and massive with 0.5 mm groundmass crystalline texture. moderately fresh to fresh. dark green. SG = 2.97. moderately hard < chisel. nonmagnetic. From 156.92 to 157.44 Weakly hematized. From 157.10-157.44 pervasive calcite alteration. From 154.21 to 154.29 30% white calcite fracture filling. Barren of sulphides. From 154.75 to 155.04 Patches of quartz veining to 3.0 cm. Massive white quartz.
CS-18-18	157.44	157.88	BST	BASALT STRONGLY HEMATIZED: Uniform and massive with 0.5 mm groundmass crystalline texture. strongly hematized dark red SG 0f 2.76 indicates this is strongly altered. Moderately soft < chisel. nonmagnetic. Contacts gradational. From 157.65 to 157.80 0.5% interstitial chalcopyrite.
CS-18-18	157.88	166.1	BST	BASALT: Uniform and massive. dark green with </= 0.5 mm groundmass texture in part distinct primary crystalline texture. Barren of sulphides. Soft << chisel. nonmagnetic. From 160.78 to 160.99 20 & 90 dca 14.0 cm quartz vein: massive white quartz with divergent walls. Sharp 3.0 and 0.5 cm basalt breccia fragments floating in vein. Barren of sulphides Upper and lower contact sharp and frozen at 20 & 90 dca respectively.

				From 165.40 to 165.47 90 dca 4.5 cm calcite vein: coarse grained 4.0 mm crystalline grey calcite. (Assay for Ag-Co environment.
CS-18-18	166.1	166.4	SYE	SYENITE DIKE: Uniform and massive with no phenocrysts. dark red with 0.1 mm chloritic banding at 0.5 cm spacing at 30 dca and 90 degrees to contacts of dike. Barren of sulphides. Upper contact slip at 85 dca. Lower contact sharp and frozen at 50 dca.
CS-18-18	166.4	167.95	BST	BASALT : Uniform and massive. dark green. 0.5 mm groundmass texture. Soft << chisel. generally nonmagnetic. Barren of sulphides.
CS-18-18	167.95	168.84	SYE	SYENITE DIKE: Uniform and massive similar to the groundmass of feldspar porphyry. Medium red. extremely hard > chisel. nonmagnetic. Appears to be intense silicification/quartz flooding. 23 cm of quartz veining (=23%) to 2.5 cm true width. Two generations of quartz veining. 0.5-2.5 cm quartz veins with ~15 % apparent feldspar dominantly along vein contacts cross cutting earlier hairline to 0.5 cm quartz flooding style veins. Hairline fracture filling with 0.5 cm red alteration rims cross cut the quartz veining. Extremely fine grained disseminated pyrite in groundmass. Coarse pyrite to 1.0 (3% in the veins) cm in the large late quartz-feldspar veins. The early veins appear to be barren of pyrite. Hematite. dominantly black. locally red as masses to 0.5 cm in the late quartz-feldspar veins and tiny specks in the groundmass. Upper contact sharp and frozen along 2.0 cm quartz-sericite vein. At lower contact dike below cuts of 1.0 cm quartz vein. The contact is variable from 20-45 dca.
CS-18-18	168.84	169.26	SYE	SYENITE DIKE: Appear to be mafic syenite. Dark red green. Uniform and massive. 0.5 mm groundmass texture. H </= chisel. nonmagnetic. Strong pervasive calcite alteration. approximately 30 % dark green chlorite evenly distributed in groundmass. 0.5% extremely fine grained disseminated pyrite in groundmass. Lower contact sharp and frozen and partly along slip both at 55 dca.
CS-18-18	169.26	170.2	SYE	SYENITE DIKE: Uniform and massive. similar to 167.95-168.84 m syenite and appears to be the same unit across the cross cutting dike above. Two generations of quartz veining (5%) as above with pyrite in the late quartz veining. 1% extremely fine grained disseminated pyrite in groundmass. Hairline fracture filling with 0.5 cm red alteration rims cross cut the quartz veining.
CS-18-18	170.2	170.71	SYE	MAFIC SYENITE DIKE: Varied textured mafic syenite with coarse upper half and fine-grained lower half. Dark red green due to chlorite and hematization. Hard > chisel Strong pervasive calcite alteration. strongly chloritic. Upper contact sharp and frozen and very irregular at ~60 dca. Lower contact sharp and frozen and very irregular at~70 dca. The irregular contacts suggest this dike cross cuts the units above and below.
CS-18-18	170.71	171.52	SYE	SYENITE DIKE: Similar to 169.26-170.20 m. Two generations of quartz veining (5%) with pyrite in second generation. Hairline fracture filling with alteration cross cuts the quartz veining. 2%

				extremely fine grained disseminated pyrite in groundmass. Lower contact obscured by quartz flooded veining.
CS-18-18	171.52	172.26	MDY	MAFIC DIKE: Appears to be dike of feldspar porphyry syenite suite. Massive. dark green dike of uncertain type... Strong pervasive calcite alteration ands intense chloritic alteration. A 7.0 and a 5.0 well rounded silicified syenite xenoliths similar to the unit directly above. The larger xenolith has the same quartz veining and hairline fracture filling. Two quartz gash fractures near perpendicular to low contact. At 172.20m there is an abrupt grain size reduction and apparent introduction alteration fine grained. strongly sericitized pale yellow alteration with 3% extremely fine grained disseminated pyrite. This change appears to not be a contact as the mineral grains appear to be continuous across the change.
CS-18-18	172.26	173.34	SYE	SYENITE: Relict 50% medium greenish grey with 1.0-2.0 mm groundmass texture. 50 pale grey stockwork bleaching destroying relict texture. This alteration is centred on both the quartz veining and hairline fracture filling. This unit hosts 3 generation of quartz veining defined by cross cutting relationships. 2% extremely fine grained to 0.2 mm disseminated pyrite concentrated in the bleached alteration. Lower contact along 0.7 cm quartz vein with gash fractures extending 4.0 cm into the unit directly below.
CS-18-18	173.34	173.49	MAF	UNIDENTIFIED MAFIC UNIT: Possibly relict volcanic preserved in this sheet dike complex. Very fine-grained. black with 5% boudinaged white quartz veining. Intense pervasive calcite alteration and chloritic. Trace pyrite. Lower contact along 0.5 cm quartz flooding style vein.
CS-18-18	173.49	176.46	FELP	FELDSPAR PORPHYRY: Logged as porphyry. not tuff based on the very pale green groundmass host the apparent phenocrysts. 1% 2-3 mm feldspar phenocrysts and 1% </= 0.5 mm feldspar phenocrysts in an extremely fine-grained. very pale grey groundmass. Very hard > chisel. nonmagnetic. Above 176.00m. 5% thin dark green chloritic foliation spaced at 2.0-5.0 mm. Foliation 50 dca Pt the upper contact. 1% quartz veining to 1.0 cm. Pale grey and dark green hairline fracture filling. 1% disseminated pyrite in groundmass. quartz veining and foliations.
CS-18-18	176.46	176.57	SYE	SYENITE: Extremely fine grained. medium pink with 60% bleaching along hairline fracture fillings. 0.3 cm quartz vein has 10% pyrite crystals to 3.0 mm. 0.5% fine-grained disseminated pyrite. Lower contact sharp and frozen at 55 dca at slip.
CS-18-18	176.57	176.73	MAF	UNDIFFERENTIATED MAFIC ROCK: Medium green. 0.5 mm groundmass crystalline texture. Moderately hard < chisel. Nonmagnetic. Lower contact 75 dca.
CS-18-18	176.73	177.1	SYE	SYENITE: Similar to176.46-176.57m. Medium red green with light pink stockwork alteration along hairline fracture filling. 0.5 extremely fine-grained disseminated pyrite. Lower contact slip at 65 dca at strong slip.

				From 176.99 to 177.14 40 dca 2.5 cm quartz vein with two angular breccia fragments of different alteration types and 15% dark green chlorite.
CS-18-18	177.1	178.37	SYE	MAFIC SYENITE: Dark red green. hard =/> chisel. nonmagnetic. Weak pervasive calcite alteration. 1% extremely fine grained disseminated pyrite. Also 0.5 cm quartz vein. From 177.30 to 178.33 Arbitrarily logged as lost core to accommodate logging and sample intervals. From 178.33-178.82 m the core was dropped recovered as over-ground core.
CS-18-18	178.37	178.65	SYE	SYENITE: Uniform and massive. medium brick red. fine-grained syenite with 0.2-0.3 mm groundmass texture. Weak pervasive calcite alteration. Lower contact ground out
CS-18-18	178.65	180.64	FEL	FELSIC DIKE: Light grey. very hard > chisel. very fine-grained two generation of quartz veining and hairline quartz fracture filling. Dominant feature 50% pale bleaching along hairline fracture fillings. 1% very fine-grained dis pyrite. Lower contact 55 dca is cross-cut by quartz flooding style vein.
CS-18-18	180.64	181.64	FELP	FELDSPAR PORPHYRY: 5% 3-4 mm feldspar phenocrysts and 2% 1.0 mm feldspar phenocrysts in a pale orange groundmass. Very hard > chisel. nonmagnetic. Appears to be strongly silicified with intense pale orange bleaching overprinting less altered dark (greener tint) rock. From 180.89 to 181.04 35 dca Three quartz veins of 0.3. 1.0 and 0.4 cm ands smaller veins at 138 dca appear to be one event. Pyrite is concentrated in this interval and in these veins. From 181.54 to 181.61 52 dca 5.0 cm quartz vein: Massive white quartz. barren of sulphides. This vein truncates hairline quartz fracture filling (125 dca) which in turn cross cut 0.3 cm quartz fracture filling (60 dca).
CS-18-18	181.64	183.91	BST	BASALT: Highly altered and strongly foliated. Calc basalt based on SG = 2.84 and moderate to strong pervasive calcite alteration. Dominant feature 50% dark green and 50% pale green 0.2-1.5 mm foliation. Pale green foliation appears to have relict or alteration quartz or feldspar based on pale grey colour and hardness > chisel. Foliation variable. dominantly 00-30 dca (controls strong slip development at this angle). Foliation locally to 70 dca). Appears to have 5% pale green overprint that is harder and appears to contain more quartz/feldspar. Basalt. Lower contact sharp and frozen at 25 dca parallel to foliation above and strong slip at 183.90 m.
CS-18-18	183.91	184.98	FELP	FELDSPAR PORPHYRY: This feldspar porphyry appears identical to the feldspar porphyry at 180.64-181.64m. There is a much greater portion of the less altered dark (greener tint) rock and the overprinted stronger silicification is less intense than above. 1% hairline quartz fracture filling is the dominant quartz in this dike. 0.5% fine-grained disseminated pyrite. The lower contact highly irregular cross cutting and injected into (between) foliations. The lower contact averages 40 dca and foliation below appears to be 145 dca. Upper contact and lower contact approximately 90 degrees to each other in oriented core.

CS-18-18	184.98	185.7	BST	BASALT: From 184.98 to 185.45 Dark green. moderately soft < chisel. top half fold and folded. 0.5-2.0 cm feldspar porphyry band tightly folded in foliation in top half. Bottom half uniform and massive. From 185.45 to 185.70 Silicified (possible sericitization): Silicification bleaching strongest along hairline fracture fillings. Moderately hard < chisel. pale green. Week pervasive calcite alteration. Barren of sulphides.
CS-18-18	185.7	186.63	FEL	FELSIC INTRUSIVE: Highly variable silicification from medium grey to pale grey to pale pink. Hard with sporadic quartz flooding. 1% disseminated pyrite.
CS-18-18	186.63	186.86	SYE	MAFIC SYENITE: Uniform and massive. dark red-green. hard . chisel. strong pervasive calcite alteration. Barren of sulphides. Contacts into brecciated rock with both contacts having small fingers injected to wall rock.
CS-18-18	186.86	198.98	FEL	FELSIC INTRUSIVE: Below 191.17m the dominant feature is pale grey groundmass with up to 25% patchy dark green (chloritic?) weakly developed foliation commonly 40 dca. Called felsic intrusive based on general pale appearance. SG=2.67-2.69 and hardness. Locally weak pervasive calcite. Vague. irregular possibly folded upper contact ~78 dca. Lower contact sharp and frozen at 60 dca parallel to foliation below. (Note Below 190.40m the relationships of geology. mineralization and structure are conspicuous. Above 190.40m these relationships are overlapping and not conspicuous.) From 187.18 to 187.33 Sericitic foliation at 70 dca. very hard > chisel. 4% pyrite. From 187.33 to 187.47 2.0 mm groundmass texture defined by 15% dark green chlorite wrapping around feldspar. Very hard > chisel. locally silicification masks chlorite texture. 2% pyrite. From 187.47 to 187.56 Sericite foliation at 85 dca. soft << chisel to moderately hard </= chisel. 6% pyrite From 187.56 to 188.35 Silicification: Intense silicification/quartz flooding with 7% quartz veining to 1.0 cm with strong pale silicification overprint with tiny black (tourmaline?) specks near larger veins. Hairline quartz fracture filling cross cut small quartz veining and largest quartz vein cuts hairline quartz fracture filling. 3% very fine-grained disseminated pyrite. From 188.35 to 188.93 Sericite foliation 40-65 dca. moderately hard to hard </> chisel. 10% extremely fine grained to 2.0 mm disseminated pyrite with half of pyrite concentrated along foliations. From 188.93 to 189.04 Silicification: Intense quartz flood and hairline quartz fracture filling. Very hard > chisel.. 2% disseminated pyrite. From 189.04 to 189.09 Sericite foliation 35 dca. pale yellow and medium green foliations. moderately hard <</= chisel. 7% pyrite concentrated along foliations. From 189.09 to 189.32 Silicification/quartz flooding. pale grey very hard > chisel. Quartz

				microfracture filling at 0.5 to 2.0 cm spacing with 0.5 cm intense. bleached pale grey silicification of walls. 4% very fine-grained to 1.5 mm disseminated pyrite. From 189.32 to 189.47 Sericite foliation at 50 dca. very hard > chisel. hairline quartz fracture filling at 135 dca. 7% very fine-grained – 0.5 mm disseminated pyrite concentrated along foliation. From 189.47 to 189.69 Silicification. light grey. very hard > chisel. 5% quartz veining and 3% disseminated pyrite. From 189.61 to 189.81 Sericite foliation at 45 dca. moderately soft to hard <</> chisel. pale yellow grey with 30% intense pale grey calcite (quartz?) alteration. 10% very fine-grained disseminated pyrite in part concentrated along foliation. From 189.81 to 189.96 Silicification (of feldspar porphyry?) pale grey hard to very hard > chisel . Appears to be feldspar porphyry in top half. 3% pyrite concentrated in fracture filling to 2.0 mm. From 189.96 to 190.09 Sericite foliation. 35 dca. pale yellow grey with 30% intense pale grey calcite (quartz?) alteration. 15% very fine-grained disseminated pyrite in part concentrated along foliation. From 190.09 to 190.14 Feldspar porphyry at 55 dca. 8% 0.5-2.0 mm feldspar phenocrysts in a very pale grey groundmass. Hairline quartz fracture filling at 122 extending into foliations above. Barren of sulphides. From 190.14 to 190.33 Silicification. pale grey very hard > chisel. with hairline quartz microfracture filling and a 0.3-1.5 cm quartz vein at 05 dca (not crossing core). 2% pyrite concentrated in quartz microfracture filling and quartz vein. From 190.33 to 190.51 Sericite foliation at 75 dca (gently folded). Pale grey. hard =/> chisel. 3% 0.0-1.0 mm disseminated pyrite From 191.55 to 191.56 35 dca 0.0-0.8 cm calcite vein: coarse grained calcite to 4.0 mm with pyrite concentrated along contact and two 4 mm pyrite crystals. From 192.91 to 193.11 58 dca 16.0 cm quartz vein: Massive white quartz. 1% coarse grained pyrite grains to 4.0 mm in vein. From 192.58-193.44m intense quartz flooding as strong development of typical vague quartz (stockwork). 2% fine disseminated pyrite in wall rock. The wall rock is pale grey lacking the chlorite above and below. 0.5% extremely fine grained black mineral specks near vein may be tourmaline. Upper contact 58 dca and lower contact 48 dca with contact ellipses rotated approximately 90 degree to each other. From 194.38 to 198.77 Quartz vein zone with 34 cm total quartz veining (7% overall). From 194.38-197.26 m 28 cm total quartz veining (10%). These veins appear to be randomly oriented in oriented core. From 196.73 to 196.18 NB Prominent quartz veining to 3.0 cm Pt foliation below and near perpendicular to the foliation below. Quarts flooded with 3% pyrite.

				From 196.18 to 196.44 NB Foliated zone with 60% pale yellow (sericite?) and 40 % mixed dark green and medium grey foliation. 1% pyrite half associated with a single foliation band. See associated quartz veining above and below. From 196.44 to 197.49 NB Quartz vein zone associated with foliated zones directly above and below. Wall rock near veins bleached by destruction of chlorite. Tiny black specks near the vein may be tourmaline. From 196.47 to 196.50 15 dca 0.8 cm quartz vein with 10% coarse pyrite masses to 1.5 cm. From 197.49 to 197.68 NB Pyritic foliation zone with 5% 0.5-2.0 mm pyrite with half concentrated along a few foliation bands. Hard =/> chisel. pale yellow. Appears to be sheared out felsic host unit.
CS-18-18	198.98	207.62	TUF	Intermediate tuff. intensely altered (sericitized and silcified).very hard. nonmagnetic. contact not clear. locally pervasive calcite alterations in the groundmas. foliation plans 40-60 dca locally folded. 3 to 5% qz/carb veins at least three generation of veins oriented 40-60 dca. haireline fractures filled with chlorite preferentially with pyrite. 0.5 to1% pyrite in the groundmass.
CS-18-18	207.62	209.76	MFEL	Microporphyric feldspar. massive. hard. nonmagnetic. 0.2% pyrite in the groundmass.
CS-18-18	209.76	211.08	TUF	Intermediate tuff. intensely altered (sericitized and silcified).very hard. nonmagnetic. locally pervasive calcite alterations in the groundmas. 3 to 5% qz/carb veins 60-70 dca at least three generations. haireline fractures 60-70 dca filled with chlorite
CS-18-18	211.08	214.5	HOR	Hornblende porphyry. banded (locally sericitized and silicfied). pervasive calcite alterations. 5% qz/carb veins up to 7cm large.
CS-18-18	214.5	214.9	DIK	Porphyry dike. contact at 35 dca. less than 1% veins. foliation plans parallel to the contact. 0.5 to 1% pyrite in the groundmass.
CS-18-18	214.9	220.35	TUF	Thin laminated very fine grained tuff. pale to medium grey. felsic tuff beds and apparent thick medium green moderately hard. nonmagnetic. 1-2% pyrite in the groundmass. 2% veins qz/carb 40 dca. more pyrite between 216.35m and 217.5m. SG 2.71 and 2.78.
CS-18-18	220.35	220.87	BREC	Breccia contact at 35 dca. quartz. smoky quartz. carbonates (calcite and ankerite?). chlorite. fine grained disseminated pyrite 5-10 %
CS-18-18	220.87	225.7	TUF	Intermediate tuff. locally intensely altered. locally banded. foliation plans 50 dca. haireline fractures parallel to foliation mostly filled by calcite cements. Breccia at 221.5 large of 15cm qz/carb chlorite and 5% pyrite. More pyrite in the groundmass between 221.8m to 222.1m and 222.65 to 222.85m.
CS-18-18	225.7	226.75	FELP	Feldspar porphyry. contat at 55 dca. 3% veins qz/carb +/- chlorite and minor pyrite. 3% pyrite in the groundmass. SG 2.68.

CS-18-18	226.75	227.81	TUF	Fine grained tuff. laminated. 55 to 60dca preferentially with chlorite and fine grained pyrite. nonmagnetic. less than 1% veins qz/carb 0.5% pyrite in the groundmass.
CS-18-18	227.81	228.04	FELP	Feldspar porphyry. contat at 55 dca. 2-3% pyrite in the groundmass. less than 1% veins.
CS-18-18	228.04	234.7	TUF	Fine grained tuff. laminated. 55 to 60dca preferentially with chlorite and fine grained pyrite. nonmagnetic. 2% veins up to 3.5 cm large qz/carb +/- chlorite and minor fine grained pyrite. 0.5% pyrite in the groundmass. SG 2.76. small intervals of feldspar crystal tuff and intermediaite tuff (230.76m and 231.20m).
CS-18-18	234.7	242.27	TUF	Feldspar Crystal Tuff. SG 2.78 which is heaver than feldspar porphyry. with dominant feature 5% grey rounded feldspar grains to 2.0 mm in a medium greenish grey groundmass. strong pervasive calcite alteration. 0.5% pyrite in the groundmass.From 234.7m to 239.95m less than 1% veins. From 239.95m to 240.8m 3 - 5% veins qz/carb parallel to foliation preferentially filled by calcite cements. Breccia at 239m large of 32cm heterolithic qz/carb minor chlorite.
CS-18-18	242.27	243.3	TUF	Intermediate tuff. contact 55 dca. pale green color with some green chloritic band. highly altered (sericitized. chloritized. ...). hard. nonmagnetic. 3%veins qz/carb at least two generations of veins and haireline fractures preferentially filled with calcite.
CS-18-18	243.3	243.73	FELP	Feldspar porphyry. contact at 50 dca. less than 1% veins nonmagnetic.
CS-18-18	243.73	244.86	TUF	Intermediate tuff. contact 55dca. pale green color with some green chloritic band. highly altered (sericitized. chloritized. ..). hard. nonmagnetic. 3%veins qz/carb at least two generations haireline fractures preferentially filled with calcite.
CS-18-18	244.86	245.23	FELP	Feldspar porphyry. contact at 50 dca. massive very hard. white feldspar in greenish-grey groundmass. locally intense silicification. At least 3 generations of veins 35 - 80 dca and veinlets irregular orientations. Minor pyrite disseminated 0.2 % concentrated along veinlets. Lower contact sharp at 50 dca.
CS-18-18	245.23	246.4	TUF	Intermediate tuff. contact 50dca. masive. intense alteration (sericite and silicification). hard. nonmagnetic. 3% veins qz/carb at least two generations haireline fractures preferentially filled with chlorite and calcite. 0.5% pyrite with more pyrite at the end of the interval.
CS-18-18	246.4	247.63	TUF	Thin laminated very fine grained tuff. pale to medium grey. moderately hard. nonmagnetic. 1-2% pyrite preferentially within the foliation plans. 2% veins qz/carb. intense pervasive calcite alterations.
CS-18-18	247.63	256.25	TUF	Intermediate tuff. contact 50dca. pale green. masive. intense alteration (sericitized. chloritized. ..). hard. nonmagnetic. locally banded. foliation plans at 50 dca. 5-10 % qz/carb +/- chlorite veins at least

				three generations haireline fractures preferentially filled with chlorite and calcite. 1 - 2% pyrite in the groundmass and at the vein walls.
CS-18-18	256.25	260.52	TUF	Fine grained tuff. banded green to pale green. intense pervasive calcite alterations. locally foliation plans 60 dca. 5-10% veins qz/carb at 259.74m large vein of 28cm qz/arb 45 dca minor pyrite and chlorite at the walls. 2-3% pyrite preferentially within the foliation plans. From 259.2m to 259.5m more pyrite in the groundmass well cristalized up to 3mm large.
CS-18-18	260.52	261.66	TUF	Intermediate tuff highely altered (sericite and silicified). alteration overprint the original rock. nonmagnetic. 3-5% veins qz/carb oriented 30-60 dca at least three generation of veins 1% pyrite in the groundmass.
CS-18-18	261.66	270.68	TUF	Fine grained tuff. foliation plans 60 dca. banded (alternation of green and pale green bands). hard. nonmagnetic. intense pervasive calcite alterations. From 261.66m to 263m 5% qz/carb veins parallel to foliation plans up to 1cm large. (at least 3 vein generations) haireline fractures filled almost by calcite and chlorite. 3% pyrite disseminated in the groundmass. From 263m to 266m 2-3% veins 30-60 dca locally folded. 0.5% pyrite in the groundmass. From 266m to 270.68m 3-5% veins parallel to foliation plans. some are irregular. 0.5-1% pyrite in the groundmass. fine grained pyrite within the foliation plans.
CS-18-18	270.68	271.4	TUF	Felsic tuff?. very weakly magnetic. hard. 3-5% veins qz/carb mostly irregular. haireline fractures preferentially filled by calcite cements.
CS-18-18	271.4	274.1	TUF	Intermediate tuff? Locally brecciated. intense pervasice calcite alterations. 5% veins qz/carb up to 13cm large. Breccia at 271.4 (large of 34cm) and at 272.17m (large of 19cm) qz/carb +/- chlorite (angular clasts within the vein cements). 0.5-1% pyrite disseminated in the groundmass.
CS-18-18	274.1	276.62	TUF	Thin laminated very fine grained tuff. pale to medium grey. contact at 35dca. moderately hard. nonmagnetic. intense pervasive calcite alterations. foliation plans at 35 dca. 0.5-1% pyrite preferentially within the foliation plans. 2-3% veins qz/carb oriented 30-50dca.
CS-18-18	276.62	281.92	ARG	Thin laminated argillite. dark grey almost black. lamination 60 dca. some bands of brown color with weakly pervasive calcite weakly magnetic. 2% veins generally parallel to the foliation plans. haireline fractures filled by calcite. 0.2% dissemianted pyrite.
CS-18-18	281.92	287.48	ARG	Argillite. banded (green and pale green alteration bands. chloritized). laminated 60dca. 2% veins qz/carb SG 2.8. at 283.47m feldspar porphyry large of 32cm contact at 60dca with 3% veins.
CS-18-18	287.48	289.28	ARG	Thin laminated argillite. dark grey almost black. lamination 50 dca. some bands of brown color with weakly pervasive calcite weakly magnetic. 1-2% veins generally parallel to the foliation plans. haireline fractures filled by calcite. 0.5-1% dissemianted pyrite in the groundmass.

CS-18-18	289.28	304.6	TUF	Argillitic tuff?. banded (green and green pale bands). laminated. 50dca. SG 2.77. nonmagnetic. From 289.23m to 292.9m 1-2% veins qz/carb +/- pyrite and chalcopyrite oriented 30-50dca haireline fractures mostly filled by chlorite and calcite. From 292.9m to 293.5m 5% veins oriented 30-50dca some irregular. qz/carb +/- chalcopyrite. From 293.5m to 295m less than 1% veins qz/carb +/- chalcopyrite. From 295m to 296.45m 3 to 5% quartz/smoky quartz/carb veins +/- chalcopyrite oriented 40-60dca. haireline fractures filled by chlorite. From 296.45m to 298.96m 2-3% veins quartz/smoky quartz/carb +/- chalcopyrite and chlorite oriented 30-50dca haireline fractures almost filled by chlorite. From 298.96m to 304.6m 1-2% veins qz/carb +/- chalcopyrite and chlorite up to 3cm large oriented 30-50dca.
CS-18-18	304.6	305.6	FELP	Feldspar porphyry contact at 50dca. massive hard. weakly magnetic. 2-3% veins oriented 35-40dca up to 3cm large.
CS-18-18	305.6	327.07	TUF	Argillitic tuff?. laminated 40-50dca. SG 2.86. locally weakly magnetic. 0.5% pyrite. local chlorite alteration. From 305.6m to 309.25m less than 1% veins. At 309.49m breccia large of 13cm 40dca qz/carb +/- chlorite and chalcopyrite with minor pyrite. From 309.62m to 312.83m less than 1% veins. From 312.83m to 313.9m 1-2% veins qz/carb +/- chalcopyrite oriented 30-50dca. haireline fractures mostly filled by chlorite and calcite. From 313.9m to 317.54m less than 1% veins. From 317.54m to 319.9m 1-2% veins qz/carb 1% pyrite disseminated locally folded foliation small interval with hematite at 319.1m with +/- chalco. From 319.8m to 327.07m less than 1% veins qz/carb at 322.15m small vein of 1cm large 40 dca qz and chalcopyrite +/- pyrite.
CS-18-18	327.07	328.2	FELP	Feldspar porphyry. feldspar phenocrysts in a light pinkish groundmass. upper contact not sharp the lower contact at 60 dca. massive hard. 2-3% veins oriented 35-40dca up to 2cm large qz/carb +/- pyrite galena crystals more at the lower contact. haireline fractures filled mostly by chlorite.
CS-18-18	328.2	339.4	TUF	Fine grained tufg. generally massive with week foliation fabric. medium greenish grey. moderately hard. some small intervals of dark tuff and coarser medium grey tuff with distinct feldspatic fabric. Locally magnetic. 2-3% veins qz/carb oriented 40-60 dca pyrrhotite and +/- pyrite and minor chalcopyrite. at 328.7m small zone (10cm large) with 5% veins qz/carb 50 dca an haireline fracture generally filled by calcite. From 335.47m to 337.07m 5-10% qz/carb veins oriented 35-50dca 5% pyrrhotite haireline fractures with calcite and chlorite +/- pyrite. From 337.07m to 337.9m zone showing banded dark grey and red alteration highly silicified locally folded 3-5% pyrrhotite and pyrite. From 337.9m to 338.55m 1-2% veins qz/carb oriented 30-40 dca with 3% pyrite and pyrrhotite highly magnetic. From 338.55m to 339.4m less than 1% veins.
CS-18-18	339.4	350	TUF	Grey to green medium grained tuff. very massive. moderately magnetic. groundmass dominated by dark green mafic minerals (looks like mafic syenite) 0.5-1% veins qz/carb 1% pyrrhotite disseminated.

CanadaCobalt Works

DIAMOND DRILL LOG - cover page

Hole Number : CS-19-19

Property	Castle-East	Objective: Test the western extension of the mineralized zone.
Claim/Lease Number	LEA-19680	
NTS Map Sheet	41P10	
UTM Zone	17	
UTM Easting	520589	
UTM Northing	5279578.6	
Elevation	400	
Drilling Company	Laframboise drilling	
Start Date	2019-01-18	
Finish Date	2019-01-22	
Hole Length	356	
Core Size	NQ	
Date Logged	2019-01-23	
Geologists	Merouane Rachidi	

Test type : Reflex

Depth (m)	*Azimuth (°)*	*Dip (°)*	*Depth (m)*	*Azimuth (°)*	*Dip (°)*
38	174.9	-50.4	200	181.8	-48.4
44	175.6	-50	206	185.2	-48
50	177.4	-50.3	212	182.9	-48.3
56	177.9	-49.9	218	176.9	-67.1
62	177.9	-50	224	177	-65.1
68	178.9	-49.7	230	181.6	-47.9
74	180.3	-49.7	236	181.8	-47.8
80	180.1	-49.8	242	176.6	-48.1
86	182.2	-49.4	248	181.4	-48
92	180.7	-49.5	254	183.7	-47.8
98	182.2	-49.3	260	184.4	-47.4
104	178.5	-49.3	266	178.1	-47.8
110	181.6	-48.9	272	184.9	-47.4
116	182.6	-49	278	184.9	-47.3
122	181.4	-49.2	284	186.1	-47.5
128	182	-48.7	290	181.4	-47.8
134	181.4	-49.2	296	175.7	-47.6
140	180.7	-49	302	182.5	-47.1
146	181.1	-49.1	308	179.8	-48.9
152	181.4	-48.8	314	182.8	-47.2
158	183.3	-48.6	320	181.8	-47.4
164	182.9	-48.3	326	183.9	-46.7
170	181.8	-48.8	332	183.2	-47.1
176	183.7	-48.3	338	180	-47
182	184.1	-48.4	344	183.3	-47
188	183.8	-48.7	350	187.7	-46.9
194	182.7	-48.2	356	189.4	-46.4

Hole name	From	To	Rock type	Comments
CS-19-19	0.98	4.98	HOR	Hornblende porphyry (medium grained) locally highly fractured. 2% veins qz/carb oriented 30-70 dca. locally very weakly magnetic. 0.5% pyrite in the groundmass.
CS-19-19	4.98	14.02	GAB	Varied textured gabbro. massive. magnetic. 3% veins qz/carb up to 3cm large at 12.13m oriented 20-70 dca (α20. β70).
CS-19-19	14.02	21.32	ALT	Altered zone. calcite alteration. magnetic. some intervals of gabbro highly magnetic. breccia zone at 14 (68cm). at 16.3m (42cm). at 18.9m (14cm) with calcite and chlorite alteration minor pyrite and pyrrhotite. 5% qz/carb veins up to 5cm at 20.02m +/- chlorite and pyrite.
CS-19-19	21.32	21.7	DIA	Matachewan diabase? Fine grained. pale green plagioclase phenocrysts. contact at 50dca. 2% veins qz/carb.
CS-19-19	21.7	22.07	ALT	calcite zone alteration. magnetic. looks like altered gabbro. 2% veins qz/carb 0.5 % pyrite in the groundmass.
CS-19-19	22.07	22.7	DIA	Matachewan diabase? Fine grained. pale green plagioclase phenocrysts. contact at 50dca. 2% veins qz/carb.
CS-19-19	22.7	23.18	BREC	Tectonic breccia. 30% qz/carb veins contact at 35dca. +/- chlorite 1% pyrite.
CS-19-19	23.18	24.95	DIA	Matachewan diabase? Locally pale red-brown. not magnetic. Fine grained. pale green plagioclase phenocrysts. contact at 50dca. 3% veins qz/carb oriented 30-60dca. with haireline fractures with chloite.
CS-19-19	24.95	26.54	TUF	Cherty tuff. banded. lamination at 45dca. locally deformed (folded). lamination plans preferentially with chlorite and pyrite with minro pyrite and pyrrhotite (upper contact with more chlorite . pyrite and pyrrhotite)
CS-19-19	26.54	32.05	FELP	Feldspar porphyry. massive. not magnetic. contact at 50dca. 0.5% pyrite. less than 1% veins.
CS-19-19	32.05	35.09	ARG	Alternance of grey and dark grey argillite. laminated 50dca. contact parallel to lamination plans. 1% pyrite and pyrrhotite preferentially within the lamination plans. some fingers of feldspar porphyry. 2% veins qz/carb +/- chlorite.
CS-19-19	35.09	38.38	FELP	Feldspar porphyry. hard. massive. locally silicified. not magnetic. contact parallel to lamination plans at 50dca. lower part with more chlorite. 1% veins qz/carb minor pyrite haireline fractures with chlorite.

CS-19-19	38.38	46.88	TUF	Cherty tuff. banded. lamination plans 50dca. locally deformed (folded). lamination plans preferentially with chlorite. some intervals of argillite or fine tuff laminated and banded. local chlorite alteration between 44m and 45m followed by a fault zone with iron oxide (rusty pyrite?).
CS-19-19	46.88	49.13	FELP	Feldspar porphyry. locally silicified. not magnetic. 0.5% pyrite in the groundmass. 2% veins qz/carb up to 2cm large minro pyrite haireline fractures with chlorite.
CS-19-19	49.13	68.8	HOR	Hornblende porphyry. medium grained. intense pervasive calcite alteration. not to very weakly magnetic. 2-3% qz/carb veins minor pyrite. 0.5% pyrite in the groundmass.
CS-19-19	68.8	71.19	FELP	Feldspar porphyry. contact at 40dca. locally silicified. Intervals of altered fine grained tuff sericitized. 3% qz/veins oriented 30-50dca haireline fractures 1% pyrite in the groundmass.
CS-19-19	71.19	71.81	TUF	Fine grained tuff. with intense pervasive alteration. 3% qz/carb veins 30dca. 0.5% pyrite in the groundmass.
CS-19-19	71.81	73.03	BST	Basalt strongly hematized. massive with 0.5 mm groundmass crystalline texture. strongly hematized dark red. Moderately. hard. nonmagnetic contact at 35dca. 2% veins qz/carb minor chlorite.
CS-19-19	73.03	80.52	HOR	Hornblende porphyry. massive. not magnetic. with pervasive calcite alteration. 0.5 to 1% pyrite not magnetic. from 73.03m to77.05m 2-3% veins qz/carb oriented 30-50dca. From 77.05m to 80.52m 5% veins up to 9cm large (α30; β55) minor pyrite.
CS-19-19	80.52	84	TUF	Intermediate tuff. intense pervasive calcite alteration. not magnetic. 2% veins qz/carb.
CS-19-19	84	85.5	QZ	Large quartz vein. irregular contact milky quartz and carbonates +/- chlorite minor pyrite within the walls.
CS-19-19	85.5	89.55	ALT	Calcite chlorite alteration. upper contact irregular. locally brecciated qz/carb with 15% veins qz/carb +/- chlorite minor pyrite locally folded.
CS-19-19	89.55	91.55	FELP	Feldspar porphyry. locally silicified. not magnetic. 0.5% pyrite in the groundmass. 2% veins qz/carb minro pyrite haireline fractures with chlorite.
CS-19-19	91.55	96.2	ALT	Calcite chlorite alteration zone. contact irregular. not magnetic. 5% veins 10-50dca qz/carb +/- chlorite minor pyrite. 1% pyrite in the groundmass.
CS-19-19	96.2	99.25	FELP	Feldspar porphyry contact at 35dca. massive. not magnetic. haireline fractures with chlorite. some intervals of fine grained tuff with intense calcite alteration. locally hematized. 5% veins qz/carb +/- chlorite 1% pyrite dissemianted.
CS-19-19	99.25	102.07	TUF	Fine grained tuff. locally silicified. foliation at 50dca. 0.5% pyrite disseminated in the groundmass. less than 1% veins.
CS-19-19	102.07	113.68	HOR	Hornblende porphyry. irregular contact. intense pervasive calcite alteration. veins qz/carb +/- chlorite mino pyrite. 0.5% pyrite. From 102.07m to 111.42m 3% veins qz/carb +/- chlorite 30-50dca

				minor pyrite. From 111.42m to 113.68m 5-10% veins qz/carb up to 23cm at 112.4m qz/carb +/- chlorite haireline fractures filled by chlorite.
CS-19-19	113.68	115.27	FELP	Feldspar porphyry contact at α10β50. massive. not magnetic. 3% veins qz/carb haireline fractures with chlorite.
CS-19-19	115.27	124.82	HOR	Hornblende porphyry. massive. not magnetic. with pervasive calcite alteration. 0.5 to 1% pyrite not magnetic. 3% veins qz/carb +/- chlorite haire line fractures with chlorite and minor pyrite.
CS-19-19	124.82	127.72	TUF	Red-brown fine grained tuff contact at 60dca. red alteration related probably to hematization? 2% veins qz/carb 30dca +/- chlorite.
CS-19-19	127.72	194.51	HOR	Hornblende porphyry with local pervasive calcite alteration. not magnetic. 2-3% veins qz/carb oriented 30-60dca several fingers of red-brown fine grained tuff contact at α10β50. more pyrite between 140.6m to 141.27m. Also intervals of microporphyre at 137.15m (9cm) at 138.4m (58cm) at 135.21m (37cm). From 146.35m to 148.11m 5% veins up to 11cm qz/carb +/- chlorite. 148.11m to 149.98m 2% qz/carb veins. From 149.98m to 151.95m 3-5% veins qz/carb up to 5cm large +/- chlorite 0.5% pyrite. From 151.95m to 157.58m 15% veins qz/carb 10-50dca (α240β35; α310β60) locally folded with intense pervasivecalcite alteration. From 157.8m to 170.85m 3% veins qz/carb +/- chlorite 30-50dca. local pervasive calcite alteration. local chlorite and sericite alteration. From 170.85m to 185.6m 3% veins qz/carb 10-50dca (α60β20; α250β20) up to 5cm large red stuff within the walls probably ankerite minro pyrite and galena preferentially within the walls. From 185.6m to 190.05m 2% qz/carb veins 30-60dca some are irregular haireline fractures with chlorite. 0.5% pyrite disseminated. From 190.5m to 194.51m 3-5% veins qz/carb +/- chlorite 0.5-1% pyrite disseminated. locally folded intense pervasive calcite alteration.
CS-19-19	194.51	199.6	FELP	Feldspar porphyry. not magnetic. 2% veins qz/carb 30-50dca. 0.5% pyrite disseminated.
CS-19-19	199.6	224.82	HOR	Hornblende porphyry. not magnetic. pervasive calcite alteration. From 199.6m to 215m 15% veins qz/carb +/- chlorite 30-50dca. From 215m to 221.55m 5% veins qz/carb +/- chlorite up to 11cm 25-50dca 0.5% pyrite. From 221.55m to 224.82m less than 1% veins.
CS-19-19	224.82	233.15	UM	Ultramafic? with pervasive calcite alteration. SG 2.80. darkgrey to pale grey fine-grained with apparent 0.5 mm grain size. Soft to moderately hard. highly magnetic. Contact progressive with some small intervals of dark grey argillite (lamination plans 40dca 1% pyrite). 1% veins carb/qz30-60dca haireline fractures filled by calcite.
CS-19-19	233.15	239.01	BST	Basalt with some intervals loooks like ultramafic dike. massive with 0.5 mm groundmass crystalline texture. moderately. hard. not magnetic contact at 45dca. intense pervasive calcite alteration. From 233.15m to 237.03m 1-2% veins qz/carb +/- chlorite 30-60dca. From237.03m to 239m 3% veins

				qz/carb +/- pyrite chlorite haireline fractures with calcite and chlorite. at 237.08m quartz feldspar large of 32cm 5% veins qz/carb haireline fractures chlorite contact at 65dca.
CS-19-19	239.01	239.24	FELP	Feldspar porphyry. pale pink. massive 3% veins qz/carb minor pyrite. 0.5% pyrite dissemianted in the groundmass. haireline fractures filled by calcite.
CS-19-19	239.24	241.89	UM	Ultramafic? with pervasive calcite alteration. not magnetic. with apparent 0.5 mm grain size. Soft to moderately hard. From 239.24m to 239.68m tectonic breccia irregulat contact qz/carb 10% chalcopyrite +/- chlorite. From 239.68m to 241.89m 5% veins (α180β45) some irregular veins qz/carb +/- chlorite.
CS-19-19	241.89	242.45	FELP	Feldspar porphyry. irregular contacts. 3% veins qz/carb 50dca. haireline fractures with chlorite.
CS-19-19	242.45	251.6	TUF	Felsic tuff. very fine tuff. locally laminated. locally very weakly magnetic. less than 1% veins qz/carb +/- chlorite. 0.5% pyrite disseminated in the groundmass.
CS-19-19	251.6	266.02	TUF	Feldspar crystal tuff?. hard massive. locally very weakly magnetic. pervasive calcite alteration. weak foliation 40dca. some intervals appears like aphanitic felsic tuff with 1-2mm black speaks that may be mafic phenocrysts with fingers of basalt. Less than 1% veins.
CS-19-19	266.02	283.65	FEL	Felsic intrusive? with apparent hornblende porphyry texture. locally weakly magnetic. locally weak pervasive calcite. irregular possibly folded contact. 1% veins qz/carb 30 to 50dca +/- chlorite haireline fractures with chlorite some fingers of microporhyre.
CS-19-19	283.65	292.93	TUF	Cherty tuff. hard. laminated. foliation plans 60dca (α40β60). 2% veins qz/carb +/- pyrite with minor pyrrhotite up to 5cm at 284.73m oriented 50dca haireline fractures with chlorite and calcite.
CS-19-19	292.93	297.5	ARG	Dark grey argillite. locally magnetic due to 2-3% pyrrhotite disseminated in the groundmass. laminated. foliation plans at 60dca with chlorite. From 292.93m to 297.65m 5% veins qz/carb (α350β65) +/- chlorite pyrite and pyrrhotite within the veins walls. 3% pyrite and pyrrhotite disseminated i the groundmass preferentially within the foliations plans (locally folded).
CS-19-19	297.5	305.49	TUF	Fine grained tuff. laminated. foliation plans with local red alteration (hematization?). hard. locally magnetic. 1-2% pyrrhotite in the groundmass. 3% veins qz/carb up to 5cm large at 299.95m qz/carb +/- chlorite pyrite and pyrrhotite minor galena locally folded foliation plans.
CS-19-19	305.49	311.9	TUF	Cherty tuff. lamination. foliation plans 50dca (locally folded). not magnetic. locally pervasive calcite alteration. From 305.49m to 310.41m 3-5% veins qz/carb +/- chlorite minor pyrite and pyrrhotite chalcopyrite up to 7cm large at 310.3m. From 310.41m to 311.9m less than 1% veins preferentially calcte alteration within the foliation plans 40dca.
CS-19-19	311.9	313.91	TUF	Fine grained tuff. contact at 35dca. less than 1% veins locally hematite alteration
CS-19-19	313.91	314.88	FELP	Feldspar porphyry. massive. locally weakly magnetic. iregular contact 1% pyrite and pyrite in the groundmass. 2% veins qz/carb +/- chlorite. haireline fractures with chlorite.

CS-19-19	314.88	316.3	TUF	Fine grained tuff. locally silicified and hematized. foliation at 55dca. 0.5% pyrite disseminated in the groundmass. less than 1% veins.
CS-19-19	316.3	318.15	FELP	Feldspar porphyry. contact at α180β35. 1% qz/veins oriented 30-50dca haireline fractures 0.5% pyrite in the groundmass.
CS-19-19	318.15	322.91	DIA	Matachewan Diabase? Uniform and massive. very dark green. almost black with 0.5 mm crystalline groundmass with 1% 0.5 mm magnetic grains. pale green plagioclase phenocrysts. 1-2% veins qz/carb 30-50dca minor pyrite and pyrrhotite.
CS-19-19	322.91	326.7	ALT	Sauseritized Feldspar phenocrysts. massive. alteration zones with sericite and chlorite. not magnetic. intense haireline fractures with chlorite filling. 1% veins qz/carb +/- chlorite minro pyrite some red stuff within the vein walls (ankerite).
CS-19-19	326.7	327.3	FELP	Feldspar porphyry contact at 50dca. 2% veins qz/carb minor pyrite.
CS-19-19	327.3	337.05	DIA	Matachewan diabase. massive. locally magnetic. with some intervals of Sauseritized Feldspar phenocrysts (intense haireline fractures with chlorite contact at 50dca) From 327.3m to 330.05m less than 1% veins From 330.05m to 334m 1% veins qz/carb +/- chlorite and chalcopyrite. at 331m altered zone silicified with 5% pyrite and pyrrhotite softly folded. From 334m to 337.05 less than 1% veins qz/carb +/- chlorite minor pyrite.
CS-19-19	337.05	337.85	FELP	Feldspar porphyry. contact at α110β65. less than 1% vein qz/carb haireline fractures filled by chlorite.
CS-19-19	337.85	351.71	TUF	Fin grained tuff. locally hematized. weakly magnetic. with some intervals of cherty tuff. From 337.83m to 345.28m less than 1% veins qz/carb 1% pyrite in the groundmass. From 345.28m to 350.13m 3% veins qz/carb +/- chlorite pyrite and pyrrhotite up to 8cm large at 349.82m 3% pyrite and pyrrhotite preferentially within foliation plans. locally pervasive calcite alteration (very narrow zones). From 350.13m to 351.71m less than 1% veins qz/carb veins 0.5% pyrite disseminated.
CS-19-19	351.71	356	FELP	Feldspar porphyry. appers like hornblende porphyry. SG 2.86. massive. not magnetic. 1% veins qz/carb +/- chlorite minor pyrite and chalcopyrite.

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-13	70.18	70.64	z047503	0.46	A18-1584	0.02	0.1		39.8	257						
CS-18-13	83.97	84.26	z047504	0.29	A18-1584	0.01	0.1		25.6	72						
CS-18-14	118.09	119.58	Z047507	1.49	A18-1584	0.01	0.1		14.6	17						
CS-18-14	119.58	120.71	Z047508	1.13	A18-1584	0.03	0.5		16.2	222						
CS-18-14	120.71	122.21	Z047509	1.5	A18-1584	0.02	0.1		13	25						
CS-18-14	122.21	123.09	Z047510	0.88	A18-1584	0.04	0.1		17.6	344						
CS-18-14	123.09	123.32	Z047511	0.23	A18-1584	0.04	0.2		23	984						
CS-18-14	123.32	124.83	Z047512	1.51	A18-1584	0.02	0.2		11.3	168						
CS-18-14	124.83	126.21	Z047513	1.38	A18-1584	0.03	0.1		11.8	85						
CS-18-14	126.21	127.62	Z047514	1.41	A18-1584	0.03	0.2		14	191						
CS-18-14	127.62	128.00	Z047515	0.38	A18-1584	0.04	0.1		14.8	199						
CS-18-14	128.00	128.82	Z047516	0.82	A18-1584	0.06	0.1		12.2	167						
CS-18-14	128.82	129.62	Z047517	0.8	A18-1584	0.04	0.2		11.1	157						
CS-18-14	129.62	130.24	Z047518	0.62	A18-1584	0.03	0.1		12.8	296						
CS-18-14	135.92	137.40	Z047519	1.48	A18-1584	0.05	0.1		10.1	9						
CS-18-14	137.40	137.63	Z047520	0.23	A18-1584	0.14	0.1		19.3	21						
CS-18-14	137.63	138.72	Z047521	1.09	A18-1584	0.005	0.2		26.1	18						
CS-18-14	142.97	144.62	Z047522	1.65	A18-1584	0.005	0.1		23.4	83						
CS-18-14	144.62	144.78	Z047523	0.16	A18-1584	0.06	0.1		31	2092						
CS-18-14	144.78	145.68	Z047524	0.9	A18-1584	0.02	0.1		18.6	19						
CS-18-14	145.68	147.03	Z047525	1.35	A18-1584	0.005	0.1		21.7	17						
CS-18-14	148.46	149.83	Z047528	1.37	A18-1584	0.02	0.1		36	191						
CS-18-14	149.83	151.25	Z047529	1.42	A18-1584	0.02	0.1		36.8	273						
CS-18-14	151.25	152.69	Z047530	1.44	A18-1584	0.03	0.2		17.1	45						
CS-18-14	152.69	154.09	Z047531	1.4	A18-1584	0.02	0.1		18.9	83						
CS-18-14	154.09	155.55	Z047532	1.46	A18-1584	0.03	0.1		7.9	32						
CS-18-14	155.55	156.92	Z047533	1.37	A18-1584	0.02	0.1		16.5	104						
CS-18-14	156.92	158.33	Z047534	1.41	A18-1584	0.05	0.1		18.6	440						
CS-18-14	158.33	159.77	Z047535	1.44	A18-1584	0.06	0.1		9.6	372						
CS-18-14	159.77	161.32	Z047536	1.55	A18-1584	0.04	0.1		12.4	543						
CS-18-14	161.32	162.72	Z047537	1.4	A18-1584	0.07	0.1		10.6	579						
CS-18-14	162.72	164.20	Z047538	1.48	A18-1584	0.04	0.1		8.5	335						
CS-18-14	164.20	165.50	Z047539	1.3	A18-1584	0.07	0.1		5.3	109						
CS-18-14	165.50	166.14	Z047540	0.64	A18-1584	0.09	0.1		1.4	36						
CS-18-14	166.14	166.96	Z047541	0.82	A18-1584	0.005	0.1		1.1	54						
CS-18-14	166.96	168.38	Z047542	1.42	A18-1584	0.04	0.1		2.2	62						
CS-18-14	168.38	170.50	Z047543	2.12	RY18290022	0.002	0.5		5	10	10			0.0007	0.001	
CS-18-14	170.50	171.83	Z047544	1.33	RY18290022	0.01	0.5		5	220	5			0.00025	0.0005	
CS-18-14	171.83	172.68	Z047545	0.85	RY18290022	0.002	0.5		5	470	20			0.0005	0.001	
CS-18-14	172.68	174.26	Z047546	1.58	RY18290022	0.0005	0.5		5	150	20			0.0007	0.001	
CS-18-14	174.26	174.89	Z047547	0.63	RY18290022	0.0005	0.5		10	270	30			0.0007	0.002	
CS-18-14	174.89	175.51	Z047548	0.62	RY18290022	0.001	0.5		10	180	10			0.0006	0.001	
CS-18-14	175.51	176.88	Z047549	1.37	RY18290022	0.001	0.5		5	270	10			0.00025	0.001	
CS-18-14	176.88	177.19	Z047550	0.31	RY18290022	0.002	0.5		20	1280	10			0.00025	0.0005	
CS-18-14	177.19	177.45	Z047551	0.26	RY18290022	0.01	0.5		30	270	20			0.0006	0.0005	
CS-18-14	177.45	178.05	Z047552	0.6	RY18290022	0.001	0.5		5	180	10			0.0005	0.0005	
CS-18-14	178.05	178.94	Z047553	0.89	RY18290022	0.001	0.5		5	490	10			0.0005	0.0005	
CS-18-14	178.94	179.32	Z047554	0.38	RY18290022	0.02	0.5		30	760	10			0.00025	0.0005	
CS-18-14	179.32	181.19	Z047555	1.87	RY18290022	0.0015	1		20	230	10			0.0005	0.001	
CS-18-14	181.19	182.55	Z047556	1.36	RY18290022	0.02	1		10	410	10			0.0005	0.001	
CS-18-14	182.55	183.86	Z047557	1.31	RY18290022	0.001	0.5		5	270	10			0.00025	0.001	
CS-18-14	183.86	185.18	Z047558	1.32	RY18290022	0.0025	0.5		5	220	20			0.0005	0.0005	
CS-18-14	185.18	186.00	Z047561	0.82	RY18290022	0.0005	0.5		5	230	10			0.00025	0.0005	
CS-18-14	187.48	189.10	Z047562	1.62	RY18290022	0.001	0.5		5	220	10			0.0005	0.0005	
CS-18-14	189.10	190.45	Z047563	1.35	RY18290022	0.001	0.5		5	130	10			0.0005	0.0005	
CS-18-14	190.45	192.04	Z047564	1.59	RY18290022	0.0015	0.5		10	20	20			0.0007	0.0005	
CS-18-14	193.45	194.87	Z047565	1.42	RY18290022	0.0015	0.5		20	400	10			0.00025	0.0005	

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-14	194.87	196.20	Z047566	1.33	RY18290022	0.001	0.5		10	110	20			0.0007	0.0005	
CS-18-14	196.20	198.00	Z047567	1.8	RY18290022	0.001	0.5		10	270	10			0.0005	0.001	
CS-18-14	199.00	200.02	Z047568	1.02	RY18290022	0.0005	0.5		10	130	30			0.0007	0.001	
CS-18-14	200.02	201.49	Z047569	1.47	RY18290022	0.001	1		10	150	20			0.0006	0.001	
CS-18-14	201.49	202.58	Z047570	1.09	RY18290022	0.001	1		10	260	20			0.0005	0.001	
CS-18-14	202.58	202.85	Z047571	0.27	RY18290022	0.0045	0.5		30	2190	20			0.0008	0.001	
CS-18-14	202.85	204.21	Z047572	1.36	RY18290022	0.003	0.5		20	190	30			0.0009	0.001	
CS-18-14	204.21	205.22	Z047573	1.01	RY18290022	0.003	1		10	400	20			0.0007	0.001	
CS-18-14	205.22	207.59	Z047574	2.37	RY18290022	0.001	0.5		10	280	20			0.0006	0.001	
CS-18-14	207.59	208.96	Z047575	1.37	RY18290022	0.003	0.5		10	170	20			0.0008	0.001	
CS-18-14	208.96	210.12	Z047576	1.16	RY18290022	0.003	0.5		10	300	20			0.0007	0.001	
CS-18-14	210.12	211.00	Z047577	0.88	RY18290022	0.0005	0.5		20	60	30			0.0008	0.001	
CS-18-14	211.00	212.46	Z047578	1.46	RY18290022	0.001	0.5		20	430	30			0.0006	0.001	
CS-18-14	212.46	213.33	Z047579	0.87	RY18290022	0.001	0.5		5	50	10			0.00025	0.0005	
CS-18-14	213.33	214.96	Z047580	1.63	RY18290022	0.002	0.5		10	210	10			0.0007	0.0005	
CS-18-14	214.96	215.32	Z047581	0.36	RY18290022	0.0015	0.5		30	230	10			0.0014	0.0005	
CS-18-14	215.32	216.81	Z047582	1.49	RY18290022	0.0025	0.5		30	650	20			0.0009	0.001	
CS-18-14	216.81	217.88	Z047583	1.07	RY18290022	0.02	0.5		20	390	10			0.0008	0.001	
CS-18-14	217.88	218.59	Z047584	0.71	RY18290022	0.015	0.5		10	530	10			0.0005	0.001	
CS-18-14	218.59	219.58	Z047585	0.99	RY18301577	0.005	0.5		30	920	20			0.0006	0.001	
CS-18-14	219.58	220.00	Z047586	0.42	RY18301577	0.001	0.5		20	900	20			0.0007	0.001	
CS-18-14	220.00	220.90	Z047587	0.9	RY18301577	0.001	0.5		30	280	10			0.00025	0.0005	
CS-18-14	220.90	221.96	Z047588	1.06	RY18301577	0.005	0.5		20	230	10			0.00025	0.001	
CS-18-14	221.96	222.23	Z047589	0.27	RY18301577	0.0005	0.5		10	1300	5			0.00025	0.001	
CS-18-14	222.23	222.72	Z047590	0.49	RY18301577	0.002	0.5		40	160	20			0.00025	0.0005	
CS-18-14	222.72	223.14	Z047591	0.42	RY18301577	0.0005	0.5		10	490	10			0.0005	0.0005	
CS-18-14	223.14	223.58	Z047592	0.44	RY18301577	0.0025	0.5		10	380	10			0.0012	0.001	
CS-18-14	223.58	224.16	Z047595	0.58	RY18290022	0.0035	0.5		20	280	30			0.0011	0.001	
CS-18-14	224.16	224.21	Z047596	0.05	RY18290022	0.015	0.5		30	590	50			0.0074	0.007	
CS-18-14	233.39	233.89	Z047597	0.5	RY18290022	0.001	0.5		30	80	70			0.0059	0.003	
CS-18-14	239.60	240.04	Z047598	0.44	RY18290022	0.4	1		100	240	100			0.0029	0.003	
CS-18-14	259.04	259.70	Z047599	0.66	RY18290022	0.003	0.5		30	140	120			0.0179	0.018	
CS-18-14	259.70	260.11	Z047600	0.41	RY18290022	0.005	0.5		40	200	100			0.0148	0.016	
CS-18-14	260.11	260.51	Z047601	0.4	RY18290022	0.003	0.5		30	100	120			0.0175	0.016	
CS-18-14	262.44	263.95	Z047602	1.51	RY18290022	0.0025	0.5		40	110	110			0.019	0.019	
CS-18-14	263.95	264.42	Z047603	0.47	RY18290022	0.01	0.5		30	2820	80			0.0111	0.012	
CS-18-14	264.42	265.32	Z047604	0.9	RY18290022	0.002	0.5		30	110	100			0.0178	0.019	
CS-18-14	266.12	266.67	Z047605	0.55	RY18290022	0.002	0.5		40	150	130			0.0043	0.004	
CS-18-14	266.67	267.53	Z047606	0.86	RY18290022	0.0025	0.5		60	230	130			0.0051	0.004	
CS-18-14	271.87	272.62	Z047607	0.75	RY18290022	0.0025	0.5		70	340	150			0.0046	0.004	
CS-18-14	279.67	280.22	Z047608	0.55	RY18290022	0.002	0.5		50	150	160			0.0028	0.003	
CS-18-14	280.22	280.83	Z047609	0.61	RY18290022	0.002	0.5		50	150	140			0.0026	0.002	
CS-18-14	286.25	286.68	Z047610	0.43	RY18290022	0.0045	0.5		50	130	110			0.002	0.002	
CS-18-14	286.68	287.59	Z047611	0.91	RY18290022	0.002	0.5		40	230	120			0.002	0.002	
CS-18-14	287.59	288.04	Z047612	0.45	RY18290022	0.002	0.5		60	140	140			0.002	0.002	
CS-18-14	294.59	295.05	Z047613	0.46	RY18290022	0.0025	0.5		40	170	80			0.00025	0.0005	
CS-18-14	295.05	296.67	Z047614	1.62	RY18290022	0.001	1		50	170	90			0.00025	0.0005	
CS-18-14	301.33	302.37	Z047615	1.04	RY18290022	0.001	0.5		50	90	80			0.00025	0.0005	
CS-18-14	302.37	302.93	Z047616	0.56	RY18290022	0.0005	0.5		40	120	90			0.00025	0.0005	
CS-18-14	302.93	303.78	Z047617	0.852	RY18290022	0.0005	0.5		40	110	90			0.00025	0.0005	
CS-18-14	303.78	304.29	Z047618	0.508	RY18290022	0.0005	0.5		30	120	80			0.00025	0.0005	
CS-18-14	305.41	306.08	Z047619	0.67	RY18290022	0.0005	0.5		40	140	90			0.00025	0.0005	
CS-18-14	316.13	317.19	Z047620	1.06	RY18290022	0.0005	0.5		40	130	100			0.00025	0.0005	
CS-18-14	319.75	320.65	Z047621	0.9	RY18290022	0.0005	0.5		40	130	110			0.00025	0.001	
CS-18-14	320.65	321.03	Z047622	0.38	RY18290022	0.0005	0.5		40	220	100			0.00025	0.001	
CS-18-14	321.03	322.08	Z047623	1.05	RY18290022	0.0005	1		40	160	110			0.00025	0.001	
CS-18-14	322.08	322.48	Z047624	0.4	RY18290022	0.0005	0.5		40	110	90			0.0005	0.001	

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-14	322.48	322.87	Z047625	0.39	RY18290022	0.0025	0.5		30	250	50			0.0005	0.001	
CS-18-14	322.87	324.24	Z047626	1.37	RY18290022	0.0025	0.5		20	70	40			0.00025	0.001	
CS-18-14	324.24	325.09	Z047627	0.85	RY18290022	0.0005	0.5		40	90	90			0.00025	0.0005	
CS-18-14	331.43	332.38	Z047628	0.95	RY18301577	0.001	0.5		50	480	100			0.001	0.00025	
CS-18-14	332.62	332.80	Z047629	0.18	RY18301577	0.001	0.5		40	130	130			0.001	0.0006	
CS-18-14	333.82	335.21	Z047632	1.39	RY18301577	0.001	0.5		30	190	110			0.001	0.0006	
CS-18-14	478.14	478.36	Z047633	0.22	RY18290022	0.0005	0.5		20	10	60			0.0014	0.002	
CS-18-14	482.78	484.05	Z047634	1.27	RY18290022	0.0005	1		10	10	30			0.0005	0.001	
CS-18-14	494.97	495.42	Z047635	0.45	RY18290022	0.0005	0.5		10	20	60			0.0011	0.001	
CS-18-14	497.90	498.62	Z047636	0.72	RY18290022	0.0005	0.5		5	40	20			0.0006	0.001	
CS-18-14	498.62	498.80	Z047637	0.18	RY18290022	0.0005	0.5		5	10	10			0.0006	0.001	
CS-18-14	498.80	500.11	Z047638	1.31	RY18290022	0.0005	0.5		20	20	50			0.0013	0.001	
CS-18-15	2.97	4.04	Z047641	1.07	RY18289942	0.001	0.5		40	60	150			0.0032	0.004	
CS-18-15	4.04	4.37	Z047642	0.33	RY18289942	0.0025	0.5		60	140	240			0.001	0.003	
CS-18-15	4.37	5.18	Z047643	0.81	RY18289942	0.004	0.5		30	590	80			0.0007	0.002	
CS-18-15	5.18	5.96	Z047644	0.78	RY18289942	0.0005	0.5		50	20	280			0.0007	0.001	
CS-18-15	5.96	6.85	Z047645	0.89	RY18289942	0.001	0.5		50	60	260			0.00025	0.001	
CS-18-15	6.85	8.24	Z047646	1.39	RY18289942	0.001	0.5		50	80	270			0.0009	0.001	
CS-18-15	8.24	9.55	Z047647	1.31	RY18289942	0.001	0.5		50	100	250			0.00025	0.001	
CS-18-15	9.55	10.95	Z047648	1.4	RY18289942	0.001	0.5		50	40	250			0.0011	0.001	
CS-18-15	10.95	12.34	Z047649	1.39	RY18289942	0.0025	0.5		40	40	150			0.0008	0.001	
CS-18-15	12.34	13.77	Z047650	1.43	RY18289942	0.0005	0.5		50	20	240			0.0014	0.001	
CS-18-15	13.77	14.23	Z047651	0.46	RY18289942	0.001	0.5		60	40	250			0.0009	0.001	
CS-18-15	14.23	14.45	Z047652	0.22	RY18289942	0.0005	0.5		50	70	240			0.0005	0.001	
CS-18-15	14.45	15.15	Z047653	0.7	RY18289942	0.0015	0.5		60	170	240			0.0025	0.003	
CS-18-15	15.15	16.66	Z047654	1.51	RY18289942	0.001	0.5		60	150	230			0.0021	0.002	
CS-18-15	16.66	18.07	Z047655	1.41	RY18289942	0.001	0.5		60	140	250			0.0041	0.005	
CS-18-15	18.07	19.51	Z047656	1.44	RY18289942	0.0005	0.5		50	50	190			0.0007	0.001	
CS-18-15	19.51	20.91	Z047657	1.4	RY18289942	0.0015	0.5		60	440	180			0.0012	0.002	
CS-18-15	20.91	22.29	Z047658	1.38	RY18289942	0.005	0.5		70	660	260			0.0069	0.008	
CS-18-15	22.29	23.66	Z047659	1.37	RY18289942	0.0015	0.5		100	290	340			0.0026	0.003	
CS-18-15	23.66	25.00	Z047660	1.34	RY18289942	0.001	0.5		60	90	200			0.0135	0.016	
CS-18-15	25.00	26.36	Z047661	1.36	RY18289942	0.002	0.5		60	470	210			0.0155	0.016	
CS-18-15	26.36	27.76	Z047662	1.4	RY18289942	0.003	0.5		120	750	390			0.0013	0.001	
CS-18-15	27.76	29.22	Z047663	1.46	RY18289942	0.0025	0.5		150	710	460			0.0007	0.0005	
CS-18-15	29.22	30.57	Z047664	1.35	RY18289942	0.01	0.5		100	570	310			0.0005	0.0005	
CS-18-15	30.57	32.00	Z047665	1.43	RY18289942	0.003	0.5		90	670	210			0.00025	0.0005	
CS-18-15	32.00	33.42	Z047666	1.42	RY18289942	0.002	0.5		70	440	130			0.00025	0.0005	
CS-18-15	33.42	34.79	Z047667	1.37	RY18289942	0.0025	0.5		70	460	50			0.00025	0.0005	
CS-18-15	34.79	35.39	Z047668	0.6	RY18289942	0.0015	0.5		30	60	50			0.0006	0.001	
CS-18-15	35.39	36.27	Z047669	0.88	RY18289942	0.0015	0.5		50	160	10			0.00025	0.0005	
CS-18-15	36.27	37.72	Z047670	1.45	RY18289942	0.001	0.5		60	80	10			0.00025	0.0005	
CS-18-15	37.72	39.11	Z047671	1.39	RY18289942	0.001	0.5		80	260	30			0.00025	0.0005	
CS-18-15	39.11	40.53	Z047672	1.42	RY18289942	0.005	0.5		60	210	30			0.00025	0.0005	
CS-18-15	40.53	41.61	Z047675	1.08	RY18291270	0.005	0.5		30	50	40			0.00025	0.0005	
CS-18-15	41.61	41.95	Z047676	0.34	RY18291270	0.003	0.5		60	140	10			0.00025	0.001	
CS-18-15	42.08	43.56	Z047677	1.48	RY18291270	0.002	0.5		30	80	5			0.00025	0.0005	
CS-18-15	43.56	44.26	Z047678	0.7	RY18291270	0.002	0.5		60	220	40			0.00025	0.0005	
CS-18-15	44.26	44.91	Z047679	0.65	RY18291270	0.0025	0.5		50	160	40			0.00025	0.001	
CS-18-15	44.91	46.30	Z047680	1.39	RY18291270	0.0025	0.5		60	150	50			0.00025	0.0005	
CS-18-15	46.30	47.68	Z047681	1.38	RY18291270	0.0015	0.5		60	50	40			0.00025	0.0005	
CS-18-15	47.68	49.07	Z047682	1.39	RY18291270	0.0025	0.5		70	190	80			0.004	0.004	
CS-18-15	49.07	50.51	Z047683	1.44	RY18291270	0.002	0.5		70	270	240			0.0138	0.013	
CS-18-15	50.51	51.83	Z047684	1.32	RY18291270	0.003	0.5		60	230	170			0.014	0.015	
CS-18-15	51.83	53.25	Z047685	1.42	RY18291270	0.0035	0.5		60	70	200			0.0076	0.007	
CS-18-15	53.25	54.65	Z047686	1.4	RY18291270	0.0005	0.5		60	170	290			0.005	0.006	
CS-18-15	54.65	56.11	Z047687	1.46	RY18291270	0.001	0.5		60	170	290			0.0049	0.008	

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-15	56.11	57.50	Z047688	1.39	RY18291270	0.001	0.5		70	60	370			0.0049	0.007	
CS-18-15	57.50	59.02	Z047689	1.52	RY18291270	0.0005	0.5		50	100	280			0.0042	0.004	
CS-18-15	59.02	60.39	Z047690	1.37	RY18291270	0.001	0.5		80	140	420			0.0037	0.004	
CS-18-15	60.39	61.73	Z047691	1.34	RY18291270	0.001	0.5		70	190	310			0.0024	0.002	
CS-18-15	61.73	62.35	Z047692	0.62	RY18291270	0.0025	0.5		70	1020	280			0.0016	0.001	
CS-18-15	62.35	63.03	Z047693	0.68	RY18291270	0.001	0.5		70	50	300			0.0026	0.003	
CS-18-15	63.03	63.77	Z047694	0.74	RY18291270	0.001	0.5		80	130	250			0.003	0.003	
CS-18-15	63.77	64.39	Z047695	0.62	RY18291270	0.0015	0.5		80	260	240			0.0142	0.017	
CS-18-15	64.39	65.89	Z047696	1.5	RY18291270	0.002	0.5		60	180	90			0.006	0.007	
CS-18-15	65.89	66.62	Z047697	0.73	RY18291270	0.0015	0.5		60	100	20			0.0009	0.001	
CS-18-15	66.62	67.55	Z047698	0.93	RY18291270	0.0005	0.5		5	5	20			0.001	0.001	
CS-18-15	67.55	68.58	Z047699	1.03	RY18291270	0.0015	0.5		20	60	20			0.00025	0.001	
CS-18-15	68.58	69.92	Z047700	1.34	RY18291270	0.0005	0.5		10	5	30			0.00025	0.0005	
CS-18-15	69.92	71.35	Z047701	1.43	RY18291270	0.002	0.5		50	150	70			0.0045	0.006	
CS-18-15	71.35	72.74	Z047702	1.39	RY18291270	0.002	0.5		50	230	90			0.0056	0.007	
CS-18-15	72.74	74.16	Z047703	1.42	RY18291270	0.0035	0.5		60	320	190			0.0213	0.026	
CS-18-15	74.16	75.45	Z047704	1.29	RY18291270	0.0015	0.5		60	250	130			0.0076	0.008	
CS-18-15	75.45	76.70	Z047705	1.25	RY18291270	0.0025	0.5		50	140	50			0.0018	0.001	
CS-18-15	76.70	77.26	Z047706	0.56	RY18291270	0.002	0.5		90	150	120			0.0036	0.004	
CS-18-15	77.26	78.28	Z047707	1.02	RY18291270	0.0005	0.5		40	10	110			0.00025	0.001	
CS-18-15	78.28	79.76	Z047708	1.48	RY18291270	0.0005	0.5		10	5	20			0.00025	0.0005	
CS-18-15	79.76	81.14	Z047709	1.38	RY18291270	0.005	0.5		30	40	30					0.02
CS-18-15	81.14	82.65	Z047712	1.51	RY18291298	0.005	1									0.01
CS-18-15	82.65	84.00	Z047713	1.35	RY18291298	0.015	0.5									0.02
CS-18-15	84.00	85.36	Z047714	1.36	RY18291298	0.04	0.5									0.1
CS-18-15	85.36	86.72	Z047715	1.36	RY18291298	0.005	0.5									0.06
CS-18-15	86.72	88.12	Z047716	1.4	RY18291298	0.01	0.5									0.08
CS-18-15	88.12	89.58	Z047717	1.46	RY18291298	0.005	1									0.22
CS-18-15	89.58	90.41	Z047718	0.83	RY18291298	0.005	0.5									0.2
CS-18-15	90.41	90.92	Z047719	0.51	RY18291298	0.04	1									0.45
CS-18-15	90.92	92.32	Z047720	1.4	RY18291298	0.005	0.5									0.01
CS-18-15	92.32	93.62	Z047721	1.3	RY18291298	0.005	0.5									0.01
CS-18-15	93.62	95.02	Z047722	1.4	RY18291298	0.005	0.5									0.05
CS-18-15	95.02	96.45	Z047723	1.43	RY18291298	0.005	0.5									0.08
CS-18-15	96.45	97.96	Z047724	1.51	RY18291298	0.005	0.5									0.15
CS-18-15	97.96	99.35	Z047725	1.39	RY18291298	0.01	1									0.07
CS-18-15	99.35	100.76	Z047726	1.41	RY18291298	0.01	0.5									0.11
CS-18-15	100.76	101.46	Z047727	0.7	RY18291298	0.005	0.5									0.36
CS-18-15	101.46	102.28	Z047728	0.82	RY18291298	0.03	2									0.44
CS-18-15	102.28	103.66	Z047729	1.38	RY18291298	0.005	0.5									0.06
CS-18-15	103.66	105.04	Z047730	1.38	RY18291298	0.005	1									0.17
CS-18-15	105.04	106.48	Z047731	1.44	RY18291298	0.005	0.5									0.04
CS-18-15	106.48	107.40	Z047732	0.92	RY18291298	0.005	0.5									0.04
CS-18-15	107.40	107.90	Z047733	0.5	RY18291298	0.05	1									0.27
CS-18-15	107.90	108.58	Z047734	0.68	RY18291298	0.15	1									0.53
CS-18-15	108.58	109.22	Z047735	0.64	RY18291298	0.1	1									0.29
CS-18-15	109.22	109.96	Z047736	0.74	RY18291298	3.78	3									0.51
CS-18-15	109.96	110.72	Z047737	0.76	RY18291298	0.4	2									0.49
CS-18-15	110.72	112.08	Z047738	1.36	RY18291298	0.01	0.5									0.08
CS-18-15	112.08	113.50	Z047739	1.42	RY18291298	0.015	0.5									0.12
CS-18-15	113.50	114.83	Z047740	1.33	RY18291298	0.02	0.5									0.18
CS-18-15	114.83	116.28	Z047741	1.45	RY18291298	0.015	0.5									0.16
CS-18-15	116.28	117.15	22489	0.87	RY19298754	0.011	0.5		32	115	215			0.005	0.016	
CS-18-15	117.15	118.27	22490	1.12	RY19298754	0.127	0.4		24	305	76			-0.005	-0.001	
CS-18-15	118.27	119.57	22491	1.3	RY19298754	0.122	0.3		24	280	42			-0.005	-0.001	
CS-18-15	119.57	120.50	22492	0.93	RY19298754	0.081	0.3		23	173	38			-0.005	-0.001	
CS-18-15	120.50	121.50	22493	1	RY19298754	0.051	0.2		15	12	30			-0.005	-0.001	

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-15	121.50	122.50	22494	1	RY19298754	0.146	0.4		14	9	24			-0.005	-0.001	
CS-18-15	122.50	123.50	22495	1	RY19298754	0.019	0.2		12	13	29			-0.005	-0.001	
CS-18-15	123.50	124.50	22496	1	RY19298754	0.035	-0.2		10	11	40			-0.005	-0.001	
CS-18-15	124.50	125.50	22497	1	RY19298754	0.044	0.3		13	43	83			-0.005	-0.001	
CS-18-15	125.50	126.50	22498	1	RY19298754	0.034	0.3		32	172	101			-0.005	-0.001	
CS-18-15	126.50	127.66	22499	1.16	RY19298754	0.013	-0.2		17	129	65			-0.005	-0.001	
CS-18-15	127.66	129.30	22500	1.64	RY19298754	0.011	-0.2		11	17	33			-0.005	-0.001	
CS-18-15	129.30	130.40	22501	1.1	RY19298754	0.01	-0.2		24	294	137			-0.005	-0.001	
CS-18-15	130.40	131.40	22502	1	RY19298754	0.013	-0.2		12	39	106			-0.005	-0.001	
CS-18-15	131.40	132.40	22503	1	RY19298754	0.004	-0.2		27	43	109			-0.005	-0.001	
CS-18-15	132.40	133.20	22504	0.8	RY19298754	0.03	-0.2		31	15	126			-0.005	-0.001	
CS-18-15	138.00	139.00	Z049324	1	RY19055416	0	-1		20	10	70					
CS-18-15	139.00	140.00	Z049325	1	RY19055416	0	-1		20	0	110					
CS-18-15	140.00	141.00	Z049326	1	RY19055416	0.02	-1		50	10	330					
CS-18-15	141.00	142.00	Z049327	1	RY19055416	0.01	-1		40	100	690					
CS-18-15	142.00	143.00	Z049328	1	RY19055416	0	-1		40	70	770					
CS-18-15	143.00	144.00	Z049329	1	RY19055416	0.01	-1		60	10	640					
CS-18-15	144.00	145.00	Z049330	1	RY19055416	0.01	-1		40	10	360					
CS-18-15	145.00	145.90	Z049331	0.9	RY19055416	0.11	-1		20	30	30					
CS-18-15	145.90	147.31	Z047750	1.41	RY18291298	0.025	0.5									0.08
CS-18-15	147.31	148.75	Z047751	1.44	RY18291298	0.025	0.5									0.08
CS-18-15	148.75	150.19	Z047752	1.44	RY18291298	0.03	0.5									0.08
CS-18-15	150.19	151.65	Z047753	1.46	RY18291298	0.01	0.5									0.06
CS-18-15	151.65	153.10	Z047754	1.45	RY18291298	0.005	0.5									0.03
CS-18-15	153.10	154.61	Z047755	1.51	RY18291298	0.005	0.5									0.07
CS-18-15	163.00	164.00	Z049332	1	RY19054478	0.01	-1		270	40	40					
CS-18-15	164.00	165.00	Z049333	1	RY19054478	0.01	-1		750	40	70					
CS-18-15	165.00	166.00	Z049334	1	RY19054478	0	-1		1150	20	110					
CS-18-15	166.00	167.00	Z049335	1	RY19054478	0	-1		1260	30	120					
CS-18-15	167.00	168.00	Z049336	1	RY19054478	0	-1		1290	30	110					
CS-18-15	168.00	169.00	Z049337	1	RY19054478	0	-1		1340	30	120					
CS-18-15	169.00	170.00	Z049338	1	RY19054478	0.01	-1		1160	50	110					
CS-18-15	170.00	171.00	Z049339	1	RY19054478	0	-1		440	40	60					
CS-18-15	251.50	252.00	Z049340	0.5	RY19055416	0	-1		60	0	420					
CS-18-15	252.00	253.00	Z049341	1	RY19055416	0	-1		70	10	510					
CS-18-15	258.00	259.00	Z049342	1	RY19055416	0	-1		60	20	380					
CS-18-15	259.00	260.00	Z049343	1	RY19055416	0	-1		90	30	830					
CS-18-15	260.00	261.00	Z049346	1	RY19055416	0	-1		130	20	1360					
CS-18-15	261.00	261.50	Z049347	0.5	RY19055416	0	-1		140	20	1530					
CS-18-15	282.00	283.00	Z049348	1	RY19055416	0	-1		140	30	1590					
CS-18-15	283.00	284.00	Z049349	1	RY19055416	0	-1		150	30	1650					
CS-18-15	284.00	285.00	Z049350	1	RY19055416	0	-1		110	50	1290					
CS-18-15	285.00	286.00	Z049351	1	RY19055416	0	-1		140	20	1620					
CS-18-15	286.00	287.00	Z049352	1	RY19055416	0	1		130	60	1560					
CS-18-15	287.00	288.00	Z049353	1	RY19055416	0	-1		140	40	1610					
CS-18-15	291.00	292.00	Z049354	1	RY19055416	0	-1		140	40	1610					
CS-18-15	292.00	293.00	Z049355	1	RY19055416	0	-1		120	40	1370					
CS-18-15	293.00	294.00	Z049356	1	RY19055416	0	-1		40	0	390					
CS-18-15	294.00	295.00	Z049357	1	RY19055416	0	-1		80	30	940					
CS-18-15	295.00	296.00	Z049358	1	RY19055416	0	-1		120	30	1500					
CS-18-15	296.00	297.00	Z049359	1	RY19055416	0	-1		140	50	1590					
CS-18-15	302.00	303.00	Z049360	1	RY19055416	0	-1		130	30	1520					
CS-18-15	303.00	304.00	Z049361	1	RY19055416	0	-1		140	50	1650					
CS-18-15	307.00	308.00	Z049362	1	RY19055416	0	3		130	30	1560					
CS-18-15	308.00	309.00	Z049363	1	RY19055416	0	1		120	30	1400					
CS-18-15	309.00	310.00	Z049364	1	RY19055416	0	32		90	20	800					
CS-18-15	315.00	316.00	Z049365	1	RY19055416	0.01	1		20	290	90					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-15	316.00	317.00	Z049366	1	RY19055416	0.01	-1		10	60	10					
CS-18-15	317.00	318.00	Z049369	1	RY19055416	0	1		10	380	20					
CS-18-15	318.00	319.00	Z049370	1	RY19055416	0	-1		20	70	20					
CS-18-15	319.00	320.00	Z049371	1	RY19055416	0	-1		0	30	10					
CS-18-15	324.00	325.00	Z049372	1	RY19055416	0.01	-1		20	200	30					
CS-18-15	325.00	326.00	Z049373	1	RY19055416	0	-1		50	90	330					
CS-18-15	326.00	327.00	Z049374	1	RY19055416	0	1		30	240	50					
CS-18-15	351.00	352.00	Z049375	1	RY19055416	0	1		20	250	80					
CS-18-15	358.00	359.00	Z049376	1	RY19055416	0	-1		20	10	50					
CS-18-15	359.00	360.00	Z049377	1	RY19055416	0	-1		10	90	10					
CS-18-15	360.00	361.00	Z049378	1	RY19055416	0	-1		10	160	10					
CS-18-15	361.00	362.00	Z049379	1	RY19055416	0	1		30	130	160					
CS-18-15	376.79	377.33	Z047742	0.54	RY18291293	0.0015	0.5		60	20	450	360	2180	0.0005	0.001	0.02
CS-18-15	377.33	378.21	Z047743	0.88	RY18291293	0.005	6		340	1300	1390	330	5280	0.0008	0.001	0.17
CS-18-15	378.21	378.93	Z047744	0.72	RY18291293	0.01	0.5		120	50	1120	500	210	0.0005	0.0005	0.03
CS-18-15	378.93	379.67	Z047745	0.74	RY18291293	0.005	2		240	230	1580	710	3300	0.001	0.001	0.06
CS-18-15	379.67	380.39	Z047748	0.72	RY18291293	0.05	2		160	140	1040	90	140	0.0011	0.001	0.24
CS-18-15	380.39	381.10	Z047749	0.71	RY18291293	0.002	1		150	310	1020	430	1510	0.0006	0.001	0.09
CS-18-15	381.10	382.00	Z049380	0.9	RY19055416	0	2		130	320	1030					
CS-18-15	382.00	383.00	Z049381	1	RY19055416	0	2		180	370	1350					
CS-18-15	383.00	384.00	Z049382	1	RY19055416	0.01	2		150	310	1110					
CS-18-15	384.00	385.00	Z049383	1	RY19055416	0	-1		50	90	440					
CS-18-15	394.00	395.00	Z049384	1	RY19055416	0	-1		100	0	470					
CS-18-15	395.00	396.00	Z049385	1	RY19055416	0	-1		150	0	1110					
CS-18-15	396.00	397.00	Z049386	1	RY19055416	0	-1		200	0	1380					
CS-18-15	399.00	400.00	Z049397	1	RY19055416	0	-1		40	10	100					
CS-18-15	408.00	409.00	Z049387	1	RY19055416	0	-1		60	0	1290					
CS-18-15	409.00	410.00	Z049388	1	RY19055416	0	-1		70	0	1280					
CS-18-15	410.00	411.00	Z049391	1	RY19055416	0	-1		80	0	1380					
CS-18-15	411.00	412.00	Z049392	1	RY19055416	0	-1		70	0	1320					
CS-18-15	412.00	413.00	Z049393	1	RY19055416	0	-1		120	0	1730					
CS-18-15	428.00	429.00	Z049394	1	RY19055416	0	-1		110	0	1710					
CS-18-15	429.00	430.00	Z049395	1	RY19055416	0	-1		100	0	1420					
CS-18-15	434.80	435.30	Z049396	0.5	RY19055416	0	1		40	70	550					
CS-18-16	8.03	8.32	z047758	0.29	RY19031452	0.0005	0.5		60	140	140			0.0064	0.007	
CS-18-16	14.60	15.62	z047759	1.02	RY19031452	0.0005	0.5		60	160	120			0.0063	0.007	
CS-18-16	15.62	16.13	z047760	0.51	RY19031452	0.001	0.5		50	210	110			0.006	0.006	
CS-18-16	16.13	17.12	z047761	0.99	RY19031452	0.013	0.5		50	300	110			0.0026	0.002	
CS-18-16	17.12	17.37	z047762	0.25	RY19031452	0.03	1		60	280	140			0.0017	0.002	
CS-18-16	17.37	17.73	z047763	0.36	RY19031422	0.02										
CS-18-16	17.73	18.78	z047764	1.05	RY19031422	0										
CS-18-16	18.78	20.02	z047765	1.24	RY19031422	0										
CS-18-16	20.02	21.00	z047766	0.98	RY19031422	0.01										
CS-18-16	21.00	21.57	z047767	0.57	RY19031422	0										
CS-18-16	21.57	22.26	z047768	0.69	RY19031422	0										
CS-18-16	22.26	22.57	z047769	0.31	RY19031422	0.02										
CS-18-16	22.57	22.92	z047770	0.35	RY19031422	0.03										
CS-18-16	22.92	24.32	z047771	1.4	RY19031422	0.01										
CS-18-16	42.00	42.71	z047772	0.71	RY19031422	0.04										
CS-18-16	43.56	44.92	z047773	1.36	RY19031422	0.06										
CS-18-16	44.92	46.35	z047774	1.43	RY19031422	0.03										
CS-18-16	63.75	64.53	z047775	0.78	RY19031422	0.01										
CS-18-16	68.36	69.12	z047778	0.76	RY19031422	0										
CS-18-16	69.12	69.75	z047779	0.63	RY19031422	0.02										0.33
CS-18-16	69.75	70.41	z047780	0.66	RY19031422	0.01										
CS-18-16	70.41	71.22	z047781	0.81	RY19031422	0										
CS-18-16	71.22	72.51	z047782	1.29	RY19031422	0										

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-16	72.51	73.53	z047783	1.02	RY19031422	0.01										
CS-18-16	73.53	73.78	z047784	0.25	RY19031422	0.08										0.65
CS-18-16	73.78	74.25	z047785	0.47	RY19031422	0.01										
CS-18-16	74.25	74.82	z047786	0.57	RY19031422	0.01										
CS-18-16	74.82	75.35	z047787	0.53	RY19031422	0.01										0.07
CS-18-16	75.35	76.07	z047788	0.72	RY19031422	0.02										0.06
CS-18-16	76.07	76.75	z047789	0.68	RY19031422	0.01										
CS-18-16	76.75	78.20	z047790	1.45	RY19031422	0.01										
CS-18-16	78.20	78.95	z047791	0.75	RY19031422	0										
CS-18-16	78.98	80.35	z047792	1.37	RY19031422	0										
CS-18-16	80.35	81.00	z047793	0.65	RY19031422	0										
CS-18-16	81.00	82.19	z047794	1.19	RY19031422	0										
CS-18-16	85.83	86.07	z047795	0.24	RY19031422	0										
CS-18-16	90.64	91.12	z047796	0.48	RY19031422	0										
CS-18-16	91.12	91.78	z047797	0.66	RY19031422	0										
CS-18-16	91.78	92.58	z047798	0.8	RY19031422	0.01										
CS-18-16	92.58	93.20	z047799	0.62	RY19031422	0										0.01
CS-18-16	93.20	94.03	z047800	0.83	RY19031422	0.01										0.06
CS-18-16	94.03	94.60	z047801	0.57	RY19031422	0.01										
CS-18-16	94.60	95.85	z047802	1.25	RY19031422	0.03										
CS-18-16	95.85	96.00	z047803	0.15	RY19031422	0										
CS-18-16	96.00	97.46	z047804	1.46	RY19031422	0.01										
CS-18-16	97.46	98.95	z047805	1.49	RY19031422	0										
CS-18-16	105.93	106.18	z047806	0.246	RY19031422	0.02										
CS-18-16	108.00	108.94	z047807	0.94	RY19031422	0										
CS-18-16	113.67	113.87	z047808	0.2	RY19031422	0										
CS-18-16	132.69	132.92	z047809	0.23	RY19031422	0.06										
CS-18-16	132.92	133.47	z047810	0.55	RY19031422	0.05										
CS-18-16	133.47	134.45	z047811	0.98	RY19031422	0.01										
CS-18-16	136.47	136.77	z047812	0.3	RY19031422	0										
CS-18-16	144.80	145.59	z047813	0.79	RY19031422	0										
CS-18-16	145.59	146.09	z047814	0.5	RY19031422	0.01										0.03
CS-18-16	146.09	147.16	z047815	1.07	RY19031422	0.01										
CS-18-16	147.16	148.16	z047816	1	RY19031422	0										
CS-18-16	154.54	155.76	z047817	1.22	RY19031422	0.01										
CS-18-16	155.76	156.74	z047820	0.98	RY19031422	0										
CS-18-16	156.74	158.35	z047821	1.61	RY19031422	0										
CS-18-16	158.35	159.31	z047822	0.96	RY19031422	0.02										
CS-18-16	159.31	159.97	z047823	0.66	RY19031422	0.1										
CS-18-16	159.97	160.78	z047824	0.81	RY19031422	0.09										
CS-18-16	160.78	161.84	z047825	1.06	RY19031422	0.1										
CS-18-16	192.90	194.35	z047826	1.45	RY19031422	0										
CS-18-16	195.92	196.90	z047827	0.98	RY19031422	0										
CS-18-16	209.45	210.36	z047828	0.91	RY19031422	0										
CS-18-16	222.76	223.25	z047829	0.49	RY19031422	0.01										
CS-18-16	223.25	223.53	z047830	0.28	RY19031452	0.388	0.5		70	13700	210			0.0034	0.004	
CS-18-16	223.53	223.90	z047831	0.37	RY19031422	0										
CS-18-16	223.90	225.00	22386	1.1	RY19298730	0.002	-0.2		46	98	159			0.006	0.005	
CS-18-16	225.00	225.83	22387	0.83	RY19298730	0.003	-0.2		46	61	149			0.007	0.005	
CS-18-16	225.83	226.46	22388	0.63	RY19298730	0.013	-0.2		6	23	11			-0.005	-0.001	
CS-18-16	226.46	226.66	z047832	0.2	RY19031422	0.46										
CS-18-16	226.66	227.51	22389	0.85	RY19298730	0.001	-0.2		39	36	114			0.007	0.004	
CS-18-16	227.51	227.62	22390	0.11	RY19298730	-0.001	-0.2		28	2	322			-0.005	-0.001	
CS-18-16	227.62	228.74	22391	1.12	RY19298730	0.072	-0.2		38	45	93			0.006	0.004	
CS-18-16	228.74	229.30	z047833	0.56	RY19031422	0.97										
CS-18-16	229.30	230.68	22392	1.38	RY19298730	-0.001	-0.2		43	88	161			0.007	0.007	
CS-18-16	230.68	231.30	z047834	0.62	RY19031422	0.01										

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-16	231.30	232.49	z047835	1.19	RY19031422	0.01										
CS-18-16	232.49	233.88	22393	1.39	RY19298730	0.037	0.3		17	37	62			-0.005	-0.001	
CS-18-16	233.88	234.43	22394	0.55	RY19298730	-0.001	-0.2		9	14	8			-0.005	-0.001	
CS-18-16	234.43	235.80	22395	1.37	RY19298730	-0.001	-0.2		11	22	18			-0.005	-0.001	
CS-18-16	235.80	236.72	22396	0.92	RY19298730	0.005	0.2		35	67	99			-0.005	-0.001	
CS-18-16	236.72	237.92	22397	1.2	RY19298730	0.01	0.2		13	51	18			-0.005	-0.001	
CS-18-16	237.92	239.00	22398	1.08	RY19298730	0.002	0.6		29	81	91			-0.005	-0.001	
CS-18-16	241.93	242.94	z047838	1.01	RY19031422	0										
CS-18-16	244.59	244.80	z047839	0.21	RY19031422	0										
CS-18-16	249.78	250.81	z047840	1.03	RY19031422	0.02										
CS-18-16	250.81	251.39	z047841	0.58	RY19031422	0.01										
CS-18-16	251.39	251.70	z047842	0.31	RY19031422	0.03										
CS-18-16	251.70	252.05	z047843	0.35	RY19031422	0.02										
CS-18-16	252.05	252.52	z047844	0.47	RY19031422	0.01										
CS-18-16	252.52	252.78	z047845	0.26	RY19031452	0.013	1		20	110	50			0.0007	0.0005	
CS-18-16	252.78	253.69	z047846	0.91	RY19031422	0										
CS-18-16	253.69	255.00	z047847	1.31	RY19031422	0.01										
CS-18-16	255.00	255.71	z047848	0.71	RY19031422	0.01										
CS-18-16	255.71	256.75	z047849	1.04	RY19031422	0.01										
CS-18-16	256.75	257.30	z047850	0.55	RY19031452	0.034	1		20	40	60			0.00025	0.0005	
CS-18-16	257.30	258.15	z047851	0.85	RY19031422	0.01										
CS-18-16	258.15	258.67	z047852	0.52	RY19031422	0.01										
CS-18-16	258.67	258.88	z047853	0.21	RY19031452	0.015	1		50	50	90			0.0005	0.0005	
CS-18-16	258.88	259.05	z047854	0.17	RY19031422	0										
CS-18-16	259.05	259.70	z047855	0.65	RY19042481	0.04										
CS-18-16	259.70	260.56	z047856	0.86	RY19042481	0.01										
CS-18-16	260.56	261.99	z047857	1.43	RY19042481	0.02										
CS-18-16	261.99	262.64	z047858	0.65	RY19042481	0.03										
CS-18-16	262.64	263.28	z047859	0.64	RY19042481	0.01										
CS-18-16	263.28	264.73	z047860	1.45	RY19042481	0.09										
CS-18-16	264.73	266.14	z047861	1.41	RY19042481	0.005										
CS-18-16	266.14	267.57	z047862	1.43	RY19042481	0.01										
CS-18-16	267.57	268.23	z047863	0.66	RY19042481	0.05										
CS-18-16	268.23	268.32	z047864	0.09	RY19042481	1.06										
CS-18-16	268.32	269.01	z047865	0.69	RY19042481	0.03										
CS-18-16	269.01	269.67	z047866	0.66	RY19042481	0.05										
CS-18-16	269.67	270.23	z047867	0.56	RY19042481	0.03										
CS-18-16	270.23	270.54	z047868	0.31	RY19042481	0.01										
CS-18-16	270.54	271.35	z047869	0.81	RY19042481	0.02										
CS-18-16	271.83	271.97	z047872	0.14	RY19042481	0.03										
CS-18-16	271.97	272.84	z047873	0.87	RY19042481	0.02										
CS-18-16	272.84	273.58	z047874	0.74	RY19042481	0.45										
CS-18-16	273.58	274.31	z047875	0.73	RY19042481	0.87										
CS-18-16	274.31	274.44	z047876	0.13	RY19042416	6.18	2		30	6400	60			0.00025	0.0005	
CS-18-16	274.44	275.54	z047877	1.1	RY19042481	0.03										
CS-18-16	275.54	276.90	z047878	1.36	RY19042481	0.01										
CS-18-16	277.48	277.83	z047879	0.35	RY19042481	0.01										
CS-18-16	284.77	284.89	z047880	0.12	RY19042481	0.005										
CS-18-16	287.16	287.47	z047881	0.31	RY19042481	0.005										
CS-18-16	290.16	290.36	z047882	0.2	RY19042481	0.005										
CS-18-16	299.00	300.00	Z049233	1	RY19047577	0.01	-1		20	70	40					
CS-18-16	300.00	301.00	Z049234	1	RY19047577	0	-1		20	90	40					
CS-18-16	301.00	302.00	Z049235	1	RY19047577	0.01	1		20	110	40					
CS-18-16	302.00	303.00	Z049236	1	RY19047577	0.01	-1		30	70	40					
CS-18-16	309.00	310.00	Z049237	1	RY19047577	0.01	-1		20	20	30					
CS-18-16	311.00	312.00	Z049238	1	RY19047577	0	-1		20	10	30					
CS-18-16	312.00	313.00	Z049239	1	RY19047577	0.01	-1		40	20	170					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-16	313.00	314.00	Z049240	1	RY19047577	0.01	-1		20	70	60					
CS-18-16	314.00	315.00	Z049241	1	RY19047577	0.04	-1		30	40	70					
CS-18-16	315.00	316.00	Z049242	1	RY19047577	0.02	1		20	60	50					
CS-18-16	316.00	317.00	Z049243	1	RY19047577	0.01	1		20	20	50					
CS-18-16	317.00	318.00	Z049244	1	RY19047577	0.01	1		20	210	60					
CS-18-16	318.00	319.00	Z049245	1	RY19047577	0.06	1		30	80	50					
CS-18-16	322.00	323.00	Z049246	1	RY19047577	0.08	1		20	70	50					
CS-18-16	323.00	324.00	Z049247	1	RY19047577	0.15	1		20	40	50					
CS-18-16	324.00	325.00	Z049248	1	RY19047577	0.27	1		30	100	50					
CS-18-16	325.00	326.00	Z049249	1	RY19047577	0.05	2		20	100	40					
CS-18-16	328.00	329.00	Z049250	1	RY19047577	0.01	1		30	220	60					
CS-18-16	329.00	330.00	Z049251	1	RY19047577	0.03	2		30	90	160					
CS-18-16	330.00	331.00	Z049252	1	RY19047577	0.05	1		20	30	30					
CS-18-16	331.00	332.00	Z049255	1	RY19047577	0.08	-1		30	40	40					
CS-18-16	332.00	333.00	Z049256	1	RY19047577	0.03	2		30	90	80					
CS-18-16	333.00	334.00	Z049257	1	RY19047577	0.01	1		30	30	130					
CS-18-16	334.00	335.00	Z049258	1	RY19047577	0.01	1		20	60	80					
CS-18-16	335.00	336.00	Z049259	1	RY19047577	0.01	4		30	100	40					
CS-18-16	336.00	337.00	Z049260	1	RY19047577	0.03	2		40	110	50					
CS-18-16	339.00	340.00	Z049261	1	RY19047577	0.03	1		20	200	70					
CS-18-16	340.00	341.00	Z049262	1	RY19047577	0.05	1		20	90	40					
CS-18-16	341.00	342.00	Z049263	1	RY19047577	0	-1		20	20	40					
CS-18-16	344.00	345.00	Z049264	1	RY19047577	0.07	2		30	410	50					
CS-18-16	345.00	346.00	Z049265	1	RY19047577	0.05	-1		30	200	40					
CS-18-16	350.00	351.00	Z049266	1	RY19047577	0.02	1		20	70	30					
CS-18-16	351.00	352.00	Z049267	1	RY19047577	0.02	-1		20	20	30					
CS-18-16	352.00	353.00	Z049268	1	RY19047577	0.01	-1		20	0	40					
CS-18-16	353.00	354.00	Z049269	1	RY19047577	0.1	3		30	330	50					
CS-18-16	354.00	355.00	Z049270	1	RY19047577	0.1	-1		30	40	60					
CS-18-16	355.00	356.00	Z049271	1	RY19047577	0.12	1		40	100	40					
CS-18-16	356.00	357.00	Z049272	1	RY19047577	0.27	1		20	150	30					
CS-18-16	366.00	367.00	Z049273	1	RY19047577	0.04	1		40	270	40					
CS-18-16	368.00	368.50	Z049274	0.5	RY19047577	0.03	1		50	690	50					
CS-18-16	415.50	416.00	Z049275	0.5	RY19047577	0.01	-1		30	120	90					
CS-18-16	416.50	417.00	Z049278	0.5	RY19047577	0.01	1		20	70	40					
CS-18-16	418.00	419.00	Z049279	1	RY19047577	0.01	2		50	450	40					
CS-18-16	419.00	420.00	Z049280	1	RY19047577	0.01	2		50	280	20					
CS-18-16	420.00	421.00	Z049281	1	RY19047572	0.001	0.5		40	210	70			0.00025	0.0005	
CS-18-16	421.00	422.00	Z049282	1	RY19047572	0.001	0.5		40	180	50			0.00025	0.0005	
CS-18-16	422.00	423.00	Z049283	1	RY19047572	0.0005	0.5		30	130	70			0.00025	0.0005	
CS-18-16	423.00	424.00	Z049284	1	RY19047572	0.007	2		80	690	60			0.0005	0.001	
CS-18-16	424.00	425.00	Z049285	1	RY19047572	0.003	2		80	490	40			0.0006	0.001	
CS-18-16	425.00	426.00	Z049286	1	RY19047572	0.011	1		70	220	50			0.0011	0.001	
CS-18-16	426.00	427.00	Z049287	1	RY19047572	0.002	1		60	290	40			0.00025	0.001	
CS-18-16	427.00	428.00	Z049288	1	RY19047572	0.002	1		50	280	20			0.00025	0.0005	
CS-18-16	428.00	429.00	Z049289	1	RY19047572	0.008	3		90	870	30			0.00025	0.0005	
CS-18-16	429.00	430.00	Z049290	1	RY19047577	0.01	2		120	810	70					
CS-18-16	430.00	431.00	Z049291	1	RY19047577	0.01	1		60	260	100					
CS-18-16	431.00	432.00	Z049292	1	RY19047577	0	1		40	280	40					
CS-18-16	432.00	433.00	Z049293	1	RY19047577	0	1		50	140	40					
CS-18-16	433.00	434.00	Z049294	1	RY19047577	0.01	1		40	290	40					
CS-18-16	434.00	435.00	Z049295	1	RY19047577	0.01	1		40	160	40					
CS-18-16	435.00	436.00	Z049296	1	RY19047577	0	-1		20	60	20					
CS-18-16	436.00	437.00	Z049297	1	RY19047577	0.01	-1		40	130	30					
CS-18-16	437.00	438.00	Z049300	1	RY19047577	0.01	-1		10	10	30					
CS-18-16	438.00	439.00	Z049301	1	RY19047577	0	-1		20	40	20					
CS-18-16	439.00	440.00	Z049302	1	RY19047577	0	-1		20	30	20					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-16	440.00	441.00	Z049303	1	RY19047577	0	-1		20	50	20					
CS-18-16	441.00	442.00	Z049304	1	RY19047577	0.01	1		40	70	30					
CS-18-16	442.00	443.00	Z049305	1	RY19047577	0.01	1		20	40	30					
CS-18-16	443.00	444.00	Z049306	1	RY19047577	0	-1		10	70	30					
CS-18-16	448.00	449.00	Z049307	1	RY19047577	0.01	-1		20	150	40					
CS-18-16	449.00	450.00	Z049308	1	RY19047577	0.01	1		30	60	120					
CS-18-16	450.00	451.00	Z049309	1	RY19047577	0.01	-1		70	120	50					
CS-18-16	451.00	452.00	Z049310	1	RY19047577	0.01	-1		30	110	80					
CS-18-16	457.00	458.00	Z049311	1	RY19047577	0.01	2		40	70	140					
CS-18-16	459.00	460.00	Z049312	1	RY19047577	0.01	1		50	30	160					
CS-18-16	460.00	461.00	Z049313	1	RY19047577	0.01	1		40	140	140					
CS-18-16	461.00	462.00	Z049314	1	RY19047577	0.01	1		20	180	30					
CS-18-16	462.00	463.00	Z049315	1	RY19047577	0	3		20	1710	10					
CS-18-16	463.00	464.00	Z049316	1	RY19047577	0	-1		10	140	10					
CS-18-16	464.00	465.00	Z049317	1	RY19047577	0.02	11		80	2770	50					
CS-18-16	465.00	466.00	Z049318	1	RY19047577	0.01	3		90	220	40					
CS-18-16	466.00	467.00	Z049319	1	RY19047577	0.01	1		30	110	70					
CS-18-16	467.00	468.00	Z049322	1	RY19047577	0.01	1		30	70	40					
CS-18-16	469.00	469.50	Z049323	0.5	RY19055416	0	-1		20	190	60					
CS-18-16W	262.80	264.22	z047885	1.42	RY19031422	0.02	-1		10	40	40					
CS-18-16W	264.22	265.61	z047886	1.39	RY19031422	0	-1		10	40	30					
CS-18-16W	265.61	266.48	z047887	0.87	RY19031440	0.04	0.5		60	90	40					0.13
CS-18-16W	266.48	267.06	z047888	0.58	RY19031440	0.05	2		70	290	40					0.44
CS-18-16W	267.06	267.61	z047889	0.55	RY19031440	0.05	0.5		20	200	60					0.09
CS-18-16W	267.61	267.97	z047890	0.36	RY19031440	0.06	0.5		10	10	40					0.12
CS-18-16W	267.97	268.50	z047891	0.53	RY19031440	0.03	1		40	5	290					0.28
CS-18-16W	268.50	269.68	z047892	1.18	RY19031440	0.04	1		20	20	40					0.21
CS-18-16W	269.68	270.62	z047893	0.94	RY19031440	0.07	0.5		10	30	30					0.08
CS-18-16W	270.95	271.88	z047894	0.93	RY19031440	0.14	1		20	1800	70					0.09
CS-18-16W	271.88	272.22	z047895	0.34	RY19031452	4.65	2		30	3530	50			0.00025	0.0005	
CS-18-16W	272.22	273.07	z047896	0.85	RY19031440	0.28	0.5		20	180	70					0.03
CS-18-16W	273.07	273.65	z047897	0.58	RY19031440	0.01	0.5		10	30	40					
CS-18-16W	273.65	275.10	z047898	1.45	RY19031440	0.005	0.5		10	90	50					
CS-18-16W	275.10	276.32	z047899	1.22	RY19031440	0.01	1		20	60	40					
CS-18-16W	276.32	276.94	z047900	0.62	RY19031440	0.01	0.5		10	30	40					
CS-18-16W	276.94	278.30	z047901	1.36	RY19031440	0.005	0.5		10	20	40					
CS-18-16W	278.30	279.33	22301	1.03	RY19298730	-0.001	-0.2		15	34	44			-0.005	-0.001	
CS-18-16W	279.33	279.83	22302	0.5	RY19298730	0.001	-0.2		20	34	57			-0.005	-0.001	
CS-18-16W	279.83	280.83	22303	1	RY19298730	-0.001	-0.2		23	25	60			-0.005	-0.001	
CS-18-16W	280.83	281.55	22304	0.72	RY19298730	-0.001	-0.2		16	41	43			-0.005	-0.001	
CS-18-16W	281.55	281.71	z047902	0.16	RY19031440	0.005	0.5		10	60	10					
CS-18-16W	281.71	283.00	22305	1.29	RY19298730	-0.001	-0.2		23	48	58			-0.005	-0.001	
CS-18-16W	283.00	284.00	22306	1	RY19298730	-0.001	-0.2		22	42	55			-0.005	-0.001	
CS-18-16W	284.00	284.90	22307	0.9	RY19298730	-0.001	-0.2		18	31	43			-0.005	-0.001	
CS-18-16W	284.90	285.37	22308	0.47	RY19298730	0.008	-0.2		24	73	107			-0.005	-0.001	
CS-18-16W	285.40	286.00	z047903	0.6	RY19031440	0.005	0.5		20	30	60					
CS-18-16W	286.00	286.66	22309	0.66	RY19298730	-0.001	-0.2		19	43	53			-0.005	-0.001	
CS-18-16W	286.66	286.99	22310	0.33	RY19298730	-0.001	-0.2		6	10	11			-0.005	-0.001	
CS-18-16W	286.99	287.59	22311	0.6	RY19298730	-0.001	-0.2		20	33	63			-0.005	-0.001	
CS-18-16W	287.59	288.31	22312	0.72	RY19298730	0.001	0.2		16	37	48			-0.005	-0.001	
CS-18-16W	288.31	288.71	z047904	0.4	RY19031440	0.01	1		30	60	60					
CS-18-16W	288.71	289.97	z047905	1.26	RY19031440	0.005	0.5		30	50	50					
CS-18-16W	289.97	290.22	z047906	0.25	RY19031440	0.01	0.5		30	80	60					
CS-18-16W	290.22	291.00	22313	0.78	RY19298730	0.001	-0.2		22	37	52			-0.005	-0.001	
CS-18-16W	291.00	291.91	22314	0.91	RY19298730	-0.001	-0.2		23	22	77			-0.005	-0.001	
CS-18-16W	291.90	292.83	z047907	0.93	RY19031440	0.005	0.5		20	20	50					
CS-18-16W	292.83	293.40	z047908	0.57	RY19031440	0.01	0.5		10	10	60					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-16W	293.40	294.55	22315	1.15	RY19298730	0.001	-0.2		18	93	46			-0.005	-0.001	
CS-18-16W	294.55	296.12	22316	1.57	RY19298730	-0.001	-0.2		14	32	39			-0.005	-0.001	
CS-18-16W	296.12	296.60	z047909	0.48	RY19031440	0.01	0.5		10	100	30					
CS-18-16W	296.60	297.00	z047910	0.4	RY19031440	0.01	0.5		20	730	50					
CS-18-16W	297.00	297.66	22317	0.66	RY19298730	0.002	-0.2		16	15	42			-0.005	-0.001	
CS-18-16W	297.66	298.30	z047911	0.64	RY19031440	0.01	0.5		20	50	50					
CS-18-16W	298.30	299.00	22318	0.7	RY19298730	-0.001	-0.2		18	14	36			-0.005	-0.001	
CS-18-16W	299.00	300.00	22319	1	RY19298730	-0.001	-0.2		21	41	40			-0.005	-0.001	
CS-18-16W	300.00	301.00	22320	1	RY19298730	-0.001	0.2		24	27	42			-0.005	-0.001	
CS-18-16W	301.00	302.00	22321	1	RY19298730	0.002	-0.2		12	5	29			-0.005	-0.001	
CS-18-16W	302.00	303.00	22322	1	RY19298730	0.003	-0.2		15	21	60			-0.005	-0.001	
CS-18-16W	303.00	304.00	22323	1	RY19298730	0.006	-0.2		22	136	47			-0.005	-0.001	
CS-18-16W	304.00	305.00	22324	1	RY19298730	0.002	-0.2		18	15	37			-0.005	-0.001	
CS-18-16W	305.00	305.90	22325	0.9	RY19298730	-0.001	-0.2		17	11	35			-0.005	-0.001	
CS-18-16W	305.90	306.75	22326	0.85	RY19298730	0.001	-0.2		19	23	35			-0.005	-0.001	
CS-18-16W	306.75	308.00	22327	1.25	RY19298730	0.001	-0.2		15	38	39			-0.005	-0.001	
CS-18-16W	308.00	308.52	22328	0.52	RY19298730	0.005	-0.2		15	114	28			-0.005	-0.001	
CS-18-16W	308.52	309.26	22329	0.74	RY19298730	0.006	0.2		34	156	58			-0.005	0.003	
CS-18-16W	309.28	310.11	z047912	0.83	RY19031440	0.01	0.5		20	20	50					
CS-18-16W	310.11	310.58	z047913	0.47	RY19031440	0.01	0.5		20	70	40					
CS-18-16W	310.58	312.10	22330	1.52	RY19298730	0.009	0.3		24	24	60			-0.005	0.001	
CS-18-16W	312.10	313.16	z047914	1.06	RY19031440	0.02	1		30	30	60					
CS-18-16W	313.16	314.57	22331	1.41	RY19298730	0.053	1.1		21	85	54			-0.005	-0.001	
CS-18-16W	314.57	315.97	22332	1.4	RY19298730	0.036	0.5		13	297	41			-0.005	-0.001	
CS-18-16W	315.97	316.34	z047915	0.37	RY19031452	5.52	26		260	4300	120			0.0005	0.0005	
CS-18-16W	316.34	316.88	z047916	0.54	RY19031440	0.005	0.5		10	60	30					
CS-18-16W	316.88	317.17	z047917	0.29	RY19031440	0.02	2		60	380	70					
CS-18-16W	317.17	317.68	22333	0.51	RY19298730	0.008	0.2		14	25	33			-0.005	-0.001	
CS-18-16W	317.68	318.00	22334	0.32	RY19298730	0.014	0.5		16	111	32			-0.005	-0.001	
CS-18-16W	318.00	319.00	22335	1	RY19298730	0.068	0.4		18	60	43			-0.005	-0.001	
CS-18-16W	319.00	320.19	22336	1.19	RY19298730	0.091	0.5		16	25	35			-0.005	-0.001	
CS-18-16W	320.19	320.59	z047918	0.4	RY19031440	0.01	3		50	430	50					
CS-18-16W	320.59	320.97	22337	0.38	RY19298730	0.013	0.2		10	7	38			-0.005	-0.001	
CS-18-16W	320.97	321.82	22338	0.85	RY19298730	0.018	1.2		107	142	42			-0.005	-0.001	
CS-18-16W	320.97	321.19	z047919	0.22	RY19031440	0.11	1		30	10	40					
CS-18-16W	321.82	323.00	22339	1.18	RY19298730	0.007	0.3		16	29	40			-0.005	-0.001	
CS-18-16W	323.00	324.00	22340	1	RY19298730	0.004	1.8		15	99	46			-0.005	-0.001	
CS-18-16W	324.00	325.22	22341	1.22	RY19298730	0.033	1.6		33	114	50			-0.005	-0.001	
CS-18-16W	325.22	325.65	z047922	0.43	RY19031440	0.01	0.5		30	70	60					
CS-18-16W	325.65	326.08	z047923	0.43	RY19031440	0.03	3		80	360	100					0.43
CS-18-16W	326.08	326.74	z047924	0.66	RY19031440	0.005	0.5		30	10	240					
CS-18-16W	326.74	327.50	z047925	0.76	RY19031440	0.09	1		30	30	80					0.27
CS-18-16W	327.50	327.92	z047926	0.42	RY19031440	0.12	0.5		40	10	60					0.31
CS-18-16W	327.92	328.39	z047927	0.47	RY19031440	0.13	0.5		20	40	50					0.13
CS-18-16W	328.39	328.96	z047928	0.57	RY19031440	0.09	1		40	40	80					0.45
CS-18-16W	328.96	329.60	z047929	0.64	RY19031440	0.06	1		40	60	90					0.26
CS-18-16W	329.60	330.12	z047930	0.52	RY19031440	0.04	2		40	120	50					0.26
CS-18-16W	335.65	335.84	z047931	0.19	RY19031440	0.03	1		30	90	60					
CS-18-16W	336.89	337.17	z047932	0.28	RY19031440	0.05	1		30	240	60					
CS-18-16W	338.50	339.50	22342	1	RY19298730	0.002	0.8		14	48	41			-0.005	-0.001	
CS-18-16W	339.50	339.70	22343	0.2	RY19298730	0.041	3.8		21	434	38			-0.005	-0.001	
CS-18-16W	339.70	340.50	22344	0.8	RY19298730	0.003	0.2		20	37	47			-0.005	-0.001	
CS-18-16W	340.50	341.63	22345	1.13	RY19298730	0.005	0.5		16	64	35			-0.005	-0.001	
CS-18-16W	341.63	342.00	22346	0.37	RY19298730	0.004	0.3		6	29	15			-0.005	-0.001	
CS-18-16W	342.00	342.43	22347	0.43	RY19298730	0.048	0.7		41	252	54			-0.005	-0.001	
CS-18-16W	342.43	343.57	22348	1.14	RY19298730	0.013	0.5		28	180	42			-0.005	-0.001	
CS-18-16W	343.57	343.89	22349	0.32	RY19298730	0.019	0.3		22	78	32			-0.005	-0.001	

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-16W	343.89	345.10	22350	1.21	RY19298730	0.009	0.2		17	49	38			-0.005	-0.001	
CS-18-16W	345.10	346.10	22351	1	RY19298730	0.022	0.5		24	91	47			-0.005	-0.001	
CS-18-16W	346.10	347.10	22352	1	RY19298730	0.045	0.3		23	158	42			-0.005	-0.001	
CS-18-16W	347.10	347.45	22353	0.35	RY19298730	0.065	2.3		37	448	41			-0.005	-0.001	
CS-18-16W	347.45	348.50	22354	1.05	RY19298730	0.024	0.3		19	62	35			-0.005	-0.001	
CS-18-16W	348.50	349.50	22355	1	RY19298730	0.022	0.2		19	74	43			-0.005	-0.001	
CS-18-16W	349.50	350.50	22356	1	RY19298730	0.046	0.2		17	32	43			-0.005	-0.001	
CS-18-16W	350.50	351.20	22357	0.7	RY19298730	0.145	0.3		17	15	44			-0.005	-0.001	
CS-18-16W	351.22	352.32	z047933	1.1	RY19031440	0.16	3		40	480	60					0.21
CS-18-16W	351.32	353.25	22358	1.93	RY19298730	0.313	0.7		22	22	43			-0.005	-0.001	
CS-18-16W	353.25	354.23	22359	0.98	RY19298730	0.388	0.6		23	22	45			-0.005	-0.001	
CS-18-16W	354.23	354.63	22360	0.4	RY19298730	0.037	0.3		12	22	12			-0.005	-0.001	
CS-18-16W	354.65	355.33	22361	0.68	RY19298730	0.121	0.5		17	61	40			-0.005	-0.001	
CS-18-16W	355.33	356.65	z047934	1.32	RY19031440	1.59	34		40	1910	60					0.3
CS-18-16W	356.65	357.65	22362	1	RY19298730	0.05	0.3		17	21	36			-0.005	-0.001	
CS-18-16W	357.65	358.65	22363	1	RY19298730	0.09	0.5		17	62	46			-0.005	-0.001	
CS-18-16W	358.65	359.65	22364	1	RY19298730	0.075	0.6		23	134	53			-0.005	-0.001	
CS-18-16W	359.65	360.65	22365	1	RY19298730	0.099	0.6		18	43	47			-0.005	-0.001	
CS-18-16W	360.65	361.65	22366	1	RY19298730	0.034	0.3		20	42	62			-0.005	-0.001	
CS-18-16W	361.65	362.65	22367	1	RY19298730	0.033	-0.2		18	31	74			-0.005	-0.001	
CS-18-16W	362.65	363.45	22368	0.8	RY19298730	0.028	0.3		25	38	64			-0.005	-0.001	
CS-18-16W	363.45	363.96	z047935	0.51	RY19031440	0.03	1		30	160	60					0.14
CS-18-16W	363.96	364.59	z047936	0.63	RY19031440	0.18	2		50	340	50					0.21
CS-18-16W	364.59	365.40	z047937	0.81	RY19031440	0.09	0.5		20	160	50					0.09
CS-18-16W	365.40	366.40	22369	1	RY19298730	0.085	0.4		16	99	53			-0.005	-0.001	
CS-18-16W	366.40	367.40	22370	1	RY19298730	0.052	0.5		13	103	36			-0.005	0.001	
CS-18-16W	367.40	368.40	22371	1	RY19298730	0.015	1.3		9	62	30			-0.005	-0.001	
CS-18-16W	368.40	369.40	22372	1	RY19298730	0.015	0.3		17	108	35			-0.005	-0.001	
CS-18-16W	369.40	370.40	22373	1	RY19298730	0.004	0.2		24	89	38			-0.005	-0.001	
CS-18-16W	370.40	371.40	22374	1	RY19298730	0.008	0.2		25	121	47			-0.005	-0.001	
CS-18-16W	371.40	372.40	22375	1	RY19298730	0.015	0.5		19	234	45			-0.005	-0.001	
CS-18-16W	372.40	373.95	22376	1.55	RY19298730	0.012	0.2		22	63	52			-0.005	-0.001	
CS-18-16W	373.95	375.00	22377	1.05	RY19298730	-0.001	0.4		31	62	33			-0.005	-0.001	
CS-18-16W	398.96	400.22	22378	1.26	RY19298730	-0.001	-0.2		20	47	38			-0.005	-0.001	
CS-18-16W	400.22	401.60	22379	1.38	RY19298730	0.001	0.2		14	66	37			-0.005	-0.001	
CS-18-16W	401.60	402.64	22380	1.04	RY19298730	-0.001	-0.2		17	122	43			-0.005	-0.001	
CS-18-16W	402.64	402.93	22381	0.29	RY19298730	0.001	0.3		17	575	29			-0.005	-0.001	
CS-18-16W	402.93	404.25	22382	1.32	RY19298730	0.001	0.3		28	969	42			-0.005	-0.001	
CS-18-16W	404.25	405.93	22383	1.68	RY19298730	-0.001	-0.2		19	44	42			-0.005	-0.001	
CS-18-16W	405.93	406.31	22384	0.38	RY19298730	0.001	-0.2		11	67	10			-0.005	-0.001	
CS-18-16W	406.31	407.22	22385	0.91	RY19298730	0.002	1.2		20	177	45			-0.005	-0.001	
CS-18-16W	413.91	415.53	z047938	1.62	RY19031440	0.005	0.5		10	10	50					
CS-18-16W	415.53	416.95	z047939	1.42	RY19031440	0.01	2		40	270	50					
CS-18-16W	416.95	418.33	z047940	1.38	RY19031440	0.01	2		80	270	50					
CS-18-16W	418.33	419.73	z047941	1.4	RY19031440	0.005	0.5		20	80	60					
CS-18-16W	419.73	420.64	z047942	0.91	RY19031440	0.005	1		30	180	100					
CS-18-16W	420.64	421.09	z047943	0.45	RY19031440	0.005	2		50	330	60					0.31
CS-18-16W	421.09	422.50	z047944	1.41	RY19031440	0.005	2		40	330	40					0.28
CS-18-16W	422.50	423.92	z047945	1.42	RY19031440	0.005	2		20	300	30					0.2
CS-18-16W	423.92	425.41	z047946	1.49	RY19031440	0.005	3		40	780	30					0.38
CS-18-16W	425.41	426.81	z047947	1.4	RY19031440	0.005	3		60	720	40					0.37
CS-18-16W	426.81	428.33	z047948	1.52	RY19031440	0.005	4		90	780	50					0.32
CS-18-16W	428.33	429.65	z047949	1.32	RY19031440	0.005	2		50	240	70					
CS-18-16W	429.65	431.10	z047950	1.45	RY19031440	0.005	2		50	320	40					
CS-18-16W	431.10	431.54	z047951	0.44	RY19031440	0.005	5		70	510	50					
CS-18-16W	431.54	432.56	z047952	1.02	RY19031440	0.005	1		30	270	30					
CS-18-16W	432.56	433.87	z047953	1.31	RY19031440	0.005	1		30	220	30					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-16W	433.87	434.07	z047954	0.2	RY19031452	0.045			5	20	2190			0.00025	0.0005	
CS-18-16W	434.07	435.36	z047955	1.29	RY19031440	0.005	1		30	590	30					
CS-18-16W	435.36	436.77	z047956	1.41	RY19031440	0.005	1		20	290	20					
CS-18-16W	439.07	439.58	z047964	0.51	RY19031440	0.005	2		30	500	60					
CS-18-16W	440.96	442.40	z047965	1.44	RY19031440	0.005	1		20	100	30					
CS-18-16W	442.40	443.09	z047966	0.69	RY19031440	0.005	1		40	100	30					
CS-18-16W	447.95	448.86	z047967	0.91	RY19031440	0.005	3		60	140	70					
CS-18-16W	455.93	456.89	z047968	0.96	RY19031440	0.005	5		60	400	80					
CS-18-16W	456.89	458.21	z047969	1.32	RY19031440	0.005	3		60	200	160					
CS-18-16W	458.21	458.89	z047970	0.68	RY19031440	0.005	1		60	200	50					
CS-18-16W	459.86	460.26	z047971	0.4	RY19031440	0.005	3		140	3190	40					
CS-18-16W	460.26	461.00	z047972	0.74	RY19031440	0.005	3		70	770	40					
CS-18-16W	461.00	461.94	z047973	0.94	RY19031440	0.005	2		130	240	40					
CS-18-16W	461.94	462.94	z047974	1	RY19031440	0.005	3		80	150	60					
CS-18-16W	467.00	467.50	z047975	0.5	RY19031440	0.005	0.5		30	10	90					
CS-18-16W	469.63	470.03	z047976	0.4	RY19031440	0.005	0.5		20	150	70					
CS-18-16W	471.07	471.76	z047977	0.69	RY19031440	0.005										
CS-18-16W	473.96	474.76	z047978	0.8	RY19031440	0.005										
CS-18-16W	532.77	533.78	z047957	1.01	RY19031440	0.005	0.5		30	90	140					
CS-18-16W	533.78	534.35	z047958	0.57	RY19031440	0.005	0.5		40	90	140					
CS-18-16W	534.35	535.22	z047959	0.87	RY19031440	0.005	0.5		40	70	100					
CS-18-16W	535.22	536.29	z047960	1.07	RY19031440	0.005	0.5		40	90	140					
CS-18-16W	551.34	551.61	z047961	0.27	RY19031440	0.005	1		40	180	170					
CS-18-16W	569.10	570.00	z047962	0.9	RY19031440	0.005	0.5		50	130	160					
CS-18-16W	573.77	574.02	z047963	0.25	RY19031440	0.005	0.5		40	400	70					
CS-18-17	18.00	19.00	Z049074	1	RY19042485	0.02	0.5		40	150	80					
CS-18-17	19.00	20.00	Z049075	1	RY19042485	0.005	0.5		30	90	60					
CS-18-17	22.50	23.00	Z049076	0.5	RY19042485	0.01	0.5		40	270	70					
CS-18-17	23.00	24.00	Z049077	1	RY19042485	0.04	0.5		20	240	30					
CS-18-17	28.00	29.00	Z049041	1	RY19042481	0.005	0.5		10	30	20					
CS-18-17	29.00	30.00	Z049042	1	RY19042481	0.06	0.5		10	90	20					
CS-18-17	30.00	31.00	Z049043	1	RY19042481	0.27	1		10	90	20					
CS-18-17	31.00	32.00	Z049044	1	RY19042481	0.03	0.5		10	30	20					
CS-18-17	32.00	33.00	Z049045	1	RY19042481	0.03	0.5		10	80	30					
CS-18-17	33.00	34.00	Z049046	1	RY19042481	0.23	0.5		20	220	40					
CS-18-17	34.00	35.00	Z049047	1	RY19042481	0.005	0.5		10	50	20					
CS-18-17	35.00	36.00	Z049048	1	RY19042481	0.03	0.5		10	140	20					
CS-18-17	36.00	37.30	Z049049	1.3	RY19042481	0.01	1		30	160	50					
CS-18-17	38.00	39.00	Z049050	1	RY19042481	0.005	0.5		50	30	160					
CS-18-17	39.00	40.00	Z049051	1	RY19042481	0.01	0.5		60	150	200					
CS-18-17	43.00	44.00	Z049052	1	RY19042481	0.005	0.5		60	450	60					
CS-18-17	44.00	45.00	Z049053	1	RY19042481	0.04	1		20	140	40					
CS-18-17	45.00	46.00	Z049054	1	RY19042481	0.02	0.5		20	20	190					
CS-18-17	46.00	47.00	Z049055	1	RY19042481	0.1	0.5		10	20	30					
CS-18-17	47.00	48.00	Z049056	1	RY19042481	0.06	1		20	30	30					
CS-18-17	48.00	49.00	Z049057	1	RY19042481	0.01	0.5		40	20	430					
CS-18-17	49.00	50.00	Z049058	1	RY19042481	0.09	0.5		90	100	970					
CS-18-17	50.00	51.00	Z049059	1	RY19042481	0.04	0.5		40	20	330					
CS-18-17	51.00	51.70	22399	0.7	RY19298730	0.03	-0.2		20	88	34			-0.005	-0.001	
CS-18-17	51.70	52.25	Z049060	0.55	RY19042481	0.4	1		20	100	30					
CS-18-17	52.25	52.90	22400	0.65	RY19298730	0.133	0.3		28	63	47			-0.005	-0.001	
CS-18-17	52.90	53.30	22401	0.4	RY19298730	0.251	1.3		44	1880	18			-0.005	-0.001	
CS-18-17	53.30	54.00	22402	0.7	RY19298730	0.09	0.4		20	129	25			-0.005	-0.001	
CS-18-17	54.00	55.00	22403	1	RY19298754	0.082	0.2		14	53	43			-0.005	-0.001	
CS-18-17	55.00	56.00	22404	1	RY19298754	0.018	0.2		17	69	46			-0.005	-0.001	
CS-18-17	56.00	57.00	Z049063	1	RY19042481	0.06	1		50	330	60					
CS-18-17	57.00	58.00	22405	1	RY19298754	0.017	0.6		46	229	44			-0.005	-0.001	

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-17	58.00	59.00	22406	1	RY19298754	0.011	0.4		29	99	39			-0.005	-0.001	
CS-18-17	59.00	60.00	22407	1	RY19298754	0.05	0.2		33	76	46			-0.005	-0.001	
CS-18-17	60.00	61.00	22408	1	RY19298754	0.012	0.6		53	157	58			-0.005	-0.001	
CS-18-17	61.00	62.33	22409	1.33	RY19298754	0.02	0.2		11	55	20			-0.005	-0.001	
CS-18-17	62.33	64.00	22410	1.67	RY19298754	0.025	-0.2		9	27	15			-0.005	-0.001	
CS-18-17	64.00	65.00	22411	1	RY19298754	-0.001	-0.2		12	29	16			-0.005	-0.001	
CS-18-17	65.00	66.00	22412	1	RY19298754	0.01	-0.2		19	34	11			-0.005	-0.001	
CS-18-17	66.00	67.00	22413	1	RY19298754	0.024	-0.2		15	17	17			-0.005	-0.001	
CS-18-17	67.00	68.00	22414	1	RY19298754	0.001	-0.2		11	20	15			-0.005	-0.001	
CS-18-17	68.00	69.10	22415	1.1	RY19298754	-0.001	-0.2		13	7	18			-0.005	-0.001	
CS-18-17	69.10	69.83	22416	0.73	RY19298754	-0.001	-0.2		17	15	37			0.006	0.001	
CS-18-17	69.83	70.70	22417	0.87	RY19298754	-0.001	-0.2		27	12	55			0.008	0.004	
CS-18-17	75.00	75.50	Z049064	0.5	RY19042481	0.005	0.5		30	30	40					
CS-18-17	82.45	83.00	Z049065	0.55	RY19042481	0.005	0.5		20	20	20					
CS-18-17	85.20	85.70	Z049066	0.5	RY19042481	0.005	0.5		10	20	10					
CS-18-17	93.00	94.00	Z049067	1	RY19047577	0.01	-1		50	90	30					
CS-18-17	98.50	99.00	Z049068	0.5	RY19047577	0.01	-1		40	60	40					
CS-18-17	104.00	105.00	Z049069	1	RY19047577	0.01	-1		50	100	60					
CS-18-17	105.00	106.00	Z049070	1	RY19047577	0.01	-1		40	110	70					
CS-18-17	110.00	111.00	Z049071	1	RY19047577	0.01	-1		40	90	90					
CS-18-17	114.00	115.00	Z049072	1	RY19047577	0.01	-1		30	70	80					
CS-18-17	115.00	115.50	Z049073	0.5	RY19047577	0.01	-1		30	40	80					
CS-18-17	125.00	126.00	Z049078	1	RY19042485	0.005	0.5		90	140	920					
CS-18-17	126.00	127.00	Z049079	1	RY19042485	0.005	0.5		90	90	870					
CS-18-17	129.25	130.00	Z049080	0.75	RY19042485	0.005	0.5		40	180	70					
CS-18-17	130.00	131.00	Z049081	1	RY19042485	0.005	0.5		20	150	40					
CS-18-17	147.00	148.00	Z049082	1	RY19042485	0.005	0.5		30	60	70					
CS-18-17	148.00	149.00	Z049084	1	RY19042485	0.005	0.5		40	80	80					
CS-18-17	156.00	157.00	Z049085	1	RY19042485	0.005	0.5		40	60	70					
CS-18-17	161.00	162.00	Z049086	1	RY19042485	0.04	0.5		30	30	70					
CS-18-17	162.00	163.00	Z049087	1	RY19042485	0.005	0.5		40	30	100					
CS-18-17	163.00	164.00	Z049088	1	RY19042485	0.01	0.5		50	60	110					
CS-18-17	166.00	167.00	Z049089	1	RY19042485	0.005	0.5		40	20	130					
CS-18-17	168.00	168.50	Z049090	0.5	RY19042485	0.005	0.5		20	40	70					
CS-18-17	171.00	172.00	Z049091	1	RY19042485	0.03	0.5		20	90	160					
CS-18-17	172.00	173.00	Z049092	1	RY19042485	0.005	0.5		40	380	120					
CS-18-17	173.00	174.00	Z049093	1	RY19042485	0.005	0.5		30	80	180					
CS-18-17	174.00	175.00	Z049094	1	RY19042485	0.005	0.5		50	50	210					
CS-18-17	184.00	185.00	Z049095	1	RY19042485	0.005	0.5		50	60	190					
CS-18-17	188.00	189.00	Z049096	1	RY19042485	0.005	0.5		60	60	210					
CS-18-17	189.00	190.00	Z049097	1	RY19042485	0.005	0.5		50	60	190					
CS-18-17	190.00	191.00	Z049098	1	RY19042485	0.01	0.5		30	80	50					
CS-18-17	191.00	192.00	Z049099	1	RY19042485	0.03	0.5		10	60	10					
CS-18-17	194.00	195.00	Z049100	1	RY19042485	0.17	0.5		20	100	50					
CS-18-17	195.00	196.00	Z049101	1	RY19042485	0.01	0.5		40	210	50					
CS-18-17	196.00	197.00	Z049102	1	RY19042485	0.01	0.5		40	290	50					
CS-18-17	197.00	198.00	Z049103	1	RY19042485	0.2	1		180	200	90					
CS-18-17	198.00	199.00	Z049104	1	RY19042485	0.44	0.5		700	120	180					
CS-18-17	199.00	200.00	Z049107	1	RY19042485	0.07	0.5		20	140	120					
CS-18-17	200.00	201.00	Z049108	1	RY19042485	0.005	0.5		20	1610	40					
CS-18-17	201.00	202.00	Z049109	1	RY19042485	0.01	1		80	3070	70					
CS-18-17	202.00	203.00	Z049110	1	RY19042485	0.01	0.5		160	1250	60					
CS-18-17	203.00	204.00	Z049111	1	RY19042485	0.05	0.5		120	1230	50					
CS-18-17	204.00	205.00	Z049112	1	RY19042485	0.08	0.5		20	1160	30					
CS-18-17	205.00	206.00	Z049113	1	RY19042485	0.06	0.5		20	110	30					
CS-18-17	206.00	207.00	Z049114	1	RY19042485	0.14	0.5		10	110	10					
CS-18-17	207.00	208.00	Z049115	1	RY19042485	0.26	0.5		5	50	5					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-17	208.00	209.00	Z049116	1	RY19042485	0.02	0.5		10	140	20					
CS-18-17	209.00	210.00	Z049117	1	RY19042485	0.01	0.5		30	160	120					
CS-18-17	211.00	212.00	Z049118	1	RY19042485	0.005	0.5		20	70	100					
CS-18-17	212.00	213.00	Z049119	1	RY19042485	0.005	0.5		20	50	50					
CS-18-17	213.00	214.00	Z049120	1	RY19042485	0.005	1		260	310	70					
CS-18-17	214.00	215.00	Z049121	1	RY19042485	0.01	0.5		80	510	50					
CS-18-17	219.00	220.00	Z049122	1	RY19042485	0.04	0.5		10	30	5					
CS-18-17	223.00	224.00	Z049123	1	RY19042485	0.01	0.5		10	30	10					
CS-18-17	238.58	239.00	Z049124	0.42	RY19042485	0.005	0.5		20	110	40					
CS-18-17	239.00	240.00	Z049125	1	RY19042485	0.01	0.5		20	80	50					
CS-18-17	251.00	252.00	Z049126	1	RY19042485	0.005	0.5		10	40	40					
CS-18-17	252.00	253.00	Z049129	1	RY19042485	0.01	0.5		10	30	80					
CS-18-17	256.00	257.00	Z049130	1	RY19042485	0.01	0.5		10	50	50					
CS-18-17	257.00	258.00	Z049131	1	RY19042485	0.01	0.5		20	30	50					
CS-18-17	278.00	279.00	Z049132	1	RY19042485	0.005	0.5		30	40	60					
CS-18-17	279.00	280.00	Z049133	1	RY19042485	0.03	0.5		20	40	40					
CS-18-17	280.00	281.00	Z049134	1	RY19042485	0.01	0.5		20	30	40					
CS-18-17	281.00	282.00	Z049135	1	RY19042485	0.01	0.5		20	40	50					
CS-18-17	282.00	283.00	Z049136	1	RY19042485	0.01	0.5		20	40	80					
CS-18-17	283.00	284.00	Z049137	1	RY19042485	0.26	0.5		20	50	70					
CS-18-17	284.00	285.00	Z049138	1	RY19042485	0.01	0.5		20	40	70					
CS-18-17	285.00	286.00	Z049139	1	RY19042485	0.005	0.5		20	40	50					
CS-18-17	286.00	287.00	Z049140	1	RY19042485	0.01	0.5		20	20	50					
CS-18-17	293.00	294.00	Z049141	1	RY19042485	0.01	0.5		20	50	50					
CS-18-17	294.00	295.00	Z049142	1	RY19042485	0.005	0.5		20	50	40					
CS-18-17	295.00	296.00	Z049143	1	RY19042485	0.01	0.5		20	30	60					
CS-18-17	296.00	297.00	Z049144	1	RY19042485	0.04	0.5		30	20	40					
CS-18-17	297.00	298.00	Z049145	1	RY19042485	0.005	0.5		30	30	40					
CS-18-17	298.00	299.00	Z049146	1	RY19042485	0.005	0.5		20	10	40					
CS-18-17	299.00	300.00	Z049147	1	RY19042485	0.17	0.5		10	30	40					
CS-18-17	300.00	301.00	Z049148	1	RY19042485	0.01	0.5		20	30	40					
CS-18-17	301.00	302.00	Z049151	1	RY19042485	0.005	0.5		30	120	60					
CS-18-17	302.00	303.00	Z049152	1	RY19042485	0.005	0.5		30	50	120					
CS-18-17	303.00	304.00	Z049153	1	RY19042485	0.03	0.5		40	40	180					
CS-18-17	304.00	305.00	Z049154	1	RY19042485	0.01	0.5		10	20	40					
CS-18-17	305.00	306.00	Z049155	1	RY19042485	0.02	1		20	50	50					
CS-18-17	353.46	353.85	Z049156	0.39	RY19042485	0.07	0.5		30	150	60					
CS-18-18	14.27	15.79	z047981	1.52	RY19031440	0.005										
CS-18-18	19.94	20.54	z047982	0.6	RY19031440	0.005										
CS-18-18	25.50	26.50	22418	1	RY19298754	0.012	0.2		7	258	47			-0.005	0.008	
CS-18-18	26.50	27.50	22419	1	RY19298754	0.002	0.3		5	164	31			-0.005	-0.001	
CS-18-18	27.50	28.56	22420	1.06	RY19298754	0.02	0.2		17	109	25			-0.005	-0.001	
CS-18-18	28.56	29.50	22421	0.94	RY19298754	0.059	0.4		20	582	10			-0.005	-0.001	
CS-18-18	29.50	30.50	22422	1	RY19298754	0.048	0.6		38	1360	18			-0.005	-0.001	
CS-18-18	30.50	31.50	22423	1	RY19298754	0.044	0.5		39	543	34			-0.005	-0.001	
CS-18-18	31.50	31.90	22424	0.4	RY19298754	0.072	0.6		49	510	83			-0.005	-0.001	
CS-18-18	31.90	33.00	22425	1.1	RY19298754	0.004	-0.2		17	40	55			-0.005	-0.001	
CS-18-18	50.14	50.82	z047983	0.68	RY19031440	0.005										
CS-18-18	50.82	51.53	z047984	0.71	RY19031440	0.005										
CS-18-18	52.93	53.40	z047985	0.47	RY19031440	0.005										
CS-18-18	59.49	59.99	z047986	0.5	RY19031440	0.01										
CS-18-18	63.89	64.89	z047987	1	RY19031440	0.005										
CS-18-18	64.89	66.06	z047988	1.17	RY19031440	0.005										
CS-18-18	67.92	68.87	z047989	0.95	RY19031440	0.005										
CS-18-18	72.57	72.98	z047990	0.41	RY19031440	0.005										
CS-18-18	103.02	103.79	z047991	0.77	RY19031440	0.005										
CS-18-18	103.79	105.35	z047992	1.56	RY19031440	0.005										

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-18	105.35	106.67	z047993	1.32	RY19031440	0.005										
CS-18-18	106.67	108.11	z047994	1.44	RY19031440	0.005										
CS-18-18	108.11	108.89	z047995	0.78	RY19031440	0.005										
CS-18-18	130.93	132.64	z047996	1.71	RY19031440	0.005										
CS-18-18	157.44	157.80	z047997	0.36	RY19031440	0.005										
CS-18-18	165.04	166.10	z047998	1.06	RY19031440	0.01										
CS-18-18	166.10	166.54	z047999	0.44	RY19031440	0.005										
CS-18-18	166.54	167.90	z048000	1.36	RY19042481	0.005	0.5		40	40	150					
CS-18-18	167.90	169.26	z049001	1.36	RY19042481	0.03	0.5		20	20	90					
CS-18-18	169.26	170.26	z049002	1	RY19042481	0.05	0.5		10	30	10					
CS-18-18	170.26	170.85	z049003	0.59	RY19042481	0.02	0.5		20	10	290					
CS-18-18	170.85	171.54	z049004	0.69	RY19042481	0.1	0.5		10	20	10					
CS-18-18	171.54	172.26	z049005	0.72	RY19042481	0.2	0.5		40	30	100					
CS-18-18	172.26	172.94	z049006	0.68	RY19042481	0.52	0.5		10	50	10					
CS-18-18	172.94	173.59	z049007	0.65	RY19042481	0.32	1		10	60	30					
CS-18-18	173.59	174.31	z049008	0.72	RY19042481	0.14	0.5		20	1110	20					
CS-18-18	174.31	175.00	z049009	0.69	RY19042481	0.1	0.5		10	30	20					
CS-18-18	175.00	176.45	z049010	1.45	RY19042481	0.05	0.5		10	10	10					
CS-18-18	176.45	177.38	z049011	0.93	RY19042481	0.04	2		10	20	80					
CS-18-18	178.33	179.95	z049012	1.62	RY19042481	0.08	0.5		10	10	10					
CS-18-18	179.95	180.61	z049013	0.66	RY19042481	0.15	0.5		10	5	10					
CS-18-18	180.61	181.19	z049014	0.58	RY19042481	0.13	0.5		10	10	10					
CS-18-18	181.19	181.70	z049015	0.51	RY19042481	0.04	0.5		5	20	10					
CS-18-18	181.70	182.51	z049016	0.81	RY19042481	0.02	0.5		20	90	80					
CS-18-18	182.51	183.91	z049017	1.4	RY19042481	0.2	0.5		30	20	80					
CS-18-18	183.91	184.95	z049018	1.04	RY19042481	0.09	0.5		10	20	10					
CS-18-18	184.95	186.12	z049019	1.17	RY19042481	0.26	0.5		30	50	60					
CS-18-18	186.12	187.27	z049020	1.15	RY19042481	0.02	0.5		20	20	90					
CS-18-18	187.27	188.00	z049021	0.73	RY19042481	0.02	0.5		20	20	10					
CS-18-18	188.00	188.90	z049022	0.9	RY19042481	0.62	1		20	390	50					
CS-18-18	188.90	189.32	z049023	0.42	RY19042481	0.02	0.5		10	40	20					
CS-18-18	189.32	189.69	z049024	0.37	RY19042481	0.11	0.5		20	70	30					
CS-18-18	189.69	190.13	z049025	0.44	RY19042481	0.08	2		30	910	40					
CS-18-18	190.13	190.92	z049026	0.79	RY19042481	0.13	2		30	880	20					
CS-18-18	190.92	191.39	z049027	0.47	RY19042481	0.03	1		10	90	10					
CS-18-18	191.39	192.31	z049028	0.92	RY19042481	0.05	0.5		10	100	20					
CS-18-18	192.31	192.75	z049031	0.44	RY19042481	0.06	0.5		10	90	10					
CS-18-18	192.75	193.36	z049032	0.61	RY19042481	0.1	0.5		10	10	20					
CS-18-18	193.36	194.07	z049033	0.71	RY19042481	0.05	0.5		10	220	20					
CS-18-18	194.07	195.17	z049034	1.1	RY19042481	0.18	0.5		10	60	10					
CS-18-18	195.17	195.89	z049035	0.72	RY19042481	0.03	0.5		10	60	10					
CS-18-18	195.89	196.59	z049036	0.7	RY19042481	0.15	0.5		70	650	50					
CS-18-18	196.59	197.44	z049037	0.85	RY19042481	0.08	0.5		10	70	10					
CS-18-18	197.44	197.98	z049038	0.54	RY19042481	0.05	1		10	140	20					
CS-18-18	197.98	198.84	z049039	0.86	RY19042481	0.16	0.5		10	20	10					
CS-18-18	198.84	199.46	z049040	0.62	RY19042481	0.02	0.5		10	80	40					
CS-18-18	199.46	201.00	22451	1.54	RY19298754	0.006	0.2		19	97	56			-0.005	-0.001	
CS-18-18	201.00	202.00	Z049157	1	RY19042485	0.06	0.5		50	420	60					
CS-18-18	202.00	203.00	22452	1	RY19298754	0.019	0.3		28	339	58			-0.005	-0.001	
CS-18-18	203.00	204.00	22453	1	RY19298754	0.193	0.2		44	127	43			-0.005	-0.001	
CS-18-18	204.00	205.00	Z049158	1	RY19042485	0.04	0.5		30	560	60					
CS-18-18	205.00	206.00	22454	1	RY19298754	0.036	-0.2		20	138	41			-0.005	-0.001	
CS-18-18	206.00	207.00	22455	1	RY19298754	0.001	-0.2		20	262	38			-0.005	-0.001	
CS-18-18	207.00	207.55	22456	0.55	RY19298754	0.008	0.2		21	179	45			-0.005	-0.001	
CS-18-18	207.55	208.50	22457	0.95	RY19298754	0.033	-0.2		27	27	32			-0.005	-0.001	
CS-18-18	208.50	209.80	22458	1.3	RY19298754	0.188	-0.2		30	73	34			-0.005	-0.001	
CS-18-18	209.80	211.00	22459	1.2	RY19298754	0.014	-0.2		19	136	30			-0.005	-0.001	

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-18	211.00	212.50	22460	1.5	RY19298754	0.021	-0.2		43	76	132			0.008	0.006	
CS-18-18	212.50	213.00	Z049159	0.5	RY19042485	0.01	0.5		40	20	160					
CS-18-18	213.00	214.45	22461	1.45	RY19298754	-0.001	-0.2		36	85	182			-0.005	0.003	
CS-18-18	214.45	214.85	22462	0.4	RY19298754	-0.001	-0.2		12	81	15			-0.005	-0.001	
CS-18-18	214.85	216.00	22463	1.15	RY19298754	-0.001	0.3		34	47	163			-0.005	0.002	
CS-18-18	216.00	217.00	22464	1	RY19298754	0.005	-0.2		25	6	185			-0.005	0.001	
CS-18-18	217.00	218.00	22465	1	RY19298754	0.019	0.2		25	25	107			-0.005	-0.001	
CS-18-18	218.00	219.00	22466	1	RY19298754	0.009	0.2		25	11	137			-0.005	-0.001	
CS-18-18	219.00	220.00	22467	1	RY19298754	0.028	0.2		20	56	152			-0.005	-0.001	
CS-18-18	220.00	221.00	Z049160	1	RY19042485	0.39	1		50	750	60					
CS-18-18	221.00	222.00	Z049161	1	RY19042485	0.21	0.5		20	80	60					
CS-18-18	222.00	223.00	Z049162	1	RY19042485	0.01	0.5		20	40	50					
CS-18-18	223.00	223.93	22468	0.93	RY19298754	0.002	0.2		15	25	35			-0.005	-0.001	
CS-18-18	223.93	224.90	22469	0.97	RY19298754	0.01	-0.2		18	35	37			-0.005	-0.001	
CS-18-18	224.90	226.00	22470	1.1	RY19298754	-0.001	-0.2		15	25	26			-0.005	-0.001	
CS-18-18	225.60	226.00	Z049163	0.4	RY19042485	0.01	0.5		10	50	20					
CS-18-18	226.00	227.00	Z049164	1	RY19042485	0.01	0.5		10	30	20					
CS-18-18	227.00	228.00	Z049165	1	RY19042485	0.02	0.5		20	30	30					
CS-18-18	228.00	229.00	22471	1	RY19298754	-0.001	0.2		32	35	66			-0.005	-0.001	
CS-18-18	229.00	230.00	22472	1	RY19298754	-0.001	0.2		20	29	46			-0.005	-0.001	
CS-18-18	230.00	231.00	Z049166	1	RY19042485	0.11	0.5		20	40	70					
CS-18-18	231.00	232.00	22473	1	RY19298754	0.001	-0.2		33	49	77			-0.005	-0.001	
CS-18-18	232.00	233.00	22474	1	RY19298754	-0.001	-0.2		25	31	53			-0.005	-0.001	
CS-18-18	233.00	234.00	22475	1	RY19298754	0.004	-0.2		19	38	44			-0.005	-0.001	
CS-18-18	239.00	240.00	Z049167	1	RY19042485	0.01	1		10	40	30					
CS-18-18	243.00	244.00	Z049168	1	RY19042485	0.005	0.5		10	30	30					
CS-18-18	244.00	245.00	Z049169	1	RY19042485	0.005	0.5		20	20	40					
CS-18-18	245.00	246.00	Z049170	1	RY19042485	0.005	0.5		10	40	30					
CS-18-18	246.00	247.00	Z049171	1	RY19042485	0.03	0.5		20	40	50					
CS-18-18	247.00	248.00	Z049172	1	RY19042485	0.005	0.5		20	30	50					
CS-18-18	248.00	249.00	Z049173	1	RY19042485	0.005	0.5		20	20	40					
CS-18-18	249.00	250.00	Z049174	1	RY19042485	0.005	0.5		10	40	40					
CS-18-18	250.00	251.00	Z049175	1	RY19042485	0.01	0.5		20	30	60					
CS-18-18	251.00	252.00	Z049176	1	RY19042485	0.01	0.5		20	50	50					
CS-18-18	252.00	253.00	Z049179	1	RY19042485	0.03	0.5		10	30	20					
CS-18-18	253.00	254.00	Z049180	1	RY19042485	0.05	0.5		20	40	60					
CS-18-18	254.00	255.00	Z049181	1	RY19042485	0.005	0.5		20	70	50					
CS-18-18	255.00	256.00	Z049182	1	RY19042485	0.005	0.5		20	30	50					
CS-18-18	256.00	257.00	Z049183	1	RY19042485	0.005	0.5		20	20	110					
CS-18-18	257.00	258.00	Z049184	1	RY19042485	0.005	0.5		20	20	70					
CS-18-18	258.00	259.00	Z049185	1	RY19042485	0.005	1		20	60	60					
CS-18-18	259.00	260.00	Z049186	1	RY19042485	0.55	0.5		20	90	50					
CS-18-18	260.00	261.00	Z049187	1	RY19042485	0.005	0.5		60	80	130					
CS-18-18	261.00	262.00	Z049188	1	RY19042485	0.05	0.5		30	50	60					
CS-18-18	262.00	263.00	22476	1	RY19298754	0.005	0.2		31	52	86			-0.005	0.001	
CS-18-18	263.00	264.00	22477	1	RY19298754	0.01	0.2		25	40	61			-0.005	-0.001	
CS-18-18	264.00	265.00	22478	1	RY19298754	0.002	0.2		27	46	54			-0.005	-0.001	
CS-18-18	265.00	266.00	22479	1	RY19298754	-0.001	0.2		23	42	47			-0.005	-0.001	
CS-18-18	266.00	267.00	22480	1	RY19298754	0.016	0.2		18	46	41			-0.005	-0.001	
CS-18-18	267.00	268.00	22481	1	RY19298754	0.008	-0.2		17	42	39			-0.005	-0.001	
CS-18-18	268.00	269.00	22482	1	RY19298754	-0.001	0.2		17	30	43			-0.005	-0.001	
CS-18-18	269.00	270.00	Z049189	1	RY19042485	0.09	0.5		20	40	40					
CS-18-18	270.00	271.00	Z049190	1	RY19042485	0.04	0.5		20	50	80					
CS-18-18	271.00	272.00	Z049191	1	RY19042485	0.1	0.5		20	60	120					
CS-18-18	272.00	273.00	Z049192	1	RY19042485	0.12	0.5		30	60	90					
CS-18-18	273.00	274.00	Z049193	1	RY19042485	0.05	0.5		20	30	50					
CS-18-18	274.00	275.00	Z049194	1	RY19042485	0.005	0.5		20	20	90					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-18-18	275.00	276.00	22483	1	RY19298754	0.085	0.2		22	16	56			-0.005	-0.001	
CS-18-18	276.00	277.00	Z049195	1	RY19042485	0.25	0.5		40	70	60					
CS-18-18	277.00	278.00	Z049196	1	RY19042485	0.07	1		20	50	50					
CS-18-18	278.00	279.00	22484	1	RY19298754	0.015	0.5		18	52	52			-0.005	-0.001	
CS-18-18	279.00	280.00	22485	1	RY19298754	0.032	0.4		14	8	37			-0.005	-0.001	
CS-18-18	280.00	281.00	22486	1	RY19298754	0.008	0.3		15	1	36			-0.005	-0.001	
CS-18-18	281.00	282.00	22487	1	RY19298754	0.002	0.7		15	44	42			-0.005	-0.001	
CS-18-18	282.00	283.45	22488	1.45	RY19298754	0.002	0.2		15	22	39			-0.005	-0.001	
CS-18-18	283.45	284.00	Z049197	0.55	RY19042485	0.005	0.5		10	70	40					
CS-18-18	288.00	289.00	Z049198	1	RY19042485	0.02	0.5		20	40	50					
CS-18-18	289.90	290.30	Z049199	0.4	RY19042485	0.05	1		30	460	60					
CS-18-18	291.55	292.16	Z049202	0.61	RY19042485	0.02	0.5		30	240	70					
CS-18-18	293.00	293.55	Z049203	0.55	RY19042485	0.005	1		20	190	40					
CS-18-18	295.00	296.00	Z049204	1	RY19042485	0.005	0.5		30	210	40					
CS-18-18	299.00	300.00	Z049205	1	RY19042485	0.005	0.5		20	50	40					
CS-18-18	300.00	301.00	Z049206	1	RY19042485	0.01	0.5		20	190	50					
CS-18-18	304.70	305.10	Z049207	0.4	RY19042485	0.005	0.5		10	50	10					
CS-18-18	308.90	309.83	Z049208	0.93	RY19042485	0.04	0.5		20	270	40					
CS-18-18	309.83	310.45	Z049209	0.62	RY19042485	0.03	1		20	40	50					
CS-18-18	312.40	313.07	Z049210	0.67	RY19042485	0.01	3		20	120	40					
CS-18-18	318.00	319.00	Z049211	1	RY19047577	0.33	1		30	190	50					
CS-18-18	319.00	320.00	Z049212	1	RY19047577	0.17	4		20	260	50					
CS-18-18	320.00	321.00	Z049213	1	RY19047577	0.01	-1		30	60	80					
CS-18-18	321.00	322.00	Z049214	1	RY19047577	0.14	2		20	260	80					
CS-18-18	322.00	323.00	Z049215	1	RY19047577	0.2	5		20	690	80					
CS-18-18	323.00	324.00	Z049216	1	RY19047577	0.02	1		20	260	90					
CS-18-18	326.00	327.00	Z049217	1	RY19047577	0.01	1		20	100	40					
CS-18-18	327.00	328.00	Z049218	1	RY19047577	0.01	1		10	40	10					
CS-18-18	328.00	329.00	Z049219	1	RY19047577	0.45	6		30	590	110					
CS-18-18	329.00	330.00	Z049220	1	RY19047577	0.06	5		20	140	90					
CS-18-18	330.00	331.00	Z049221	1	RY19047577	0.04	3		20	50	90					
CS-18-18	331.00	332.00	Z049224	1	RY19047577	0.03	1		30	220	60					
CS-18-18	332.00	333.00	Z049225	1	RY19047577	0.01	-1		10	50	50					
CS-18-18	333.00	334.00	Z049226	1	RY19047577	0.01	-1		20	40	70					
CS-18-18	334.00	335.00	Z049227	1	RY19047577	0.01	-1		30	70	70					
CS-18-18	335.00	336.00	Z049228	1	RY19047577	0.01	1		50	390	70					
CS-18-18	336.00	337.00	Z049229	1	RY19047577	0.01	2		90	620	50					
CS-18-18	337.00	338.00	Z049230	1	RY19047577	0	2		70	400	50					
CS-18-18	338.00	339.00	Z049231	1	RY19047577	0.02	1		50	470	110					
CS-18-18	339.00	340.00	Z049232	1	RY19047577	0.01	-1		50	70	50					
CS-19-19	17.00	18.00	Z049398	1	RY19055416	0	-1		130	30	1580					
CS-19-19	18.00	19.00	Z049399	1	RY19055416	0	-1		110	30	1400					
CS-19-19	19.00	20.00	Z049400	1	RY19055416	0	-1		120	30	1380					
CS-19-19	20.00	21.00	Z049401	1	RY19055416	0	-1		100	50	1200					
CS-19-19	21.00	22.00	Z049402	1	RY19055416	0	-1		90	60	1030					
CS-19-19	22.00	23.00	Z049403	1	RY19055416	0	-1		50	80	570					
CS-19-19	23.00	24.00	Z049404	1	RY19055416	0.01	-1		40	20	290					
CS-19-19	24.00	25.00	Z049405	1	RY19055416	0	-1		30	30	270					
CS-19-19	25.00	26.00	Z049406	1	RY19055416	0.01	1		50	370	280					
CS-19-19	38.00	39.00	Z049407	1	RY19055416	0	1		10	30	20					
CS-19-19	39.00	40.00	Z049408	1	RY19055416	0.01	-1		20	90	30					
CS-19-19	40.00	41.00	Z049409	1	RY19055416	0.12	1		40	90	20					
CS-19-19	47.00	48.00	Z049410	1	RY19055416	0	1		0	20	10					
CS-19-19	48.00	49.00	Z049411	1	RY19055416	0.05	-1		0	30	0					
CS-19-19	49.00	50.00	Z049412	1	RY19055416	0.02	-1		30	30	60					
CS-19-19	62.00	62.50	Z049413	0.5	RY19055416	0.03	-1		30	10	40					
CS-19-19	79.00	80.00	Z049414	1	RY19055416	0	-1		30	10	70					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-19-19	80.00	81.00	Z049415	1	RY19055416	0	-1		20	0	70					
CS-19-19	83.00	84.00	Z049416	1	RY19055416	0.01	-1		30	70	90					
CS-19-19	84.00	85.00	Z049417	1	RY19055416	0.01	-1		0	10	10					
CS-19-19	85.00	86.00	Z049420	1	RY19055416	0.09	-1		20	10	40					
CS-19-19	86.00	87.00	Z049421	1	RY19055416	0	-1		30	70	100					
CS-19-19	87.00	88.00	Z049422	1	RY19055416	0.01	-1		30	30	110					
CS-19-19	92.00	93.00	Z049423	1	RY19055416	0.1	-1		40	20	280					
CS-19-19	93.00	94.00	Z049424	1	RY19055416	0.01	-1		30	20	120					
CS-19-19	96.00	97.00	Z049425	1	RY19055416	0.01	-1		40	100	80					
CS-19-19	97.00	98.00	Z049426	1	RY19055416	0	-1		30	60	40					
CS-19-19	104.00	105.00	Z049427	1	RY19055416	0	-1		40	80	50					
CS-19-19	111.00	112.00	Z049428	1	RY19055416	0	-1		40	100	50					
CS-19-19	112.00	113.00	Z049429	1	RY19055416	0.01	1		30	50	50					
CS-19-19	113.00	114.00	Z049430	1	RY19055416	0.01	-1		20	50	30					
CS-19-19	147.00	148.00	Z049431	1	RY19055421	0	1		40	40	90					
CS-19-19	151.00	152.00	Z049432	1	RY19055421	0	1		40	60	70					
CS-19-19	153.00	154.00	Z049433	1	RY19055421	0	1		40	40	90					
CS-19-19	154.00	155.00	Z049434	1	RY19055421	0	1		40	90	70					
CS-19-19	155.00	156.00	Z049435	1	RY19055421	0	1		30	50	140					
CS-19-19	156.00	157.00	Z049436	1	RY19055421	0	1		30	30	90					
CS-19-19	172.00	173.00	Z049437	1	RY19055421	0	1		30	40	60					
CS-19-19	173.00	174.00	Z049438	1	RY19055421	0	1		30	40	50					
CS-19-19	174.00	175.00	Z049439	1	RY19055421	0	-1		40	60	70					
CS-19-19	178.00	179.00	Z049440	1	RY19055421	0	1		30	50	50					
CS-19-19	179.00	180.00	Z049443	1	RY19055421	0	1		30	60	60					
CS-19-19	180.00	181.00	Z049444	1	RY19055421	0	1		30	50	50					
CS-19-19	183.00	184.00	Z049445	1	RY19055421	0	1		30	40	120					
CS-19-19	184.00	185.00	Z049446	1	RY19055421	0	1		40	50	70					
CS-19-19	185.00	186.00	Z049447	1	RY19055421	0	1		30	70	70					
CS-19-19	193.00	194.00	Z049448	1	RY19055421	0	1		40	50	90					
CS-19-19	194.00	195.00	Z049449	1	RY19055421	0	1		30	40	70					
CS-19-19	200.00	201.00	Z049450	1	RY19055421	0	1		40	50	120					
CS-19-19	201.00	202.00	Z049451	1	RY19055421	0	1		40	40	90					
CS-19-19	210.00	211.00	Z049452	1	RY19055421	0	-1		40	30	90					
CS-19-19	213.00	214.00	Z049453	1	RY19055421	0	1		40	40	110					
CS-19-19	214.00	215.00	Z049454	1	RY19055421	0	-1		40	30	90					
CS-19-19	215.00	216.00	Z049455	1	RY19055421	0	1		40	40	90					
CS-19-19	216.00	217.00	Z049456	1	RY19055421	0	1		40	120	100					
CS-19-19	217.00	218.00	Z049457	1	RY19055421	0	-1		40	40	100					
CS-19-19	233.00	234.00	Z049458	1	RY19055421	0	1		40	70	150					
CS-19-19	234.00	235.00	Z049459	1	RY19055421	0	1		30	20	160					
CS-19-19	235.00	236.00	Z049460	1	RY19055421	0.01	-1		30	0	180					
CS-19-19	239.00	240.00	Z049461	1	RY19055421	0.12	2		30	3810	120					
CS-19-19	240.00	241.00	Z049462	1	RY19055421	0	1		50	40	250					
CS-19-19	241.00	242.00	Z049465	1	RY19055421	0	1		50	20	200					
CS-19-19	242.00	243.00	Z049466	1	RY19055421	0	1		40	20	110					
CS-19-19	284.00	285.00	Z049467	1	RY19055421	0	1		70	410	60					
CS-19-19	285.00	286.00	Z049468	1	RY19055421	0	1		20	420	50					
CS-19-19	286.00	287.00	Z049469	1	RY19055421	0	1		20	100	50					
CS-19-19	287.00	288.00	22426	1	RY19298754	0.005	0.4		26	58	45			-0.005	-0.001	
CS-19-19	288.00	289.00	22427	1	RY19298754	0.013	1.6		24	100	40			-0.005	-0.001	
CS-19-19	289.00	290.00	22428	1	RY19298754	0.006	1.6		28	70	59			-0.005	-0.001	
CS-19-19	290.00	291.00	22429	1	RY19298754	0.058	0.4		19	43	89			-0.005	0.002	
CS-19-19	291.00	292.00	22430	1	RY19298754	0.09	0.3		8	28	43			-0.005	-0.001	
CS-19-19	292.00	292.50	22431	0.5	RY19298754	-0.001	0.4		7	43	33			-0.005	-0.001	
CS-19-19	292.50	293.00	22432	0.5	RY19298754	0.026	1		10	138	41			-0.005	-0.001	
CS-19-19	293.00	294.00	Z049470	1	RY19055421	0.39	3		20	280	80					

Hole Name	From	To	Sample Number	Length	Certificate	Au	Ag	As	Co	Cu	Ni	Pb	Zn	Pt	Pd	Te
CS-19-19	294.00	295.00	Z049471	1	RY19055421	0.16	1		20	120	60					
CS-19-19	295.00	296.00	Z049472	1	RY19055421	0.58	5		40	160	40					
CS-19-19	296.00	297.00	Z049473	1	RY19055421	0.75	3		40	190	40					
CS-19-19	297.00	298.00	Z049474	1	RY19055421	0.52	2		30	50	60					
CS-19-19	298.00	299.00	Z049475	1	RY19055421	15.2	11		80	470	30					
CS-19-19	299.00	300.00	Z049476	1	RY19055421	0.04	5		20	240	40					
CS-19-19	300.00	301.00	Z049477	1	RY19055421	0.07	1		30	90	30					
CS-19-19	301.00	302.00	22433	1	RY19298754	0.053	1.1		27	78	26			-0.005	-0.001	
CS-19-19	302.00	303.00	22434	1	RY19298754	0.219	1.7		30	131	39			-0.005	-0.001	
CS-19-19	303.00	304.00	Z049478	1	RY19055421	0.31	3		60	310	40					
CS-19-19	304.00	303.65	22435	-0.35	RY19298754	0.443	1.1		23	57	30			-0.005	-0.001	
CS-19-19	304.45	305.50	22436	1.05	RY19298754	0.306	2		37	311	75			-0.005	-0.001	
CS-19-19	305.50	306.50	22437	1	RY19298754	0.112	1.6		34	301	32			0.005	-0.001	
CS-19-19	306.50	307.30	22438	0.8	RY19298754	0.086	0.3		10	66	29			-0.005	-0.001	
CS-19-19	307.30	308.00	22439	0.7	RY19298754	0.052	0.6		31	10	27			-0.005	-0.001	
CS-19-19	308.00	309.00	Z049479	1	RY19055421	0.16	2		70	370	50					
CS-19-19	309.00	310.00	Z049480	1	RY19055421	0.04	1		10	170	30					
CS-19-19	310.00	311.00	Z049481	1	RY19055421	0.05	1		30	80	40					
CS-19-19	311.00	311.95	22440	0.95	RY19298754	0.092	0.7		18	46	38			-0.005	-0.001	
CS-19-19	311.95	313.00	22441	1.05	RY19298754	0.219	0.4		27	14	22			-0.005	-0.001	
CS-19-19	313.00	314.00	Z049482	1	RY19055421	0.03	-1		20	30	40					
CS-19-19	314.00	315.00	Z049483	1	RY19055421	0.19	1		20	200	20					
CS-19-19	315.00	316.00	22442	1	RY19298754	0.046	0.6		15	122	31			-0.005	-0.001	
CS-19-19	316.00	317.00	Z049484	1	RY19055421	0.01	-1		10	40	10					
CS-19-19	317.00	318.00	Z049487	1	RY19055421	0.02	-1		10	60	10					
CS-19-19	318.00	318.30	22443	0.3	RY19298754	0.06	1.2		10	413	45			-0.005	0.001	
CS-19-19	318.30	319.00	22444	0.7	RY19298754	0.081	1		23	98	103			0.007	0.005	
CS-19-19	319.00	320.00	22445	1	RY19298754	0.231	1		23	82	65			0.006	0.003	
CS-19-19	320.00	321.00	Z049488	1	RY19055421	0.3	-1		40	50	80					
CS-19-19	321.00	322.00	22446	1	RY19298754	0.199	0.6		16	84	79			0.006	0.003	
CS-19-19	322.00	323.00	22447	1	RY19298754	0.184	1.1		32	174	62			-0.005	0.002	
CS-19-19	323.00	324.00	Z049489	1	RY19055421	0.04	-1		40	70	90					
CS-19-19	324.00	325.00	Z049490	1	RY19055421	0.04	-1		30	170	80					
CS-19-19	325.00	326.00	Z049491	1	RY19055421	0.04	-1		40	130	80					
CS-19-19	326.00	327.00	Z049492	1	RY19055421	0.05	-1		40	20	80					
CS-19-19	327.00	328.00	Z049493	1	RY19055421	0.07	-1		30	100	50					
CS-19-19	327.72	329.00	22448	1.28	RY19298754	0.247	0.6		15	91	22			0.013	0.007	
CS-19-19	329.00	330.00	22449	1	RY19298754	0.073	0.4		39	230	46			0.009	0.003	
CS-19-19	330.00	331.00	22450	1	RY19298754	0.033	0.5		15	122	39			-0.005	-0.001	
CS-19-19	331.00	332.00	Z049494	1	RY19055421	0.19	3		70	490	110					
CS-19-19	332.00	333.00	Z049495	1	RY19055421	0.01	-1		40	70	100					
CS-19-19	333.00	334.00	Z049496	1	RY19055421	0.02	-1		40	180	110					
CS-19-19	345.00	346.00	Z049497	1	RY19055421	0	-1		40	320	70					
CS-19-19	346.00	347.00	Z049498	1	RY19055421	0.01	7		50	490	80					
CS-19-19	347.00	348.00	Z049499	1	RY19055421	0.01	1		40	220	80					
CS-19-19	348.00	349.00	Z049500	1	RY19055421	0.02	3		90	810	120					
CS-19-19	349.00	350.12	Z049501	1.12	RY19055421	0.01	1		40	360	150					
CS-19-19	355.00	356.00	Z049502	1	RY19055421	0.01	1		60	480	90					

Hole Name	From	To	Sample Number	length	Certificate	Au g/t	Ag g/t	As	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Pt g/t	Pd g/t	Te ppm
CS-18-14	Blank		z047501		A18-1584	0.005	0.1		4.5	8						
CS-18-14	Oreas 600		z047502		A18-1584	0.2	2.1		1530	4407						
CS-18-14	Oreas 601		Z047526		A18-1584	0.18	2.1		1550	4320						
CS-18-14	Blank: White marble		Z047527		A18-1584	< 0.01	< 0.2		7.9	6						
CS-18-14	Oreas 600		Z047559		RY18290022	0.184	25		<10	490	20			<0.0005	0.001	
CS-18-14	Blank White marble		Z047560		RY18290022	0.003	0.5		5	5	5			<0.0005	0.001	
CS-18-14	Blank		Z047593		RY18301577	<0.001	0.5		5	5	5			<0.0005	<0.001	
CS-18-14	Oreas 601		Z047594		RY18301577	0.741	52		10	1040	20			0.0014	0.006	
CS-18-14	Blank	2.90	Z047630		RY18301577	0.001	0.5		5	5	5			<0.001	<0.0005	
CS-18-14	Oreas 601	3.00	Z047631		RY18301577	0.765	51		5	1020	30			0.005	0.0010	
CS-18-15	Oreas 601		z047639		RY18289942	0.69	48		10	980	30			0.0011	0.006	
CS-18-15	Blank: White marble		z047640		RY18289942	0.004	<1		<10	<10	<10			<0.0005	0.001	
CS-18-15	Blank:		z047673		RY18291270	0.002	<1		<10	10	<10			<0.0005	<0.001	
CS-18-15	Oreas 76a		z047674		RY18291270	0.057	1		1200	2950	72400			0.68	0.389	
CS-18-15	Blank		z047710		RY18291270		<1		<10	<10	10					<0.01
CS-18-15	Oreas 601		z047711		RY18291298		50									14.3
CS-18-15	Blank		z047746		RY18291293	0.001	<1		<10	<10	10	<20	30	<0.0005	<0.001	<0.01
CS-18-15	Oreas 600		z047747		RY18291293	0.183	26		10	510	20	200	650	<0.0005	0.001	7.37
CS-18-15	Blank:		Z047673		RY18291270	0.002	0.5		5	10	5			<0.0005	<0.001	
CS-18-15	Oreas 76a		Z047674		RY18291270	0.057	1		1200	2950	72400			0.680	0.389	
CS-18-15	Blank		z047710		RY18291270	<0.01	0.5		5	5	10					<0.01
CS-18-15	Oreas 601		Z047711		RY18291298	0.83	50									14.30
CS-18-15	Blank		Z047746		RY18291293	0.001	0.5		5	5	10	<20	30	<0.0005	<0.001	<0.01
CS-18-15	Oreas 600		Z047747		RY18291293	0.183	26		10	510	20	200	650	<0.0005	0.001	7.37
CS-18-15	Blk	Blk	Z049344		RY19055416	-0.01	-1		-10	-10	-10					
CS-18-15	Oreas 600	Oreas 600	Z049345		RY19055416	0.2	25		10	470	20					
CS-18-15	BLK	BLK	Z049367		RY19055416	-0.01	-1		-10	-10	10					
CS-18-15	Oreas 601	Oreas 601	Z049368		RY19055416	0.82	49		10	990	30					
CS-18-15	BLK	BLK	Z049389		RY19055416	-0.01	-1		-10	-10	10					
CS-18-15	Oreas 600	Oreas 600	Z049390		RY19055416	0.2	25		10	480	20					
CS-18-16	Blank: White marble		z047756		RY19031452	<0.001	0.5		5	10	10			<0.0005	0.001	
CS-18-16	Oreas 601		z047757		RY19031452	0.781	50		10	990	30			0.0011	0.006	
CS-18-16	Blank: White marble		z047776		RY19031422	0.01										
CS-18-16	Oreras 600		z047777		RY19031422	0.04										
CS-18-16	Blank		z047818		RY19031422	-0.01										
CS-18-16	Oreas 601		z047819		RY19031422	0.8										
CS-18-16	Blank		z047836		RY19031422	-0.01										
CS-18-16	Oreas 601		z047837		RY19031422	0.07										
CS-18-16	Blank		z047870		RY19042481	<0.01										
CS-18-16	Oreas 600		z047871		RY19042481	0.09										
CS-18-16	Blk	Blk	Z049253		RY19047577	0.01	-1		-10	-10	-10					
CS-18-16	Oreas 600	Oreas 600	Z049254		RY19047577	0.21	25		10	490	20					
CS-18-16	BLK	BLK	Z049276		RY19047577	-0.01	-1		-10	-10	-10					
CS-18-16	Oreas 601	Oreas 601	Z049277		RY19047577	0.8	49		10	980	30					
CS-18-16	BLK	BLK	Z049298		RY19047577	0.01	-1		-10	-10	10					
CS-18-16	Oreas 600	Oreas 600	Z049299		RY19047577	0.2	25		10	470	20					
CS-18-16	BLK	BLK	Z049320		RY19047577	0.01	-1		-10	-10	-10					
CS-18-16	Oreas 601	Oreas 601	Z049321		RY19047577	0.78	48		-10	970	20					
CS-18-16w	Blank: White marble		z047883		RY19031422	0.01	-1		-10	10	10					
CS-18-16w	Oreas76a		z047884		RY19031422	0.08	2		1170	2790	70600					
CS-18-16w	Blank: White marble		z047920		RY19031440	<0.01	0.5		5	5	5					
CS-18-16w	Oreas 77a		z047921		RY19031440	0.07	2		1680	4260	>100000					
CS-18-17	Blk	Blk	Z049061		RY19042481	<0.01	0.5		5	5	10					
CS-18-17	Oreas 76a	Oreas 76a	Z049062		RY19042481	0.07	1		1190	2870	69800					
CS-18-17	BLK	BLK	Z049083		RY19042485	<0.01	0.5		30	70	60					
CS-18-17	BLK	BLK	Z049105		RY19042485	<0.01	0.5		5	5	5					
CS-18-17	Oreas 600	Oreas 600	Z049106		RY19042485	0.04	1		1170	2850	71200					

Hole Name	From	To	Sample Number	length	Certificate	Au g/t	Ag g/t	As	Co ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm	Pt g/t	Pd g/t	Te ppm
CS-18-17	BLK	BLK	Z049127		RY19042485	<0.01	0.5		5	5	5					
CS-18-17	Oreas 601	Oreas 601	Z049128		RY19042485	0.04	2		1110	2720	67900					
CS-18-17	BLK	BLK	Z049149		RY19042485	0.01	0.5		5	5	5					
CS-18-17	Oreas 601	Oreas 601	Z049150		RY19042485	0.07	2		1140	2800	65900					
CS-18-18	Blank: White marble		z047979		RY19031440	<0.01										
CS-18-18	Oreas 76a		z047980		RY19031440	0.05										
CS-18-18	Blank: White marble		z049029		RY19042481	0.01	0.5		5	5	10					
CS-18-18	Oreas 77a		z049030		RY19042481	0.1	2		1650	4280	100000					
CS-18-18	Blk	Blk	Z049177		RY19042485	<0.01	0.5		5	5	10					
CS-18-18	Oreas 76a	Oreas 76a	Z049178		RY19042485	0.02	2		1160	2860	68000					
CS-18-18	BLK	BLK	Z049200		RY19042485	<0.01	0.5		5	5	5					
CS-18-18	Oreas 601	Oreas 601	Z049201		RY19042485	0.8	51		5	1020	20					
CS-18-18	BLK	BLK	Z049222		RY19047577	-0.01	-1		-10	-10	-10					
CS-18-18	Oreas 600	Oreas 600	Z049223		RY19047577	0.21	25		10	490	20					
CS-19-19	Blk	Blk	Z049418		RY19055416	-0.01	-1		-10	-10	-10					
CS-19-19	Oreas 600	Oreas 600	Z049419		RY19055416	0.21	26		10	480	20					
CS-19-19	BLK	BLK	Z049441		RY19055421	-0.01	1		-10	-10	-10					
CS-19-19	Oreas 601	Oreas 601	Z049442		RY19055421	0.8	49		10	980	20					
CS-19-19	BLK	BLK	Z049463		RY19055421	-0.01	1		-10	10	10					
CS-19-19	Oreas 600	Oreas 600	Z049464		RY19055421	0.2	25		10	480	10					
CS-19-19	BLK	BLK	Z049485		RY19055421	-0.01	-1		-10	-10	-10					
CS-19-19	Oreas 601	Oreas 601	Z049486		RY19055421	0.81	49		10	1010	20					

Swastika Laboratories Ltd

Established 1928

Assaying - Consulting - Representation

Assay Certificate

Certificate Number: 18-1584

Company: **Canada Cobalt Works**

Project: CASTLE SILVER

Report Date: 27-Sep-18

Attn: Doug Robinson

We hereby certify the following Assay of 42 core samples submitted 18-Sep-18 by Doug Robinson

Sample Number	Au FA-AAS g/Mt	Au Chk FA-AAS g/Mt	Ag AR-AAS ppm	Cu AR-AAS ppm	Co AR-AAS ppm
PTC-1b			53.0	> 10000	
Z047501	< 0.01		< 0.2	8	4.5
Z047502	0.20		2.1	4407	1530
Z047503	0.02		< 0.2	257	39.8
Z047504	0.01		< 0.2	72	25.6
Z047505	0.02		21.5	140	25.7
Z047506	0.02		22.6	171	31.7
Z047507	0.01		< 0.2	17	14.6
Z047508	0.03		0.5	222	16.2
Z047509	0.02		< 0.2	25	13.0
Z047510	0.04	0.05	< 0.2	344	17.6
Blank Value	0.03				
OxH139	1.35				
Z047511	0.04		0.2	984	23.0
Z047512	0.02		0.2	168	11.3
Z047513	0.03		< 0.2	85	11.8
Z047514	0.03		0.2	191	14.0
Z047515	0.04		< 0.2	199	14.8
Z047516	0.06		< 0.2	167	12.2
SU-1b			6.1		
Z047517	0.04		0.2	157	11.1
Z047518	0.03		< 0.2	296	12.8
Z047519	0.05		< 0.2	9	10.1
Z047520	0.14	< 0.01	< 0.2	21	19.3
Z047521	< 0.01		0.2	18	26.1

Certified by _____

Valid Abu Ammar

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 Fax (705) 642-3300

Established 1928

Swastika Laboratories Ltd

Assaying - Consulting - Representation

Assay Certificate

Certificate Number: 18-1584

Company: **Canada Cobalt Works**

Project: CASTLE SILVER

Report Date: 27-Sep-18

Attn: Doug Robinson

We hereby certify the following Assay of 42 core samples submitted 18-Sep-18 by Doug Robinson

Sample Number	Au FA-AAS g/Mt	Au Chk FA-AAS g/Mt	Ag AR-AAS ppm	Cu AR-AAS ppm	Co AR-AAS ppm
Z047522	< 0.01		< 0.2	83	23.4
Z047523	0.06		< 0.2	2092	31.0
Z047524	0.02		< 0.2	19	18.6
Z047525	< 0.01		< 0.2	17	21.7
Z407526	0.18		2.1	4320	1550
Z047527	< 0.01		< 0.2	6	7.9
Z047528	0.02		< 0.2	191	36.0
Blank Value	< 0.01				
OxH139	1.34				
Z047529	0.02		< 0.2	273	36.8
Z047530	0.03	< 0.01	0.2	45	17.1
Z047531	0.02		< 0.2	83	18.9
Z047532	0.03		< 0.2	32	7.9
Z047533	0.02		< 0.2	104	16.5
Z047534	0.05		< 0.2	440	18.6
Z047535	0.06		< 0.2	372	9.6
Z047536	0.04		< 0.2	543	12.4
Z047537	0.07		< 0.2	579	10.6
Z047538	0.04		< 0.2	335	8.5
Z047539	0.07		< 0.2	109	5.3
Z047540	0.09	< 0.01	< 0.2	36	1.4
Z047541	< 0.01		< 0.2	54	1.1
Z047542	0.04		< 0.2	62	2.2

Certified by _____

Valid Abu Ammar

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 Fax (705) 642-3300

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Nombre total de pages: 1
plus les pages d'annexe
Finalisée date: 29-NOV-2018
Compte: CACOWO

CERTIFICAT RY18289942

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 34 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 15-NOV-2018.

Les résultats sont transmis à:

FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE	FRANK J. BASA DOUG ROBINSON

PRÉPARATION ÉCHANTILLONS

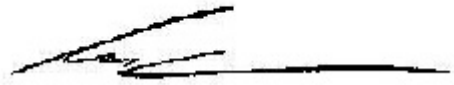
CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-24	Entrée pulpe - Reçu sans code barre
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
TOT-ICP06		
PGM-MS23	Pt, Pd et Au 30 g FA ICP-MS	ICP-MS

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 29-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18289942

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01
Z047639		0.09	0.690	0.0011	0.006	48	10	980	30							
Z047640		0.38	0.004	<0.0005	0.001	<1	<10	<10	<10							
Z047641		2.37	0.002	0.0032	0.004	<1	40	60	150	48.3	8.38	8.20	12.05	8.61	3.76	0.26
Z047642		0.72	0.005	0.0010	0.003	<1	60	140	240							
Z047643		2.06	0.008	0.0007	0.002	<1	30	590	80	49.8	10.80	10.00	9.47	5.49	5.09	0.34
Z047644		2.00	0.001	0.0007	0.001	<1	50	20	280							
Z047645		2.17	0.002	<0.0005	0.001	<1	50	60	260							
Z047646		3.50	0.002	0.0009	0.001	<1	50	80	270							
Z047647		3.19	0.002	<0.0005	0.001	<1	50	100	250							
Z047648		3.66	0.002	0.0011	0.001	<1	50	40	250							
Z047649		3.40	0.005	0.0008	0.001	<1	40	40	150							
Z047650		3.59	0.001	0.0014	0.001	<1	50	20	240							
Z047651		1.37	0.002	0.0009	0.001	<1	60	40	250							
Z047652		0.57	0.001	0.0005	0.001	<1	50	70	240	46.0	3.99	10.85	14.75	12.15	1.29	0.08
Z047653		1.70	0.003	0.0025	0.003	<1	60	170	240							
Z047654		3.68	0.002	0.0021	0.002	<1	60	150	230							
Z047655		3.48	0.002	0.0041	0.005	<1	60	140	250							
Z047656		3.48	0.001	0.0007	0.001	<1	50	50	190							
Z047657		3.39	0.003	0.0012	0.002	<1	60	440	180							
Z047658		3.43	0.011	0.0069	0.008	<1	70	660	260							
Z047659		3.42	0.003	0.0026	0.003	<1	100	290	340							
Z047660		3.27	0.002	0.0135	0.016	<1	60	90	200							
Z047661		3.53	0.004	0.0155	0.016	<1	60	470	210							
Z047662		3.85	0.006	0.0013	0.001	<1	120	750	390							
Z047663		3.77	0.005	0.0007	<0.001	<1	150	710	460							
Z047664		3.49	0.024	0.0005	<0.001	<1	100	570	310							
Z047665		3.68	0.006	<0.0005	<0.001	<1	90	670	210							
Z047666		3.38	0.004	<0.0005	<0.001	<1	70	440	130							
Z047667		3.28	0.005	<0.0005	<0.001	<1	70	460	50							
Z047668		1.26	0.003	0.0006	0.001	<1	30	60	50							
Z047669		2.08	0.003	<0.0005	<0.001	<1	50	160	10							
Z047670		3.53	0.002	<0.0005	<0.001	<1	60	80	10							
Z047671		3.27	0.002	<0.0005	<0.001	<1	80	260	30	42.6	12.10	21.6	6.68	4.17	3.53	0.46
Z047672		3.24	0.010	<0.0005	<0.001	<1	60	210	30							

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 29-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18289942

Description échantillon	Méthode élément unités LDI	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z047639									
Z047640									
Z047641		0.132	1.25	0.14	0.05	0.03	0.02	5.90	97.08
Z047642									
Z047643		0.047	1.19	0.15	0.11	0.03	0.04	4.72	97.28
Z047644									
Z047645									
Z047646									
Z047647									
Z047648									
Z047649									
Z047650									
Z047651									
Z047652		0.104	0.73	0.18	0.04	0.01	<0.01	5.38	95.55
Z047653									
Z047654									
Z047655									
Z047656									
Z047657									
Z047658									
Z047659									
Z047660									
Z047661									
Z047662									
Z047663									
Z047664									
Z047665									
Z047666									
Z047667									
Z047668									
Z047669									
Z047670									
Z047671		<0.002	2.09	0.25	0.11	0.02	0.01	5.21	98.83
Z047672									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 29-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18289942

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	ME-ICP06	ME-ICP61a	OA-GRA05	PGM-MS23
	TOT-ICP06			

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

plus les pages d'annexe
Finalisée date: 3-DEC-2018
Cette copie a fait un rapport sur 2-AVRIL-2019
Compte: CACOWO

CERTIFICAT RY18290022

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 81 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 15-NOV-2018.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA DOUG ROBINSON	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

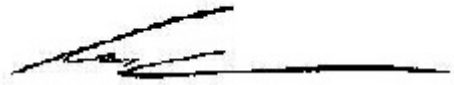
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
TOT-ICP06		
PGM-MS23	Pt, Pd et Au 30 g FA ICP-MS	ICP-MS

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 3-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18290022

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01
Z047543		4.43	0.004	0.0007	0.001	<1	<10	10	10							
Z047544		2.73	0.028	<0.0005	<0.001	<1	<10	220	<10							
Z047545		1.78	0.004	0.0005	0.001	<1	<10	470	20							
Z047546		2.98	0.001	0.0007	0.001	<1	<10	150	20							
Z047547		1.84	0.001	0.0007	0.002	<1	10	270	30							
Z047548		1.23	0.002	0.0006	0.001	<1	10	180	10							
Z047549		2.81	0.002	<0.0005	0.001	<1	<10	270	10							
Z047550		0.63	0.004	<0.0005	<0.001	<1	20	1280	10							
Z047551		0.58	0.021	0.0006	<0.001	<1	30	270	20							
Z047552		1.17	0.002	0.0005	<0.001	<1	<10	180	10							
Z047553		1.85	0.002	0.0005	<0.001	<1	<10	490	10							
Z047554		0.91	0.045	<0.0005	<0.001	<1	30	760	10							
Z047555		4.01	0.003	0.0005	0.001	1	20	230	10							
Z047556		3.30	0.045	0.0005	0.001	1	10	410	10							
Z047557		2.80	0.002	<0.0005	0.001	<1	<10	270	10							
Z047558		2.70	0.005	0.0005	<0.001	<1	<10	220	20							
Z047559		0.09	0.184	<0.0005	0.001	25	<10	490	20							
Z047560		0.50	0.003	<0.0005	0.001	<1	<10	<10	<10							
Z047561		1.82	0.001	<0.0005	<0.001	<1	<10	230	10							
Z047562		3.47	0.002	0.0005	<0.001	<1	<10	220	10							
Z047563		2.92	0.002	0.0005	<0.001	<1	<10	130	10							
Z047564		3.40	0.003	0.0007	<0.001	<1	10	20	20							
Z047565		3.14	0.003	<0.0005	<0.001	<1	20	400	10							
Z047566		2.84	0.002	0.0007	<0.001	<1	10	110	20							
Z047567		3.78	0.002	0.0005	0.001	<1	10	270	10							
Z047568		2.23	0.001	0.0007	0.001	<1	10	130	30							
Z047569		2.85	0.002	0.0006	0.001	1	10	150	20							
Z047570		1.85	0.002	0.0005	0.001	1	10	260	20							
Z047571		0.48	0.009	0.0008	0.001	<1	30	2190	20							
Z047572		2.57	0.006	0.0009	0.001	<1	20	190	30							
Z047573		2.12	0.006	0.0007	0.001	1	10	400	20							
Z047574		4.20	0.002	0.0006	0.001	<1	10	280	20							
Z047575		2.74	0.006	0.0008	0.001	<1	10	170	20							
Z047576		2.27	0.006	0.0007	0.001	<1	10	300	20							
Z047577		2.01	0.001	0.0008	0.001	<1	20	60	30							
Z047578		3.15	0.002	0.0006	0.001	<1	20	430	30							
Z047579		1.77	0.002	<0.0005	<0.001	<1	<10	50	10							
Z047580		3.63	0.004	0.0007	<0.001	<1	10	210	10							
Z047581		0.86	0.003	0.0014	<0.001	<1	30	230	10							
Z047582		3.59	0.005	0.0009	0.001	<1	30	650	20							

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 3-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18290022

Description échantillon	Méthode élément unités LDI	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z047543									
Z047544									
Z047545									
Z047546									
Z047547									
Z047548									
Z047549									
Z047550									
Z047551									
Z047552									
Z047553									
Z047554									
Z047555									
Z047556									
Z047557									
Z047558									
Z047559									
Z047560									
Z047561									
Z047562									
Z047563									
Z047564									
Z047565									
Z047566									
Z047567									
Z047568									
Z047569									
Z047570									
Z047571									
Z047572									
Z047573									
Z047574									
Z047575									
Z047576									
Z047577									
Z047578									
Z047579									
Z047580									
Z047581									
Z047582									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 3-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18290022

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01
Z047583		2.35	0.039	0.0008	0.001	<1	20	390	10							
Z047584		1.60	0.031	0.0005	0.001	<1	10	530	10							
Z047595		1.35	0.007	0.0011	0.001	<1	20	280	30							
Z047596		0.15	0.033	0.0074	0.007	<1	30	590	50							
Z047597		1.04	0.002	0.0059	0.003	<1	30	80	70							
Z047598		0.93	0.811	0.0029	0.003	1	100	240	100							
Z047599		1.68	0.006	0.0179	0.018	<1	30	140	120							
Z047600		1.05	0.016	0.0148	0.016	<1	40	200	100							
Z047601		1.03	0.006	0.0175	0.016	<1	30	100	120							
Z047602		4.04	0.005	0.0190	0.019	<1	40	110	110							
Z047603		1.14	0.021	0.0111	0.012	<1	30	2820	80							
Z047604		1.99	0.004	0.0178	0.019	<1	30	110	100							
Z047605		1.31	0.004	0.0043	0.004	<1	40	150	130							
Z047606		1.96	0.005	0.0051	0.004	<1	60	230	130							
Z047607		1.83	0.005	0.0046	0.004	<1	70	340	150							
Z047608		1.43	0.004	0.0028	0.003	<1	50	150	160							
Z047609		1.57	0.004	0.0026	0.002	<1	50	150	140							
Z047610		1.12	0.009	0.0020	0.002	<1	50	130	110							
Z047611		2.17	0.004	0.0020	0.002	<1	40	230	120							
Z047612		1.12	0.004	0.0020	0.002	<1	60	140	140							
Z047613		1.15	0.005	<0.0005	<0.001	<1	40	170	80							
Z047614		1.52	0.002	<0.0005	<0.001	1	50	170	90							
Z047615		2.61	0.002	<0.0005	<0.001	<1	50	90	80							
Z047616		1.35	<0.001	<0.0005	<0.001	<1	40	120	90							
Z047617		1.85	0.001	<0.0005	<0.001	<1	40	110	90							
Z047618		1.19	0.001	<0.0005	<0.001	<1	30	120	80							
Z047619		1.53	0.001	<0.0005	<0.001	<1	40	140	90							
Z047620		2.37	0.001	<0.0005	<0.001	<1	40	130	100							
Z047621		2.30	<0.001	<0.0005	0.001	<1	40	130	110							
Z047622		1.01	0.001	<0.0005	0.001	<1	40	220	100							
Z047623		2.70	0.001	<0.0005	0.001	1	40	160	110							
Z047624		0.89	0.001	0.0005	0.001	<1	40	110	90	47.6	18.20	8.74	5.01	5.96	6.10	0.52
Z047625		0.97	0.005	0.0005	0.001	<1	30	250	50							
Z047626		3.09	0.005	<0.0005	0.001	<1	20	70	40							
Z047627		1.89	0.001	<0.0005	<0.001	<1	40	90	90							
Z047633		0.51	<0.001	0.0014	0.002	<1	20	10	60							
Z047634		2.73	<0.001	0.0005	0.001	1	10	10	30							
Z047635		1.10	<0.001	0.0011	0.001	<1	10	20	60	64.8	16.35	5.43	1.09	2.96	6.45	0.87
Z047636		1.61	<0.001	0.0006	0.001	<1	<10	40	20							
Z047637		0.41	<0.001	0.0006	0.001	<1	<10	10	10	74.4	13.45	2.04	1.13	0.60	7.53	0.46

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 3-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18290022

Description échantillon	Méthode élément unités LDI	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z047583									
Z047584									
Z047595									
Z047596									
Z047597									
Z047598									
Z047599									
Z047600									
Z047601									
Z047602									
Z047603									
Z047604									
Z047605									
Z047606									
Z047607									
Z047608									
Z047609									
Z047610									
Z047611									
Z047612									
Z047613									
Z047614									
Z047615									
Z047616									
Z047617									
Z047618									
Z047619									
Z047620									
Z047621									
Z047622									
Z047623									
Z047624		0.016	0.48	0.14	0.04	<0.01	<0.01	7.27	100.08
Z047625									
Z047626									
Z047627									
Z047633									
Z047634									
Z047635		0.019	0.55	0.03	0.17	0.01	0.02	2.17	100.92
Z047636									
Z047637		0.012	0.31	0.02	0.07	<0.01	<0.01	1.26	101.28

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 3-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18290022

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01
Z047638		2.84	<0.001	0.0013	0.001	<1	20	20	50							

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 3-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18290022

Description échantillon	Méthode élément unités LDI	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z047638									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 3-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18290022

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	ME-ICP06	ME-ICP61a	OA-GRA05	PGM-MS23
	TOT-ICP06			

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 28-NOV-2018
Cette copie a fait un rapport sur 2-AVRIL-2019
Compte: CACOWO

CERTIFICAT RY18291270

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 38 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 16-NOV-2018.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA DOUG ROBINSON	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

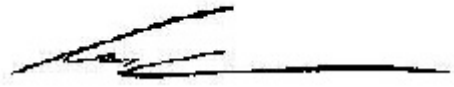
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
TOT-ICP06		
ME-MS42	Max. 34 éléments par ICP-MS	ICP-MS
PGM-MS23	Pt, Pd et Au 30 g FA ICP-MS	ICP-MS
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 28-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291270

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01
Z047673		0.62	0.002	<0.0005	<0.001		<1	<10	10	<10						
Z047674		0.05	0.057	0.680	0.389		1	1200	2950	72400						
Z047675		2.47	0.012	<0.0005	<0.001		<1	30	50	40	50.3	13.60	14.35	6.90	1.68	5.91
Z047676		0.79	0.006	<0.0005	0.001		<1	60	140	10						
Z047677		3.30	0.004	<0.0005	<0.001		<1	30	80	<10						
Z047678		2.02	0.004	<0.0005	<0.001		<1	60	220	40						
Z047679		1.50	0.005	<0.0005	0.001		<1	50	160	40						
Z047680		3.36	0.005	<0.0005	<0.001		<1	60	150	50						
Z047681		3.45	0.003	<0.0005	<0.001		<1	60	50	40						
Z047682		3.57	0.005	0.0040	0.004		<1	70	190	80						
Z047683		3.75	0.004	0.0138	0.013		<1	70	270	240						
Z047684		3.40	0.006	0.0140	0.015		<1	60	230	170						
Z047685		3.74	0.007	0.0076	0.007		<1	60	70	200						
Z047686		3.64	0.001	0.0050	0.006		<1	60	170	290						
Z047687		3.67	0.002	0.0049	0.008		<1	60	170	290						
Z047688		3.65	0.002	0.0049	0.007		<1	70	60	370						
Z047689		3.85	0.001	0.0042	0.004		<1	50	100	280						
Z047690		3.77	0.002	0.0037	0.004		<1	80	140	420						
Z047691		3.71	0.002	0.0024	0.002		<1	70	190	310						
Z047692		1.85	0.005	0.0016	0.001		<1	70	1020	280						
Z047693		1.88	0.002	0.0026	0.003		<1	70	50	300	47.8	4.81	13.90	14.80	12.75	0.98
Z047694		2.01	0.002	0.0030	0.003		<1	80	130	250						
Z047695		1.63	0.003	0.0142	0.017		<1	80	260	240						
Z047696		3.54	0.004	0.0060	0.007		<1	60	180	90						
Z047697		1.95	0.003	0.0009	0.001		<1	60	100	20						
Z047698		2.12	0.001	0.0010	0.001		<1	<10	<10	20						
Z047699		2.29	0.003	<0.0005	0.001		<1	20	60	20						
Z047700		3.25	0.001	<0.0005	<0.001		<1	10	<10	30						
Z047701		3.62	0.004	0.0045	0.006		<1	50	150	70						
Z047702		3.40	0.004	0.0056	0.007		<1	50	230	90						
Z047703		3.64	0.007	0.0213	0.026		<1	60	320	190						
Z047704		3.30	0.003	0.0076	0.008		<1	60	250	130						
Z047705		3.07	0.005	0.0018	0.001		<1	50	140	50						
Z047706		1.26	0.004	0.0036	0.004		<1	90	150	120						
Z047707		2.19	0.001	<0.0005	0.001		<1	40	10	110						
Z047708		3.65	0.001	<0.0005	<0.001		<1	10	<10	20						
Z047709		3.06				<0.01	<1	30	40	30						
Z047710		0.54				<0.01	<1	<10	<10	10						

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 28-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291270

Description échantillon	Méthode élément unités LDI	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01	ME-MS42 Te ppm 0.01
Z047673 Z047674 Z047675 Z047676 Z047677		0.50	0.002	1.14	0.23	0.17	0.03	0.01	5.27	100.09	
Z047678 Z047679 Z047680 Z047681 Z047682											
Z047683 Z047684 Z047685 Z047686 Z047687											
Z047688 Z047689 Z047690 Z047691 Z047692											
Z047693 Z047694 Z047695 Z047696 Z047697		0.11	0.133	0.98	0.19	0.02	0.01	<0.01	4.82	101.30	
Z047698 Z047699 Z047700 Z047701 Z047702											
Z047703 Z047704 Z047705 Z047706 Z047707											
Z047708 Z047709 Z047710											0.02 <0.01

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 28-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291270

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP06	ME-ICP61a	ME-MS42
	OA-GRA05	PGM-MS23	TOT-ICP06	

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

plus les pages d'annexe
Finalisée date: 27-NOV-2018
Cette copie a fait un rapport sur 2-AVRIL-2019
Compte: CACOWO

CERTIFICAT RY18291293

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 8 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 16-NOV-2018.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA DOUG ROBINSON	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

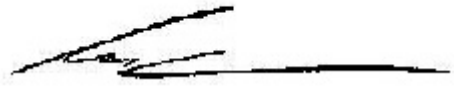
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
TOT-ICP06		
ME-MS42	Max. 34 éléments par ICP-MS	ICP-MS
PGM-MS23	Pt, Pd et Au 30 g FA ICP-MS	ICP-MS

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 27-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291293

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01
Z047742		1.28	0.003	0.0005	0.001	<1	60	20	450	50.7	3.94	8.97	8.78	21.6	0.28	0.14
Z047743		2.18	0.014	0.0008	0.001	6	340	1300	1390	44.5	3.55	13.70	6.67	23.6	0.16	0.20
Z047744		1.74	0.026	0.0005	<0.001	<1	120	50	1120	44.4	0.83	18.95	6.78	24.3	0.13	0.09
Z047745		1.76	0.014	0.0010	0.001	2	240	230	1580	51.7	0.68	12.40	6.60	24.5	0.11	0.05
Z047746		0.62	0.001	<0.0005	<0.001	<1	<10	<10	10							
Z047747		0.10	0.183	<0.0005	0.001	26	10	510	20							
Z047748		1.61	0.160	0.0011	0.001	2	160	140	1040							
Z047749		1.72	0.004	0.0006	0.001	1	150	310	1020	52.4	4.07	10.80	3.80	23.9	0.10	0.10

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 27-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291293

Description échantillon	Méthode élément unités LDI	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01	ME-MS42 Te ppm 0.01	ME-ICP61a Pb ppm 20	ME-ICP61a Zn ppm 20
Z047742		0.069	0.63	0.37	0.03	<0.01	<0.01	3.84	99.35	0.02	360	2180
Z047743		0.008	0.37	0.28	0.06	<0.01	<0.01	5.41	98.51	0.17	330	5280
Z047744		0.008	0.12	0.16	0.01	<0.01	<0.01	5.77	101.55	0.03	500	210
Z047745		0.009	0.11	0.17	<0.01	<0.01	<0.01	4.29	100.62	0.06	710	3300
Z047746										<0.01	<20	30
Z047747										7.37	200	650
Z047748										0.24	90	140
Z047749		0.010	0.08	0.20	0.01	<0.01	<0.01	5.05	100.52	0.09	430	1510

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 27-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291293

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	ME-ICP06	ME-ICP61a	ME-MS42	OA-GRA05
	PGM-MS23	TOT-ICP06		

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

plus les pages d'annexe
Finalisée date: 28-NOV-2018
Cette copie a fait un rapport sur 2-AVRIL-2019
Compte: CACOWO

CERTIFICAT RY18291298

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 37 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 16-NOV-2018.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA DOUG ROBINSON	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

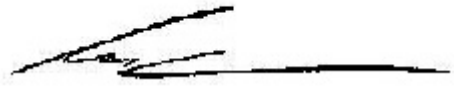
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
TOT-ICP06		
ME-MS42	Max. 34 éléments par ICP-MS	ICP-MS
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 28-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291298

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01
Z047711		0.10	0.83	50												
Z047712		3.10	<0.01	1												
Z047713		3.12	0.03	<1												
Z047714		3.02	0.08	<1	51.4	13.90	5.61	6.84	3.52	4.63	1.97	0.009	0.68	0.15	0.29	0.07
Z047715		3.23	<0.01	<1												
Z047716		3.48	0.02	<1												
Z047717		3.18	<0.01	1												
Z047718		1.68	0.01	<1												
Z047719		1.46	0.09	1												
Z047720		3.18	<0.01	<1												
Z047721		2.81	<0.01	<1												
Z047722		3.12	0.01	<1												
Z047723		3.07	0.01	<1	63.0	18.00	1.74	2.48	1.02	9.59	0.52	0.005	0.39	0.04	0.15	0.04
Z047724		3.42	0.01	<1												
Z047725		3.10	0.02	1												
Z047726		3.19	0.02	<1												
Z047727		1.54	0.01	<1												
Z047728		1.65	0.06	2												
Z047729		2.89	0.01	<1												
Z047730		2.94	0.01	1												
Z047731		3.43	<0.01	<1												
Z047732		2.01	<0.01	<1												
Z047733		1.13	0.11	1												
Z047734		1.69	0.31	1												
Z047735		1.54	0.20	1												
Z047736		1.67	3.78	3												
Z047737		1.68	0.80	2												
Z047738		3.16	0.02	<1												
Z047739		3.28	0.03	<1												
Z047740		3.11	0.04	<1												
Z047741		3.23	0.03	<1												
Z047750		3.34	0.05	<1												
Z047751		3.23	0.05	<1	58.6	14.85	3.98	3.84	2.19	7.55	0.58	0.005	0.77	0.13	0.54	0.10
Z047752		3.28	0.07	<1												
Z047753		3.32	0.02	<1	54.5	14.15	7.10	4.56	4.50	5.53	0.86	0.009	0.84	0.16	0.73	0.11
Z047754		3.42	0.01	<1	50.6	12.70	8.03	5.91	5.84	4.05	1.35	0.014	0.81	0.13	0.82	0.09
Z047755		3.66	0.01	<1												

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 28-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291298

Description échantillon	Méthode élément unités LDI	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01	ME-MS42 Te ppm 0.01
Z047711					14.30
Z047712					0.01
Z047713					0.02
Z047714		0.08	10.05	99.20	0.10
Z047715					0.06
Z047716					0.08
Z047717					0.22
Z047718					0.20
Z047719					0.45
Z047720					0.01
Z047721					0.01
Z047722					0.05
Z047723		0.02	3.23	100.23	0.08
Z047724					0.15
Z047725					0.07
Z047726					0.11
Z047727					0.36
Z047728					0.44
Z047729					0.06
Z047730					0.17
Z047731					0.04
Z047732					0.04
Z047733					0.27
Z047734					0.53
Z047735					0.29
Z047736					0.51
Z047737					0.49
Z047738					0.08
Z047739					0.12
Z047740					0.18
Z047741					0.16
Z047750					0.08
Z047751		0.06	5.32	98.52	0.08
Z047752					0.08
Z047753		0.06	6.29	99.40	0.06
Z047754		0.07	8.14	98.55	0.03
Z047755					0.07

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 28-NOV-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18291298

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP06	ME-ICP61a	ME-MS42
	OA-GRA05	TOT-ICP06		

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 17-DEC-2018
Cette copie a fait un rapport sur 2-AVRIL-2019
Compte: CACOWO

CERTIFICAT RY18301577

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 15 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 27-NOV-2018.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA DOUG ROBINSON	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
CRU-31	Granulation - 70 % <2 mm
LOG-22	Entrée échantillon - Reçu sans code barre
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um

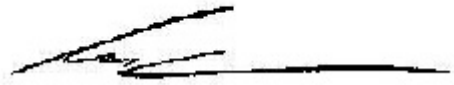
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
TOT-ICP06		
PGM-MS23	Pt, Pd et Au 30 g FA ICP-MS	ICP-MS

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 17-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18301577

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01
Z047585		1.85	0.012	0.0006	0.001	<1	30	920	20							
Z047586		0.91	0.002	0.0007	0.001	<1	20	900	20							
Z047587		2.10	0.002	<0.0005	<0.001	<1	30	280	10							
Z047588		2.38	0.011	<0.0005	0.001	<1	20	230	10							
Z047589		0.64	0.001	<0.0005	0.001	<1	10	1300	<10							
Z047590		1.17	0.004	<0.0005	<0.001	<1	40	160	20							
Z047591		0.81	0.001	0.0005	<0.001	<1	10	490	10							
Z047592		1.09	0.005	0.0012	0.001	<1	10	380	10							
Z047593		0.57	<0.001	<0.0005	<0.001	<1	<10	<10	<10							
Z047594		0.10	0.741	0.0014	0.006	52	10	1040	20							
Z047628		2.22	0.002	<0.0005	0.001	<1	50	480	100							
Z047629		0.41	0.002	0.0006	0.001	<1	40	130	130	49.5	15.45	8.97	9.61	8.82	1.42	2.72
Z047630		0.62	0.001	<0.0005	<0.001	<1	<10	<10	<10							
Z047631		0.09	0.765	0.0010	0.005	51	<10	1020	30							
Z047632		3.09	0.002	0.0006	0.001	<1	30	190	110							

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 17-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18301577

Description échantillon	Méthode élément unités LDI	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z047585									
Z047586									
Z047587									
Z047588									
Z047589									
Z047590									
Z047591									
Z047592									
Z047593									
Z047594									
Z047628									
Z047629		0.018	0.35	0.18	0.02	0.01	0.02	2.89	99.98
Z047630									
Z047631									
Z047632									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 17-DEC-2018
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY18301577

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	ME-ICP06	ME-ICP61a	OA-GRA05	PGM-MS23
	TOT-ICP06			

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

CERTIFICAT RY19031422

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 119 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 6-FEVR-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

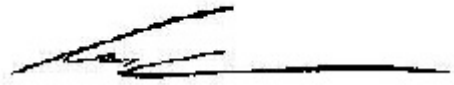
CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
CRU-31	Granulation - 70 % <2 mm
LOG-22	Entrée échantillon - Reçu sans code barre
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um

PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-MS42	Max. 34 éléments par ICP-MS	ICP-MS
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031422

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-MS42 Te ppm 0.01
Z047763		0.82	0.02					
Z047764		2.68	<0.01					
Z047765		2.76	<0.01					
Z047766		2.24	0.01					
Z047767		1.60	<0.01					
Z047768		1.78	<0.01					
Z047769		0.85	0.02					
Z047770		0.75	0.03					
Z047771		2.57	0.01					
Z047772		1.80	0.04					
Z047773		3.58	0.06					
Z047774		3.88	0.03					
Z047775		1.85	0.01					
Z047776		0.54	0.01					
Z047777		0.05	0.04					
Z047778		1.75	<0.01					
Z047779		1.70	0.02					0.33
Z047780		1.71	0.01					
Z047781		1.91	<0.01					
Z047782		2.49	<0.01					
Z047783		2.46	0.01					
Z047784		0.71	0.08					0.65
Z047785		1.31	0.01					
Z047786		1.45	0.01					
Z047787		1.49	0.01					0.07
Z047788		1.96	0.02					0.06
Z047789		1.82	0.01					
Z047790		3.78	0.01					
Z047791		2.06	<0.01					
Z047792		3.34	<0.01					
Z047793		1.71	<0.01					
Z047794		3.55	<0.01					
Z047795		0.61	<0.01					
Z047796		1.35	<0.01					
Z047797		1.54	<0.01					
Z047798		1.68	0.01					
Z047799		1.47	<0.01					0.01
Z047800		2.17	0.01					0.06
Z047801		1.38	0.01					
Z047802		3.16	0.03					

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031422

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-MS42 Te ppm 0.01
Z047803		0.58	<0.01					
Z047804		3.58	0.01					
Z047805		4.28	<0.01					
Z047806		0.67	0.02					
Z047807		2.16	<0.01					
Z047808		0.51	<0.01					
Z047809		1.09	0.06					
Z047810		1.56	0.05					
Z047811		3.73	0.01					
Z047812		0.77	<0.01					
Z047813		1.85	<0.01					
Z047814		1.31	0.01					0.03
Z047815		2.45	0.01					
Z047816		2.72	<0.01					
Z047817		2.76	0.01					
Z047818		0.75	<0.01					
Z047819		0.10	0.80					
Z047820		2.44	<0.01					
Z047821		4.51	<0.01					
Z047822		2.12	0.02					
Z047823		1.73	0.10					
Z047824		2.24	0.09					
Z047825		2.79	0.10					
Z047826		3.68	<0.01					
Z047827		2.60	<0.01					
Z047828		2.07	<0.01					
Z047829		1.47	0.01					
Z047831		1.03	<0.01					
Z047832		0.67	0.46					
Z047833		1.39	0.97					
Z047834		1.60	0.01					
Z047835		3.00	0.01					
Z047836		0.81	<0.01					
Z047837		0.05	0.07					
Z047838		2.69	<0.01					
Z047839		0.68	<0.01					
Z047840		2.55	0.02					
Z047841		1.39	0.01					
Z047842		0.88	0.03					
Z047843		0.99	0.02					

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031422

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-MS42 Te ppm 0.01
Z047844		1.37	0.01					
Z047846		2.74	<0.01					
Z047847		3.55	0.01					
Z047848		1.78	0.01					
Z047849		2.72	0.01					
Z047851		2.50	0.01					
Z047852		1.23	0.01					
Z047854		0.59	<0.01					
Z047855		Not Recvd						
Z047856		Not Recvd						
Z047857		Not Recvd						
Z047858		Not Recvd						
Z047859		Not Recvd						
Z047860		Not Recvd						
Z047861		Not Recvd						
Z047862		Not Recvd						
Z047863		Not Recvd						
Z047864		Not Recvd						
Z047865		Not Recvd						
Z047866		Not Recvd						
Z047867		Not Recvd						
Z047868		Not Recvd						
Z047869		Not Recvd						
Z047870		Not Recvd						
Z047871		Not Recvd						
Z047872		Not Recvd						
Z047873		Not Recvd						
Z047874		Not Recvd						
Z047875		Not Recvd						
Z047877		Not Recvd						
Z047878		Not Recvd						
Z047879		Not Recvd						
Z047880		Not Recvd						
Z047881		Not Recvd						
Z047882		Not Recvd						
Z047883		0.34	0.01	<1	<10	10	10	
Z047884		0.04	0.08	2	1170	2790	70600	
Z047885		2.87	0.02	<1	10	40	40	
Z047886		3.22	<0.01	<1	10	40	30	

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031422

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP61a	ME-MS42	

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Cette copie a fait un rapport sur 25-FEVR-2019
Compte: CACOWO

CERTIFICAT RY19031440

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 110 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 6-FEVR-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
CRU-31	Granulation - 70 % <2 mm
LOG-22	Entrée échantillon - Reçu sans code barre
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um

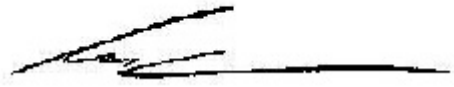
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-OG62	Teneur marchande éléments - quatre acides	ICP-AES
Ni-OG62	Teneur marchande Ni - quatre acides	
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
TOT-ICP06		
ME-MS42	Max. 34 éléments par ICP-MS	ICP-MS
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031440

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	Ni-OG62 Ni % 0.001	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002
Z047887		1.87	0.04	<1	60	90	40									
Z047888		1.34	0.05	2	70	290	40									
Z047889		1.42	0.05	<1	20	200	60									
Z047890		0.90	0.06	<1	10	10	40									
Z047891		1.43	0.03	1	40	<10	290									
Z047892		2.34	0.04	1	20	20	40									
Z047893		2.64	0.07	<1	10	30	30									
Z047894		2.36	0.14	1	20	1800	70									
Z047896		2.11	0.28	<1	20	180	70									
Z047897		1.36	0.01	<1	10	30	40									
Z047898		3.79	<0.01	<1	10	90	50									
Z047899		2.76	0.01	1	20	60	40									
Z047900		1.35	0.01	<1	10	30	40									
Z047901		2.57	<0.01	<1	10	20	40									
Z047902		0.52	<0.01	<1	10	60	10									
Z047903		1.44	<0.01	<1	20	30	60									
Z047904		0.96	0.01	1	30	60	60									
Z047905		2.77	<0.01	<1	30	50	50									
Z047906		0.54	0.01	<1	30	80	60									
Z047907		2.35	<0.01	<1	20	20	50									
Z047908		1.37	0.01	<1	10	10	60									
Z047909		1.35	0.01	<1	10	100	30									
Z047910		1.08	0.01	<1	20	730	50									
Z047911		1.87	0.01	<1	20	50	50									
Z047912		2.01	0.01	<1	20	20	50									
Z047913		1.10	0.01	<1	20	70	40									
Z047914		3.24	0.02	1	30	30	60									
Z047916		1.39	<0.01	<1	10	60	30									
Z047917		0.82	0.02	2	60	380	70									
Z047918		1.08	0.01	3	50	430	50									
Z047919		0.63	0.11	1	30	10	40									
Z047920		0.50	<0.01	<1	<10	<10	<10									
Z047921		0.04	0.07	2	1680	4260	>100000	10.50								
Z047922		1.32	0.01	<1	30	70	60									
Z047923		1.31	0.03	3	80	360	100									
Z047924		1.91	<0.01	<1	30	10	240									
Z047925		2.01	0.09	1	30	30	80									
Z047926		1.31	0.12	<1	40	10	60									
Z047927		1.39	0.13	<1	20	40	50									
Z047928		1.67	0.09	1	40	40	80									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031440

Description échantillon	Méthode élément unités LDI	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01	ME-MS42 Te ppm 0.01
Z047887									0.13
Z047888									0.44
Z047889									0.09
Z047890									0.12
Z047891									0.28
Z047892									0.21
Z047893									0.08
Z047894									0.09
Z047896									0.03
Z047897									
Z047898									
Z047899									
Z047900									
Z047901									
Z047902									
Z047903									
Z047904									
Z047905									
Z047906									
Z047907									
Z047908									
Z047909									
Z047910									
Z047911									
Z047912									
Z047913									
Z047914									
Z047916									
Z047917									
Z047918									
Z047919									
Z047920									
Z047921									
Z047922									
Z047923									0.43
Z047924									
Z047925									0.27
Z047926									0.31
Z047927									0.13
Z047928									0.45

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031440

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	Ni-OG62 Ni % 0.001	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002
Z047929		2.00	0.06	1	40	60	90									
Z047930		1.53	0.04	2	40	120	50									
Z047931		0.52	0.03	1	30	90	60		51.5	15.65	16.10	4.13	4.97	5.38	0.56	0.008
Z047932		0.74	0.05	1	30	240	60									
Z047933		2.68	0.16	3	40	480	60									
Z047934		2.97	1.59	34	40	1910	60									
Z047935		1.46	0.03	1	30	160	60									
Z047936		1.61	0.18	2	50	340	50									
Z047937		1.88	0.09	<1	20	160	50									
Z047938		4.45	<0.01	<1	10	10	50									
Z047939		4.07	0.01	2	40	270	50									
Z047940		3.69	0.01	2	80	270	50									
Z047941		3.51	<0.01	<1	20	80	60									
Z047942		2.37	<0.01	1	30	180	100									
Z047943		1.23	<0.01	2	50	330	60									
Z047944		3.29	<0.01	2	40	330	40									
Z047945		3.56	<0.01	2	20	300	30									
Z047946		3.69	<0.01	3	40	780	30									
Z047947		4.11	<0.01	3	60	720	40									
Z047948		3.26	<0.01	4	90	780	50									
Z047949		3.19	<0.01	2	50	240	70									
Z047950		2.78	<0.01	2	50	320	40									
Z047951		1.21	<0.01	5	70	510	50									
Z047952		2.77	<0.01	1	30	270	30									
Z047953		2.84	<0.01	1	30	220	30									
Z047955		3.02	<0.01	1	30	590	30									
Z047956		3.18	<0.01	1	20	290	20									
Z047957		1.72	<0.01	<1	30	90	140									
Z047958		2.57	<0.01	<1	40	90	140									
Z047959		2.09	<0.01	<1	40	70	100									
Z047960		2.90	<0.01	<1	40	90	140									
Z047961		0.68	<0.01	1	40	180	170									
Z047962		2.56	<0.01	<1	50	130	160									
Z047963		0.67	<0.01	<1	40	400	70									
Z047964		1.15	<0.01	2	30	500	60									
Z047965		3.46	<0.01	1	20	100	30									
Z047966		2.00	<0.01	1	40	100	30									
Z047967		2.52	<0.01	3	60	140	70									
Z047968		2.32	<0.01	5	60	400	80									
Z047969		3.05	<0.01	3	60	200	160									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031440

Description échantillon	Méthode élément unités LDI	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01	ME-MS42 Te ppm 0.01
Z047929									0.26
Z047930									0.26
Z047931		0.69	0.14	0.19	0.01	0.03	2.40	101.76	
Z047932									
Z047933									0.21
Z047934									0.30
Z047935									0.14
Z047936									0.21
Z047937									0.09
Z047938									
Z047939									
Z047940									
Z047941									
Z047942									
Z047943									0.31
Z047944									0.28
Z047945									0.20
Z047946									0.38
Z047947									0.37
Z047948									0.32
Z047949									
Z047950									
Z047951									
Z047952									
Z047953									
Z047955									
Z047956									
Z047957									
Z047958									
Z047959									
Z047960									
Z047961									
Z047962									
Z047963									
Z047964									
Z047965									
Z047966									
Z047967									
Z047968									
Z047969									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031440

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	Ni-OG62 Ni % 0.001	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002
Z047970		1.76	<0.01	1	60	200	50									
Z047971		0.94	<0.01	3	140	3190	40									
Z047972		2.17	<0.01	3	70	770	40									
Z047973		2.09	<0.01	2	130	240	40									
Z047974		2.53	<0.01	3	80	150	60									
Z047975		1.08	<0.01	<1	30	10	90		51.7	12.00	10.60	6.14	10.25	2.62	3.23	0.138
Z047976		1.28	<0.01	<1	20	150	70									
Z047977		1.89	<0.01													
Z047978		1.91	<0.01													
Z047979		0.47	<0.01													
Z047980		0.03	0.05													
Z047981		3.87	<0.01													
Z047982		1.41	<0.01													
Z047983		1.63	<0.01													
Z047984		1.94	<0.01													
Z047985		1.42	<0.01													
Z047986		1.06	0.01													
Z047987		2.80	<0.01													
Z047988		3.08	<0.01													
Z047989		2.19	<0.01													
Z047990		1.15	<0.01													
Z047991		1.90	<0.01													
Z047992		3.39	<0.01													
Z047993		3.01	<0.01													
Z047994		3.98	<0.01													
Z047995		2.27	<0.01													
Z047996		4.46	<0.01													
Z047997		0.93	<0.01													
Z047998		2.53	0.01													
Z047999		1.18	<0.01													

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031440

Description échantillon	Méthode élément unités LDI	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01	ME-MS42 Te ppm 0.01
Z047970									
Z047971									
Z047972									
Z047973									
Z047974									
Z047975		0.51	0.92	0.05	<0.01	0.16	2.20	100.52	
Z047976									
Z047977									
Z047978									
Z047979									
Z047980									
Z047981									
Z047982									
Z047983									
Z047984									
Z047985									
Z047986									
Z047987									
Z047988									
Z047989									
Z047990									
Z047991									
Z047992									
Z047993									
Z047994									
Z047995									
Z047996									
Z047997									
Z047998									
Z047999									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031440

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP06	ME-ICP61a	ME-MS42
	ME-OG62	Ni-OG62	OA-GRA05	TOT-ICP06

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Nombre total de pages: 2 (A)
plus les pages d'annexe
Finalisée date: 24-FEVR-2019
Compte: CACOWO

CERTIFICAT RY19031452

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 15 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 6-FEVR-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
CRU-31	Granulation - 70 % <2 mm
LOG-22	Entrée échantillon - Reçu sans code barre
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
SPL-21	Échant. fractionné - div. riffles
PUL-QC	Test concassage QC
PUL-31	Pulvérisé à 85 % <75 um

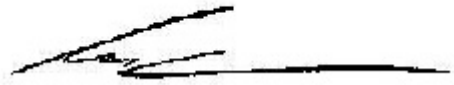
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES
ME-MS42	Max. 34 éléments par ICP-MS	ICP-MS
PGM-MS23	Pt, Pd et Au 30 g FA ICP-MS	ICP-MS
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 24-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031452

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-MS42 Te ppm 0.01
Z047756		0.84	<0.001	<0.0005	0.001		<1	<10	10	10	
Z047757		0.11	0.781	0.0011	0.006		50	10	990	30	
Z047758		0.61	<0.001	0.0064	0.007		<1	60	140	140	
Z047759		1.94	<0.001	0.0063	0.007		<1	60	160	120	
Z047760		1.10	0.001	0.0060	0.006		<1	50	210	110	
Z047761		2.04	0.013	0.0026	0.002		<1	50	300	110	
Z047762		0.76	0.030	0.0017	0.002		1	60	280	140	
Z047830		0.69	0.388	0.0034	0.004		<1	70	13700	210	0.26
Z047845		0.63	0.013	0.0007	<0.001		1	20	110	50	0.05
Z047850		1.59	0.034	<0.0005	<0.001		1	20	40	60	0.09
Z047853		0.63	0.015	0.0005	<0.001		1	50	50	90	0.09
Z047876		Not Recvd									
Z047895		0.76	>1.00	<0.0005	<0.001	4.65	2	30	3530	50	
Z047915		1.02	>1.00	0.0005	<0.001	5.52	26	260	4300	120	0.27
Z047954		0.58	0.045	<0.0005	<0.001		5	20	2190	30	0.05

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 24-FEVR-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19031452

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP61a	ME-MS42	PGM-MS23

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Nombre total de pages: 2 (A)
plus les pages d'annexe
Finalisée date: 8-MARS-2019
Compte: CACOWO

CERTIFICAT RY19042416

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique à 1 échantillon de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 20-FEVR-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

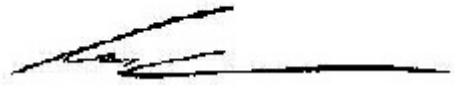
CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
PUL-QC	Test concassage QC

PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
PGM-MS23	Pt, Pd et Au 30 g FA ICP-MS	ICP-MS
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 8-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042416

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z047876		0.50	>1.00	<0.0005	<0.001	6.18	2	30	6400	60

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 8-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042416

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP61a	PGM-MS23	

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	LOG-22	PUL-31	PUL-QC
	SPL-21	WEI-21		

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

CERTIFICAT RY19042481

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 94 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 20-FEVR-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

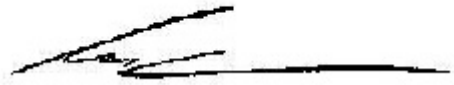
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	
Ni-OG62	Teneur marchande Ni - quatre acides	
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
TOT-ICP06		
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES
ME-OG62	Teneur marchande éléments - quatre acides	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042481

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	Ni-OG62 Ni % 0.001	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002
Z047855		2.00	0.04													
Z047856		2.26	0.01													
Z047857		4.12	0.02													
Z047858		1.84	0.03													
Z047859		2.01	0.01													
Z047860		3.92	0.09													
Z047861		3.78	<0.01													
Z047862		4.28	0.01													
Z047863		1.91	0.05													
Z047864		0.41	1.06													
Z047865		1.85	0.03													
Z047866		1.65	0.05													
Z047867		1.38	0.03													
Z047868		1.02	0.01													
Z047869		2.20	0.02													
Z047870		0.58	<0.01													
Z047871		0.07	0.09													
Z047872		0.29	0.03													
Z047873		2.22	0.02													
Z047874		1.45	0.45													
Z047875		1.75	0.87													
Z047877		2.72	0.03						53.4	14.55	7.48	7.37	3.59	5.12	0.84	0.013
Z047878		3.65	0.01						56.7	14.60	6.54	6.56	3.20	4.60	0.97	0.012
Z047879		0.97	0.01						46.7	10.85	5.39	14.95	2.87	4.36	0.21	0.008
Z047880		0.37	<0.01						71.3	13.65	2.11	2.68	0.90	5.92	0.86	0.002
Z047881		0.60	<0.01						59.2	15.40	5.35	3.89	4.04	2.87	1.78	0.010
Z047882		0.52	<0.01						61.8	15.50	5.58	5.12	3.09	4.86	0.46	0.014
Z048000		3.86	<0.01	<1	40	40	150									
Z049001		3.69	0.03	<1	20	20	90									
Z049002		2.29	0.05	<1	10	30	10									
Z049003		1.47	0.02	<1	20	10	290									
Z049004		1.57	0.10	<1	10	20	10									
Z049005		1.47	0.20	<1	40	30	100									
Z049006		1.71	0.52	<1	10	50	10									
Z049007		1.71	0.32	1	10	60	30									
Z049008		1.76	0.14	<1	20	1110	20									
Z049009		1.57	0.10	<1	10	30	20									
Z049010		3.73	0.05	<1	10	10	10		71.8	14.15	1.55	2.98	0.45	7.88	0.16	0.003
Z049011		2.50	0.04	2	10	20	80									
Z049012		3.88	0.08	<1	10	10	10									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042481

Description échantillon	Méthode élément unités LDI	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z047855								
Z047856								
Z047857								
Z047858								
Z047859								
Z047860								
Z047861								
Z047862								
Z047863								
Z047864								
Z047865								
Z047866								
Z047867								
Z047868								
Z047869								
Z047870								
Z047871								
Z047872								
Z047873								
Z047874								
Z047875								
Z047877		0.73	0.13	0.27	0.02	0.02	7.32	100.85
Z047878		0.59	0.12	0.19	0.02	0.02	6.73	100.85
Z047879		0.58	0.25	0.24	0.02	0.01	12.55	98.99
Z047880		0.21	0.03	0.08	0.05	0.03	2.69	100.51
Z047881		0.57	0.07	0.16	0.03	0.03	5.55	98.95
Z047882		0.61	0.10	0.16	0.03	0.01	3.48	100.81
Z048000								
Z049001								
Z049002								
Z049003								
Z049004								
Z049005								
Z049006								
Z049007								
Z049008								
Z049009								
Z049010		0.21	0.03	0.08	0.06	0.04	2.52	101.91
Z049011								
Z049012								

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042481

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	Ni-OG62 Ni % 0.001	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002
Z049013		1.59	0.15	<1	10	<10	10									
Z049014		1.21	0.13	<1	10	10	10									
Z049015		1.36	0.04	<1	<10	20	10									
Z049016		2.46	0.02	<1	20	90	80									
Z049017		3.47	0.20	<1	30	20	80									
Z049018		2.06	0.09	<1	10	20	10									
Z049019		3.23	0.26	<1	30	50	60									
Z049020		2.84	0.02	<1	20	20	90									
Z049021		1.99	0.02	<1	20	20	10									
Z049022		2.62	0.62	1	20	390	50									
Z049023		1.03	0.02	<1	10	40	20									
Z049024		0.98	0.11	<1	20	70	30									
Z049025		1.46	0.08	2	30	910	40									
Z049026		1.82	0.13	2	30	880	20									
Z049027		1.27	0.03	1	10	90	10									
Z049028		2.04	0.05	<1	10	100	20									
Z049029		0.57	0.01	<1	<10	<10	10									
Z049030		0.05	0.10	2	1650	4280	>100000	10.70								
Z049031		1.20	0.06	<1	10	90	10									
Z049032		1.46	0.10	<1	10	10	20									
Z049033		1.81	0.05	<1	10	220	20									
Z049034		2.95	0.18	<1	10	60	10									
Z049035		1.80	0.03	<1	10	60	10									
Z049036		1.84	0.15	<1	70	650	50									
Z049037		2.00	0.08	<1	10	70	10									
Z049038		1.80	0.05	1	10	140	20									
Z049039		2.05	0.16	<1	10	20	10									
Z049040		1.62	0.02	<1	10	80	40									
Z049041		2.95	<0.01	<1	10	30	20									
Z049042		3.05	0.06	<1	10	90	20									
Z049043		2.72	0.27	1	10	90	20									
Z049044		2.52	0.03	<1	10	30	20									
Z049045		2.11	0.03	<1	10	80	30									
Z049046		2.27	0.23	<1	20	220	40									
Z049047		2.23	<0.01	<1	10	50	20									
Z049048		2.72	0.03	<1	10	140	20									
Z049049		2.80	0.01	1	30	160	50									
Z049050		2.50	<0.01	<1	50	30	160									
Z049051		2.47	0.01	<1	60	150	200									
Z049052		2.26	<0.01	<1	60	450	60									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042481

Description échantillon	Méthode élément unités LDI	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z049013								
Z049014								
Z049015								
Z049016								
Z049017								
Z049018								
Z049019								
Z049020								
Z049021								
Z049022								
Z049023								
Z049024								
Z049025								
Z049026								
Z049027								
Z049028								
Z049029								
Z049030								
Z049031								
Z049032								
Z049033								
Z049034								
Z049035								
Z049036								
Z049037								
Z049038								
Z049039								
Z049040								
Z049041								
Z049042								
Z049043								
Z049044								
Z049045								
Z049046								
Z049047								
Z049048								
Z049049								
Z049050								
Z049051								
Z049052								

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042481

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	Ni-OG62 Ni % 0.001	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002
Z049053		2.37	0.04	1	20	140	40									
Z049054		2.72	0.02	<1	20	20	190									
Z049055		2.40	0.10	<1	10	20	30									
Z049056		2.80	0.06	1	20	30	30									
Z049057		2.80	0.01	<1	40	20	430									
Z049058		2.65	0.09	<1	90	100	970									
Z049059		2.30	0.04	<1	40	20	330									
Z049060		1.52	0.40	1	20	100	30									
Z049061		0.40	<0.01	<1	<10	<10	10									
Z049062		0.05	0.07	1	1190	2870	69800									
Z049063		2.30	0.06	1	50	330	60									
Z049064		1.44	<0.01	<1	30	30	40									
Z049065		1.61	<0.01	<1	20	20	20									
Z049066		1.18	<0.01	<1	10	20	10									

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042481

Description échantillon	Méthode élément unités LDI	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z049053								
Z049054								
Z049055								
Z049056								
Z049057								
Z049058								
Z049059								
Z049060								
Z049061								
Z049062								
Z049063								
Z049064								
Z049065								
Z049066								

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042481

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP06	ME-ICP61a	ME-OG62
	Ni-OG62	OA-GRA05	TOT-ICP06	

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Nombre total de pages: 5 (A)
plus les pages d'annexe
Finalisée date: 7-MARS-2019
Compte: CACOWO

CERTIFICAT RY19042485

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 137 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 20-FEVR-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

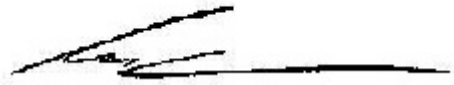
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042485

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049074		2.47	0.02	<1	40	150	80
Z049075		2.71	<0.01	<1	30	90	60
Z049076		1.52	0.01	<1	40	270	70
Z049077		2.53	0.04	<1	20	240	30
Z049078		2.41	<0.01	<1	90	140	920
Z049079		2.63	<0.01	<1	90	90	870
Z049080		2.07	<0.01	<1	40	180	70
Z049081		2.85	<0.01	<1	20	150	40
Z049082		1.19	<0.01	<1	30	60	70
Z049083		1.42	<0.01	<1	30	70	60
Z049084		2.94	<0.01	<1	40	80	80
Z049085		2.57	<0.01	<1	40	60	70
Z049086		2.24	0.04	<1	30	30	70
Z049087		2.75	<0.01	<1	40	30	100
Z049088		2.68	0.01	<1	50	60	110
Z049089		2.41	<0.01	<1	40	20	130
Z049090		1.41	<0.01	<1	20	40	70
Z049091		2.80	0.03	<1	20	90	160
Z049092		3.01	<0.01	<1	40	380	120
Z049093		2.77	<0.01	<1	30	80	180
Z049094		2.64	<0.01	<1	50	50	210
Z049095		2.99	<0.01	<1	50	60	190
Z049096		2.78	<0.01	<1	60	60	210
Z049097		2.52	<0.01	<1	50	60	190
Z049098		2.75	0.01	<1	30	80	50
Z049099		2.70	0.03	<1	10	60	10
Z049100		2.94	0.17	<1	20	100	50
Z049101		2.51	0.01	<1	40	210	50
Z049102		3.00	0.01	<1	40	290	50
Z049103		2.97	0.20	1	180	200	90
Z049104		2.99	0.44	<1	700	120	180
Z049105		0.18	<0.01	<1	<10	<10	<10
Z049106		0.05	0.04	1	1170	2850	71200
Z049107		3.09	0.07	<1	20	140	120
Z049108		2.75	<0.01	<1	20	1610	40
Z049109		3.21	0.01	1	80	3070	70
Z049110		3.20	0.01	<1	160	1250	60
Z049111		2.75	0.05	<1	120	1230	50
Z049112		3.04	0.08	<1	20	1160	30
Z049113		2.81	0.06	<1	20	110	30

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042485

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049114		2.48	0.14	<1	10	110	10
Z049115		2.81	0.26	<1	<10	50	<10
Z049116		2.54	0.02	<1	10	140	20
Z049117		2.38	0.01	<1	30	160	120
Z049118		2.76	<0.01	<1	20	70	100
Z049119		2.89	<0.01	<1	20	50	50
Z049120		2.65	<0.01	1	260	310	70
Z049121		3.02	0.01	<1	80	510	50
Z049122		2.80	0.04	<1	10	30	<10
Z049123		2.37	0.01	<1	10	30	10
Z049124		1.29	<0.01	<1	20	110	40
Z049125		2.66	0.01	<1	20	80	50
Z049126		2.72	<0.01	<1	10	40	40
Z049127		0.12	<0.01	<1	<10	<10	<10
Z049128		0.04	0.04	2	1110	2720	67900
Z049129		2.94	0.01	<1	10	30	80
Z049130		2.53	0.01	<1	10	50	50
Z049131		2.84	0.01	<1	20	30	50
Z049132		2.53	<0.01	<1	30	40	60
Z049133		2.51	0.03	<1	20	40	40
Z049134		2.87	0.01	<1	20	30	40
Z049135		3.11	0.01	<1	20	40	50
Z049136		2.87	0.01	<1	20	40	80
Z049137		2.60	0.26	<1	20	50	70
Z049138		2.72	0.01	<1	20	40	70
Z049139		2.64	<0.01	<1	20	40	50
Z049140		2.76	0.01	<1	20	20	50
Z049141		2.68	0.01	<1	20	50	50
Z049142		2.46	<0.01	<1	20	50	40
Z049143		2.93	0.01	<1	20	30	60
Z049144		2.87	0.04	<1	30	20	40
Z049145		2.76	<0.01	<1	30	30	40
Z049146		2.74	<0.01	<1	20	10	40
Z049147		2.32	0.17	<1	10	30	40
Z049148		2.69	0.01	<1	20	30	40
Z049149		0.12	0.01	<1	<10	<10	<10
Z049150		0.05	0.07	2	1140	2800	65900
Z049151		2.54	<0.01	<1	30	120	60
Z049152		2.67	<0.01	<1	30	50	120
Z049153		2.43	0.03	<1	40	40	180

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042485

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049154		2.20	0.01	<1	10	20	40
Z049155		2.40	0.02	1	20	50	50
Z049156		1.07	0.07	<1	30	150	60
Z049157		2.44	0.06	<1	50	420	60
Z049158		3.06	0.04	<1	30	560	60
Z049159		1.39	0.01	<1	40	20	160
Z049160		2.59	0.39	1	50	750	60
Z049161		2.86	0.21	<1	20	80	60
Z049162		2.69	0.01	<1	20	40	50
Z049163		0.93	0.01	<1	10	50	20
Z049164		2.84	0.01	<1	10	30	20
Z049165		2.51	0.02	<1	20	30	30
Z049166		2.98	0.11	<1	20	40	70
Z049167		2.62	0.01	1	10	40	30
Z049168		2.64	<0.01	<1	10	30	30
Z049169		2.54	<0.01	<1	20	20	40
Z049170		2.24	<0.01	<1	10	40	30
Z049171		2.35	0.03	<1	20	40	50
Z049172		2.39	<0.01	<1	20	30	50
Z049173		2.56	<0.01	<1	20	20	40
Z049174		2.27	<0.01	<1	10	40	40
Z049175		2.73	0.01	<1	20	30	60
Z049176		2.59	0.01	<1	20	50	50
Z049177		0.41	<0.01	<1	<10	<10	10
Z049178		0.04	0.02	2	1160	2860	68000
Z049179		2.47	0.03	<1	10	30	20
Z049180		2.38	0.05	<1	20	40	60
Z049181		2.16	<0.01	<1	20	70	50
Z049182		2.31	<0.01	<1	20	30	50
Z049183		2.65	<0.01	<1	20	20	110
Z049184		2.54	<0.01	<1	20	20	70
Z049185		2.48	<0.01	1	20	60	60
Z049186		2.63	0.55	<1	20	90	50
Z049187		2.81	<0.01	<1	60	80	130
Z049188		2.27	0.05	<1	30	50	60
Z049189		2.48	0.09	<1	20	40	40
Z049190		3.31	0.04	<1	20	50	80
Z049191		2.76	0.10	<1	20	60	120
Z049192		2.78	0.12	<1	30	60	90
Z049193		2.05	0.05	<1	20	30	50

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042485

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049194		2.58	<0.01	<1	20	20	90
Z049195		2.98	0.25	<1	40	70	60
Z049196		2.68	0.07	1	20	50	50
Z049197		1.70	<0.01	<1	10	70	40
Z049198		2.76	0.02	<1	20	40	50
Z049199		1.45	0.05	1	30	460	60
Z049200		0.14	<0.01	<1	<10	<10	<10
Z049201		0.09	0.80	51	<10	1020	20
Z049202		1.42	0.02	<1	30	240	70
Z049203		1.15	<0.01	1	20	190	40
Z049204		2.80	<0.01	<1	30	210	40
Z049205		2.58	<0.01	<1	20	50	40
Z049206		3.16	0.01	<1	20	190	50
Z049207		1.00	<0.01	<1	10	50	10
Z049208		2.54	0.04	<1	20	270	40
Z049209		1.92	0.03	1	20	40	50
Z049210		1.77	0.01	3	20	120	40

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19042485

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP61a

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

plus les pages d'annexe
Finalisée date: 7-MARS-2019
Compte: CACOWO

CERTIFICAT RY19047572

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 9 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 26-FEVR-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

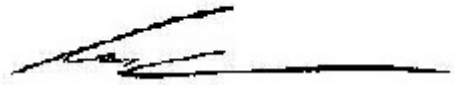
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
ME-ICP06	Roche entière - ICP-AES	ICP-AES
OA-GRA05	Perte par calcination à 1 000 C	WST-SEQ
PGM-MS23	Pt, Pd et Au 30 g FA ICP-MS	ICP-MS
TOT-ICP06		
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19047572

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01
Z049281		3.03	0.001	<0.0005	<0.001	<1	40	210	70	65.1	6.50	18.65	2.53	3.22	2.30	0.24
Z049282		2.62	0.001	<0.0005	<0.001	<1	40	180	50	50.9	12.50	21.2	2.83	3.48	5.03	0.65
Z049283		2.54	<0.001	<0.0005	<0.001	<1	30	130	70	53.0	15.70	12.80	3.20	4.35	6.50	0.13
Z049284		2.67	0.007	0.0005	0.001	2	80	690	60	61.2	14.30	11.20	1.30	3.29	5.95	0.50
Z049285		2.33	0.003	0.0006	0.001	2	80	490	40	63.8	12.25	10.35	0.70	2.49	4.66	0.97
Z049286		2.61	0.011	0.0011	0.001	1	70	220	50	61.7	16.35	8.09	0.82	2.19	5.30	2.94
Z049287		2.53	0.002	<0.0005	0.001	1	60	290	40	63.7	15.55	7.39	0.83	1.55	4.64	3.89
Z049288		2.81	0.002	<0.0005	<0.001	1	50	280	20	60.4	16.55	8.33	1.18	1.94	3.50	4.63
Z049289		3.08	0.008	<0.0005	<0.001	3	90	870	30	61.9	13.80	8.96	2.13	1.93	6.80	0.72

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19047572

Description échantillon	Méthode élément unités LDI	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
Z049281		0.011	0.44	0.30	0.07	<0.01	0.02	0.89	100.27
Z049282		0.017	0.88	0.41	0.14	0.01	0.07	1.16	99.28
Z049283		0.020	1.09	0.44	0.16	<0.01	0.01	2.29	99.69
Z049284		0.011	0.72	0.24	0.16	<0.01	0.03	2.82	101.72
Z049285		0.007	0.62	0.17	0.14	<0.01	0.05	3.15	99.36
Z049286		0.017	0.78	0.11	0.15	0.01	0.12	2.50	101.08
Z049287		0.005	0.77	0.09	0.19	0.01	0.13	2.49	101.24
Z049288		0.004	1.01	0.17	0.32	0.01	0.16	2.84	101.04
Z049289		0.007	0.80	0.21	0.25	<0.01	0.03	2.50	100.04

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 7-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19047572

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	ME-ICP06	ME-ICP61a	OA-GRA05	PGM-MS23
	TOT-ICP06			

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	PUL-31
	PUL-QC	SPL-21	WEI-21	

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

plus les pages d'annexe
Finalisée date: 12-MARS-2019
Compte: CACOWO

CERTIFICAT RY19047577

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 110 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 26-FEVR-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

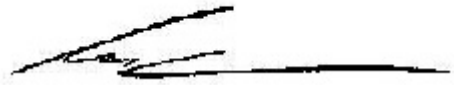
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 12-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19047577

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049067		3.17	0.01	<1	50	90	30
Z049068		1.32	0.01	<1	40	60	40
Z049069		2.23	0.01	<1	50	100	60
Z049070		3.15	0.01	<1	40	110	70
Z049071		3.21	0.01	<1	40	90	90
Z049072		3.01	0.01	<1	30	70	80
Z049073		1.29	0.01	<1	30	40	80
Z049211		2.59	0.33	1	30	190	50
Z049212		2.74	0.17	4	20	260	50
Z049213		2.39	0.01	<1	30	60	80
Z049214		2.80	0.14	2	20	260	80
Z049215		2.60	0.20	5	20	690	80
Z049216		2.54	0.02	1	20	260	90
Z049217		2.40	0.01	1	20	100	40
Z049218		2.17	0.01	1	10	40	10
Z049219		2.13	0.45	6	30	590	110
Z049220		2.64	0.06	5	20	140	90
Z049221		2.63	0.04	3	20	50	90
Z049222		0.66	<0.01	<1	<10	<10	<10
Z049223		0.09	0.21	25	10	490	20
Z049224		2.65	0.03	1	30	220	60
Z049225		2.56	0.01	<1	10	50	50
Z049226		2.50	0.01	<1	20	40	70
Z049227		2.22	0.01	<1	30	70	70
Z049228		2.18	0.01	1	50	390	70
Z049229		2.75	0.01	2	90	620	50
Z049230		2.68	<0.01	2	70	400	50
Z049231		2.84	0.02	1	50	470	110
Z049232		2.43	0.01	<1	50	70	50
Z049233		2.64	0.01	<1	20	70	40
Z049234		2.47	<0.01	<1	20	90	40
Z049235		2.58	0.01	1	20	110	40
Z049236		2.58	0.01	<1	30	70	40
Z049237		2.81	0.01	<1	20	20	30
Z049238		2.70	<0.01	<1	20	10	30
Z049239		2.45	0.01	<1	40	20	170
Z049240		2.92	0.01	<1	20	70	60
Z049241		3.09	0.04	<1	30	40	70
Z049242		2.34	0.02	1	20	60	50
Z049243		2.54	0.01	1	20	20	50

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 12-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19047577

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049244		2.29	0.01	1	20	210	60
Z049245		2.90	0.06	1	30	80	50
Z049246		2.52	0.08	1	20	70	50
Z049247		2.87	0.15	1	20	40	50
Z049248		2.36	0.27	1	30	100	50
Z049249		2.79	0.05	2	20	100	40
Z049250		2.54	0.01	1	30	220	60
Z049251		3.20	0.03	2	30	90	160
Z049252		2.58	0.05	1	20	30	30
Z049253		0.57	0.01	<1	<10	<10	<10
Z049254		0.09	0.21	25	10	490	20
Z049255		2.44	0.08	<1	30	40	40
Z049256		2.44	0.03	2	30	90	80
Z049257		2.79	0.01	1	30	30	130
Z049258		2.20	0.01	1	20	60	80
Z049259		2.58	0.01	4	30	100	40
Z049260		2.85	0.03	2	40	110	50
Z049261		2.45	0.03	1	20	200	70
Z049262		2.50	0.05	1	20	90	40
Z049263		3.39	<0.01	<1	20	20	40
Z049264		2.93	0.07	2	30	410	50
Z049265		2.25	0.05	<1	30	200	40
Z049266		2.49	0.02	1	20	70	30
Z049267		2.55	0.02	<1	20	20	30
Z049268		2.21	0.01	<1	20	<10	40
Z049269		2.78	0.10	3	30	330	50
Z049270		2.73	0.10	<1	30	40	60
Z049271		2.72	0.12	1	40	100	40
Z049272		2.50	0.27	1	20	150	30
Z049273		2.69	0.04	1	40	270	40
Z049274		1.51	0.03	1	50	690	50
Z049275		1.36	0.01	<1	30	120	90
Z049276		0.55	<0.01	<1	<10	<10	<10
Z049277		0.09	0.80	49	10	980	30
Z049278		1.33	0.01	1	20	70	40
Z049279		2.69	0.01	2	50	450	40
Z049280		2.55	0.01	2	50	280	20
Z049290		2.88	0.01	2	120	810	70
Z049291		2.45	0.01	1	60	260	100
Z049292		2.62	<0.01	1	40	280	40

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 12-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19047577

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049293		2.47	<0.01	1	50	140	40
Z049294		2.39	0.01	1	40	290	40
Z049295		2.47	0.01	1	40	160	40
Z049296		2.22	<0.01	<1	20	60	20
Z049297		2.32	0.01	<1	40	130	30
Z049298		0.50	0.01	<1	<10	<10	10
Z049299		0.09	0.20	25	10	470	20
Z049300		2.64	0.01	<1	10	10	30
Z049301		2.78	<0.01	<1	20	40	20
Z049302		2.68	<0.01	<1	20	30	20
Z049303		2.67	<0.01	<1	20	50	20
Z049304		2.68	0.01	1	40	70	30
Z049305		2.71	0.01	1	20	40	30
Z049306		2.44	<0.01	<1	10	70	30
Z049307		3.00	0.01	<1	20	150	40
Z049308		2.32	0.01	1	30	60	120
Z049309		2.48	0.01	<1	70	120	50
Z049310		2.34	0.01	<1	30	110	80
Z049311		2.64	0.01	2	40	70	140
Z049312		2.45	0.01	1	50	30	160
Z049313		2.99	0.01	1	40	140	140
Z049314		2.88	0.01	1	20	180	30
Z049315		2.23	<0.01	3	20	1710	10
Z049316		2.69	<0.01	<1	10	140	10
Z049317		2.70	0.02	11	80	2770	50
Z049318		2.35	0.01	3	90	220	40
Z049319		2.84	0.01	1	30	110	70
Z049320		0.51	0.01	<1	<10	<10	<10
Z049321		0.09	0.78	48	<10	970	20
Z049322		2.35	0.01	1	30	70	40

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 12-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19047577

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP61a

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 11-MARS-2019
Compte: CACOWO

CERTIFICAT RY19054478

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 8 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 6-MARS-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

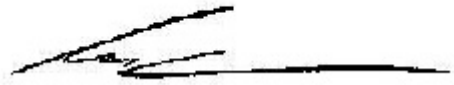
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 11-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19054478

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049332		2.64	0.01	<1	40	40	270
Z049333		2.65	0.01	<1	70	40	750
Z049334		3.01	<0.01	<1	110	20	1150
Z049335		3.07	<0.01	<1	120	30	1260
Z049336		2.91	<0.01	<1	110	30	1290
Z049337		2.46	<0.01	<1	120	30	1340
Z049338		2.52	0.01	<1	110	50	1160
Z049339		2.91	<0.01	<1	60	40	440

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 11-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19054478

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP61a

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	PUL-31
	PUL-QC	SPL-21	WEI-21	

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Nombre total de pages: plus les pages d'annexe
Finalisée date: 23-MARS-2019
Cette copie a fait un rapport sur 1-AVRIL-2019
Compte: CACOWO

CERTIFICAT RY19055416

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 100 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 6-MARS-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

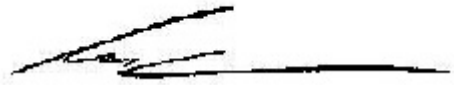
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19055416

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049323		1.26	<0.01	<1	20	190	60
Z049324		2.47	<0.01	<1	20	10	70
Z049325		2.55	<0.01	<1	20	<10	110
Z049326		2.24	0.02	<1	50	10	330
Z049327		2.45	0.01	<1	40	100	690
Z049328		2.70	<0.01	<1	40	70	770
Z049329		2.52	0.01	<1	60	10	640
Z049330		2.78	0.01	<1	40	10	360
Z049331		2.33	0.11	<1	20	30	30
Z049340		1.47	<0.01	<1	60	<10	420
Z049341		2.92	<0.01	<1	70	10	510
Z049342		2.40	<0.01	<1	60	20	380
Z049343		2.94	<0.01	<1	90	30	830
Z049344		0.80	<0.01	<1	<10	<10	<10
Z049345		0.08	0.20	25	10	470	20
Z049346		2.64	<0.01	<1	130	20	1360
Z049347		1.20	<0.01	<1	140	20	1530
Z049348		2.47	<0.01	<1	140	30	1590
Z049349		2.57	<0.01	<1	150	30	1650
Z049350		2.53	<0.01	<1	110	50	1290
Z049351		2.68	<0.01	<1	140	20	1620
Z049352		2.77	<0.01	1	130	60	1560
Z049353		2.38	<0.01	<1	140	40	1610
Z049354		2.70	<0.01	<1	140	40	1610
Z049355		3.24	<0.01	<1	120	40	1370
Z049356		2.56	<0.01	<1	40	<10	390
Z049357		2.48	<0.01	<1	80	30	940
Z049358		3.02	<0.01	<1	120	30	1500
Z049359		2.42	<0.01	<1	140	50	1590
Z049360		3.19	<0.01	<1	130	30	1520
Z049361		3.41	<0.01	<1	140	50	1650
Z049362		3.77	<0.01	3	130	30	1560
Z049363		2.79	<0.01	1	120	30	1400
Z049364		2.63	<0.01	32	90	20	800
Z049365		2.41	0.01	1	20	290	90
Z049366		2.73	0.01	<1	10	60	10
Z049367		0.63	<0.01	<1	<10	<10	10
Z049368		0.08	0.82	49	10	990	30
Z049369		2.24	<0.01	1	10	380	20
Z049370		2.51	<0.01	<1	20	70	20

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19055416

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049371		2.67	<0.01	<1	<10	30	10
Z049372		2.58	0.01	<1	20	200	30
Z049373		2.90	<0.01	<1	50	90	330
Z049374		2.67	<0.01	1	30	240	50
Z049375		2.92	<0.01	1	20	250	80
Z049376		2.76	<0.01	<1	20	10	50
Z049377		2.68	<0.01	<1	10	90	10
Z049378		2.73	<0.01	<1	10	160	10
Z049379		2.74	<0.01	1	30	130	160
Z049380		2.58	<0.01	2	130	320	1030
Z049381		2.76	<0.01	2	180	370	1350
Z049382		2.28	0.01	2	150	310	1110
Z049383		3.01	<0.01	<1	50	90	440
Z049384		2.85	<0.01	<1	100	<10	470
Z049385		2.77	<0.01	<1	150	<10	1110
Z049386		2.32	<0.01	<1	200	<10	1380
Z049387		2.67	<0.01	<1	60	<10	1290
Z049388		2.85	<0.01	<1	70	<10	1280
Z049389		0.73	<0.01	<1	<10	<10	10
Z049390		0.09	0.20	25	10	480	20
Z049391		3.25	<0.01	<1	80	<10	1380
Z049392		3.02	<0.01	<1	70	<10	1320
Z049393		2.53	<0.01	<1	120	<10	1730
Z049394		2.51	<0.01	<1	110	<10	1710
Z049395		2.97	<0.01	<1	100	<10	1420
Z049396		1.51	<0.01	1	40	70	550
Z049397		2.57	<0.01	<1	40	10	100
Z049398		2.39	<0.01	<1	130	30	1580
Z049399		2.70	<0.01	<1	110	30	1400
Z049400		2.62	<0.01	<1	120	30	1380
Z049401		2.90	<0.01	<1	100	50	1200
Z049402		2.72	<0.01	<1	90	60	1030
Z049403		2.34	<0.01	<1	50	80	570
Z049404		2.51	0.01	<1	40	20	290
Z049405		2.41	<0.01	<1	30	30	270
Z049406		2.28	0.01	1	50	370	280
Z049407		2.30	<0.01	1	10	30	20
Z049408		2.51	0.01	<1	20	90	30
Z049409		2.22	0.12	1	40	90	20
Z049410		2.54	<0.01	1	<10	20	10

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19055416

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049411		2.39	0.05	<1	<10	30	<10
Z049412		2.61	0.02	<1	30	30	60
Z049413		2.66	0.03	<1	30	10	40
Z049414		2.82	<0.01	<1	30	10	70
Z049415		2.45	<0.01	<1	20	<10	70
Z049416		2.93	0.01	<1	30	70	90
Z049417		2.36	0.01	<1	<10	10	10
Z049418		0.59	<0.01	<1	<10	<10	<10
Z049419		0.09	0.21	26	10	480	20
Z049420		2.31	0.09	<1	20	10	40
Z049421		2.66	<0.01	<1	30	70	100
Z049422		2.71	0.01	<1	30	30	110
Z049423		2.80	0.10	<1	40	20	280
Z049424		2.25	0.01	<1	30	20	120
Z049425		2.84	0.01	<1	40	100	80
Z049426		2.72	<0.01	<1	30	60	40
Z049427		2.64	<0.01	<1	40	80	50
Z049428		2.91	<0.01	<1	40	100	50
Z049429		2.40	0.01	1	30	50	50
Z049430		2.34	0.01	<1	20	50	30

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 23-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19055416

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP61a

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Nombre total de pages: 3 (A)
plus les pages d'annexe
Finalisée date: 21-MARS-2019
Cette copie a fait un rapport sur 22-MARS-2019
Compte: CACOWO

CERTIFICAT RY19055421

Projet: CS2018

Bon de commande #: CS2018

Ce rapport s'applique aux 72 échantillons de carotte forage soumis à notre laboratoire de Rouyn-Noranda, QC, Canada le 6-MARS-2019.

Les résultats sont transmis à:

WEBTRIEVE ACCESS FRANK J. BASA MEROUANE RACHIDI	FRANK J. BASA ELAINE BASA	ELAINE BASA JOANNE LAFRENIÈRE

PRÉPARATION ÉCHANTILLONS

CODE ALS	DESCRIPTION
WEI-21	Poids échantillon reçu
LOG-22	Entrée échantillon - Reçu sans code barre
CRU-31	Granulation - 70 % <2 mm
SPL-21	Échant. fractionné - div. riffles
PUL-31	Pulvérisé à 85 % <75 um
LOG-24	Entrée pulpe - Reçu sans code barre
CRU-QC	Test concassage QC
PUL-QC	Test concassage QC

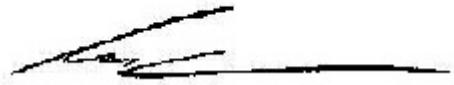
PROCÉDURES ANALYTIQUES

CODE ALS	DESCRIPTION	INSTRUMENT
Au-AA25	Teneur marchande Au 30 g fini FA AA	AAS
ME-ICP61a	Teneur élevée quatre acides ICP-AES	ICP-AES

Ce rapport est final et remplace tout autre rapport préliminaire portant ce numéro de certificat. Les résultats s'appliquent aux échantillons soumis. Toutes les pages de ce rapport ont été vérifiées et approuvées avant publication.

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 21-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19055421

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049431		1.85	<0.01	1	40	40	90
Z049432		3.04	<0.01	1	40	60	70
Z049433		2.51	<0.01	1	40	40	90
Z049434		3.01	<0.01	1	40	90	70
Z049435		2.35	<0.01	1	30	50	140
Z049436		2.52	<0.01	1	30	30	90
Z049437		2.37	<0.01	1	30	40	60
Z049438		2.58	<0.01	1	30	40	50
Z049439		2.61	<0.01	<1	40	60	70
Z049440		2.67	<0.01	1	30	50	50
Z049441		0.51	<0.01	1	<10	<10	<10
Z049442		0.09	0.80	49	10	980	20
Z049443		2.30	<0.01	1	30	60	60
Z049444		2.51	<0.01	1	30	50	50
Z049445		3.18	<0.01	1	30	40	120
Z049446		2.51	<0.01	1	40	50	70
Z049447		2.23	<0.01	1	30	70	70
Z049448		2.41	<0.01	1	40	50	90
Z049449		2.54	<0.01	1	30	40	70
Z049450		2.63	<0.01	1	40	50	120
Z049451		2.57	<0.01	1	40	40	90
Z049452		2.72	<0.01	<1	40	30	90
Z049453		2.19	<0.01	1	40	40	110
Z049454		2.50	<0.01	<1	40	30	90
Z049455		2.37	<0.01	1	40	40	90
Z049456		2.47	<0.01	1	40	120	100
Z049457		2.60	<0.01	<1	40	40	100
Z049458		2.43	<0.01	1	40	70	150
Z049459		2.50	<0.01	1	30	20	160
Z049460		2.92	0.01	<1	30	<10	180
Z049461		2.36	0.12	2	30	3810	120
Z049462		2.72	<0.01	1	50	40	250
Z049463		0.54	<0.01	1	<10	10	10
Z049464		0.09	0.20	25	10	480	10
Z049465		2.02	<0.01	1	50	20	200
Z049466		2.74	<0.01	1	40	20	110
Z049467		3.00	<0.01	1	70	410	60
Z049468		2.34	<0.01	1	20	420	50
Z049469		2.71	<0.01	1	20	100	50
Z049470		2.69	0.39	3	20	280	80

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 21-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19055421

Description échantillon	Méthode élément unités LDI	WEI-21 Poids reçu kg 0.02	Au-AA25 Au ppm 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Co ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Ni ppm 10
Z049471		2.51	0.16	1	20	120	60
Z049472		2.84	0.58	5	40	160	40
Z049473		2.33	0.75	3	40	190	40
Z049474		2.37	0.52	2	30	50	60
Z049475		2.42	15.20	11	80	470	30
Z049476		2.27	0.04	5	20	240	40
Z049477		2.39	0.07	1	30	90	30
Z049478		2.50	0.31	3	60	310	40
Z049479		2.58	0.16	2	70	370	50
Z049480		2.18	0.04	1	10	170	30
Z049481		2.03	0.05	1	30	80	40
Z049482		2.35	0.03	<1	20	30	40
Z049483		2.37	0.19	1	20	200	20
Z049484		2.46	0.01	<1	10	40	10
Z049485		0.78	<0.01	<1	<10	<10	<10
Z049486		0.09	0.81	49	10	1010	20
Z049487		2.39	0.02	<1	10	60	10
Z049488		2.54	0.30	<1	40	50	80
Z049489		2.80	0.04	<1	40	70	90
Z049490		2.80	0.04	<1	30	170	80
Z049491		3.11	0.04	<1	40	130	80
Z049492		2.37	0.05	<1	40	20	80
Z049493		2.44	0.07	<1	30	100	50
Z049494		2.77	0.19	3	70	490	110
Z049495		2.88	0.01	<1	40	70	100
Z049496		2.65	0.02	<1	40	180	110
Z049497		2.87	<0.01	<1	40	320	70
Z049498		2.37	0.01	7	50	490	80
Z049499		2.98	0.01	1	40	220	80
Z049500		2.78	0.02	3	90	810	120
Z049501		2.99	0.01	1	40	360	150
Z049502		2.80	0.01	1	60	480	90

***** Voir la page d'annexe pour les commentaires en ce qui concerne ce certificat *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Téléphone: +1 (604) 984 0221 Télécopieur: +1 (604) 984 0218
www.alsglobal.com/geochemistry

À: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalisée date: 21-MARS-2019
Compte: CACOWO

Projet: CS2018

CERTIFICAT D'ANALYSE RY19055421

COMMENTAIRE DE CERTIFICAT

ADRESSE DE LABORATOIRE

Traité à ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applique à la Méthode:	Au-AA25	ME-ICP61a

Traité à ALS Rouyn-Noranda

Applique à la Méthode:	CRU-31	CRU-QC	LOG-22	LOG-24
	PUL-31	PUL-QC	SPL-21	WEI-21

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Total # Pages: 4 (A)
Plus Appendix Pages
Finalized Date: 16-DEC-2019
Account: CACOWO

CERTIFICATE RY19298730

Project: Castle Silver Mine

This report is for 102 Drill Core samples submitted to our lab in Rouyn-Noranda, QC, Canada on 22-NOV-2019.

The following have access to data associated with this certificate:

FRANK J. BASA ELAINE BASA	ELAINE BASA CLAUDE DUPLESSIS	FRANK J. BASA MEROUANE RACHIDI

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP23	Pt, Pd, Au 30g FA ICP	ICP-AES
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalized Date: 16-DEC-2019
Account: CACOWO

Project: Castle Silver Mine

CERTIFICATE OF ANALYSIS RY19298730

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	ME-ICP41 Ag ppm 0.2	ME-ICP41 Co ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Ni ppm 1	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
22301		2.53	<0.2	15	34	44	<0.001	<0.005	<0.001
22302		1.31	<0.2	20	34	57	0.001	<0.005	<0.001
22303		2.71	<0.2	23	25	60	<0.001	<0.005	<0.001
22304		2.18	<0.2	16	41	43	<0.001	<0.005	<0.001
22305		3.16	<0.2	23	48	58	<0.001	<0.005	<0.001
22306		2.49	<0.2	22	42	55	<0.001	<0.005	<0.001
22307		2.55	<0.2	18	31	43	<0.001	<0.005	<0.001
22308		1.07	<0.2	24	73	107	0.008	<0.005	<0.001
22309		1.43	<0.2	19	43	53	<0.001	<0.005	<0.001
22310		0.70	<0.2	6	10	11	<0.001	<0.005	<0.001
22311		1.39	<0.2	20	33	63	<0.001	<0.005	<0.001
22312		1.72	0.2	16	37	48	0.001	<0.005	<0.001
22313		1.61	<0.2	22	37	52	0.001	<0.005	<0.001
22314		1.88	<0.2	23	22	77	<0.001	<0.005	<0.001
22315		2.44	<0.2	18	93	46	0.001	<0.005	<0.001
22316		3.07	<0.2	14	32	39	<0.001	<0.005	<0.001
22317		1.43	<0.2	16	15	42	0.002	<0.005	<0.001
22318		1.61	<0.2	18	14	36	<0.001	<0.005	<0.001
22319		1.96	<0.2	21	41	40	<0.001	<0.005	<0.001
22320		2.25	0.2	24	27	42	<0.001	<0.005	<0.001
22321		2.56	<0.2	12	5	29	0.002	<0.005	<0.001
22322		2.02	<0.2	15	21	60	0.003	<0.005	<0.001
22323		2.08	<0.2	22	136	47	0.006	<0.005	<0.001
22324		2.62	<0.2	18	15	37	0.002	<0.005	<0.001
22325		2.55	<0.2	17	11	35	<0.001	<0.005	<0.001
22326		2.21	<0.2	19	23	35	0.001	<0.005	<0.001
22327		2.63	<0.2	15	38	39	0.001	<0.005	<0.001
22328		1.14	<0.2	15	114	28	0.005	<0.005	<0.001
22329		1.66	0.2	34	156	58	0.006	<0.005	0.003
22330		2.54	0.3	24	24	60	0.009	<0.005	0.001
22331		3.62	1.1	21	85	54	0.053	<0.005	<0.001
22332		3.14	0.5	13	297	41	0.036	<0.005	<0.001
22333		1.42	0.2	14	25	33	0.008	<0.005	<0.001
22334		0.84	0.5	16	111	32	0.014	<0.005	<0.001
22335		2.36	0.4	18	60	43	0.068	<0.005	<0.001
22336		2.84	0.5	16	25	35	0.091	<0.005	<0.001
22337		1.03	0.2	10	7	38	0.013	<0.005	<0.001
22338		1.73	1.2	107	142	42	0.018	<0.005	<0.001
22339		2.67	0.3	16	29	40	0.007	<0.005	<0.001
22340		2.22	1.8	15	99	46	0.004	<0.005	<0.001

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalized Date: 16-DEC-2019
Account: CACOWO

Project: Castle Silver Mine

CERTIFICATE OF ANALYSIS RY19298730

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	ME-ICP41 Ag ppm 0.2	ME-ICP41 Co ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Ni ppm 1	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
22341		3.80	1.6	33	114	50	0.033	<0.005	<0.001
22342		2.71	0.8	14	48	41	0.002	<0.005	<0.001
22343		0.50	3.8	21	434	38	0.041	<0.005	<0.001
22344		1.88	0.2	20	37	47	0.003	<0.005	<0.001
22345		2.49	0.5	16	64	35	0.005	<0.005	<0.001
22346		0.82	0.3	6	29	15	0.004	<0.005	<0.001
22347		1.13	0.7	41	252	54	0.048	<0.005	<0.001
22348		2.76	0.5	28	180	42	0.013	<0.005	<0.001
22349		0.70	0.3	22	78	32	0.019	<0.005	<0.001
22350		3.26	0.2	17	49	38	0.009	<0.005	<0.001
22351		2.93	0.5	24	91	47	0.022	<0.005	<0.001
22352		2.81	0.3	23	158	42	0.045	<0.005	<0.001
22353		0.93	2.3	37	448	41	0.065	<0.005	<0.001
22354		2.02	0.3	19	62	35	0.024	<0.005	<0.001
22355		2.28	0.2	19	74	43	0.022	<0.005	<0.001
22356		2.09	0.2	17	32	43	0.046	<0.005	<0.001
22357		1.64	0.3	17	15	44	0.145	<0.005	<0.001
22358		2.15	0.7	22	22	43	0.313	<0.005	<0.001
22359		2.05	0.6	23	22	45	0.388	<0.005	<0.001
22360		0.91	0.3	12	22	12	0.037	<0.005	<0.001
22361		1.52	0.5	17	61	40	0.121	<0.005	<0.001
22362		2.40	0.3	17	21	36	0.050	<0.005	<0.001
22363		2.49	0.5	17	62	46	0.090	<0.005	<0.001
22364		2.43	0.6	23	134	53	0.075	<0.005	<0.001
22365		2.00	0.6	18	43	47	0.099	<0.005	<0.001
22366		2.16	0.3	20	42	62	0.034	<0.005	<0.001
22367		2.44	<0.2	18	31	74	0.033	<0.005	<0.001
22368		1.82	0.3	25	38	64	0.028	<0.005	<0.001
22369		2.22	0.4	16	99	53	0.085	<0.005	<0.001
22370		2.19	0.5	13	103	36	0.052	<0.005	0.001
22371		2.13	1.3	9	62	30	0.015	<0.005	<0.001
22372		2.15	0.3	17	108	35	0.015	<0.005	<0.001
22373		2.32	0.2	24	89	38	0.004	<0.005	<0.001
22374		2.56	0.2	25	121	47	0.008	<0.005	<0.001
22375		2.54	0.5	19	234	45	0.015	<0.005	<0.001
22376		3.80	0.2	22	63	52	0.012	<0.005	<0.001
22377		2.72	0.4	31	62	33	<0.001	<0.005	<0.001
22378		3.23	<0.2	20	47	38	<0.001	<0.005	<0.001
22379		3.33	0.2	14	66	37	0.001	<0.005	<0.001
22380		2.46	<0.2	17	122	43	<0.001	<0.005	<0.001

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalized Date: 16-DEC-2019
Account: CACOWO

Project: Castle Silver Mine

CERTIFICATE OF ANALYSIS RY19298730

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-ICP41 Ag ppm 0.2	ME-ICP41 Co ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Ni ppm 1	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
22381		1.18	0.3	17	575	29	0.001	<0.005	<0.001
22382		2.66	0.3	28	969	42	0.001	<0.005	<0.001
22383		3.44	<0.2	19	44	42	<0.001	<0.005	<0.001
22384		1.00	<0.2	11	67	10	0.001	<0.005	<0.001
22385		2.83	1.2	20	177	45	0.002	<0.005	<0.001
22386		3.22	<0.2	46	98	159	0.002	0.006	0.005
22387		2.09	<0.2	46	61	149	0.003	0.007	0.005
22388		1.59	<0.2	6	23	11	0.013	<0.005	<0.001
22389		1.66	<0.2	39	36	114	0.001	0.007	0.004
22390		0.55	<0.2	28	2	322	<0.001	<0.005	<0.001
22391		2.77	<0.2	38	45	93	0.072	0.006	0.004
22392		3.55	<0.2	43	88	161	<0.001	0.007	0.007
22393		3.56	0.3	17	37	62	0.037	<0.005	<0.001
22394		1.38	<0.2	9	14	8	<0.001	<0.005	<0.001
22395		2.77	<0.2	11	22	18	<0.001	<0.005	<0.001
22396		2.15	0.2	35	67	99	0.005	<0.005	<0.001
22397		2.82	0.2	13	51	18	0.010	<0.005	<0.001
22398		2.40	0.6	29	81	91	0.002	<0.005	<0.001
22399		1.57	<0.2	20	88	34	0.030	<0.005	<0.001
22400		1.56	0.3	28	63	47	0.133	<0.005	<0.001
22401		1.14	1.3	44	1880	18	0.251	<0.005	<0.001
22402		1.24	0.4	20	129	25	0.090	<0.005	<0.001

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalized Date: 16-DEC-2019
Account: CACOWO

Project: Castle Silver Mine

CERTIFICATE OF ANALYSIS RY19298730

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:	ME-ICP41	PGM-ICP23

Processed at ALS Rouyn-Noranda

Applies to Method:	CRU-31	CRU-QC	LOG-22	PUL-31
	PUL-QC	SPL-21	WEI-21	

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Total # Pages: 4 (A)
Plus Appendix Pages
Finalized Date: 16-DEC-2019
Account: CACOWO

CERTIFICATE RY19298754

Project: Castle Silver Mine

This report is for 102 Drill Core samples submitted to our lab in Rouyn-Noranda, QC, Canada on 22-NOV-2019.

The following have access to data associated with this certificate:

FRANK J. BASA ELAINE BASA	ELAINE BASA CLAUDE DUPLESSIS	FRANK J. BASA MEROUANE RACHIDI

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP23	Pt, Pd, Au 30g FA ICP	ICP-AES
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalized Date: 16-DEC-2019
Account: CACOWO

Project: Castle Silver Mine

CERTIFICATE OF ANALYSIS RY19298754

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-ICP41 Ag ppm 0.2	ME-ICP41 Co ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Ni ppm 1	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
22403		2.59	0.2	14	53	43	0.082	<0.005	<0.001
22404		2.55	0.2	17	69	46	0.018	<0.005	<0.001
22405		2.80	0.6	46	229	44	0.017	<0.005	<0.001
22406		2.44	0.4	29	99	39	0.011	<0.005	<0.001
22407		2.59	0.2	33	76	46	0.050	<0.005	<0.001
22408		2.69	0.6	53	157	58	0.012	<0.005	<0.001
22409		3.33	0.2	11	55	20	0.020	<0.005	<0.001
22410		4.75	<0.2	9	27	15	0.025	<0.005	<0.001
22411		2.03	<0.2	12	29	16	<0.001	<0.005	<0.001
22412		2.21	<0.2	19	34	11	0.010	<0.005	<0.001
22413		2.33	<0.2	15	17	17	0.024	<0.005	<0.001
22414		2.12	<0.2	11	20	15	0.001	<0.005	<0.001
22415		2.47	<0.2	13	7	18	<0.001	<0.005	<0.001
22416		2.22	<0.2	17	15	37	<0.001	0.006	0.001
22417		1.86	<0.2	27	12	55	<0.001	0.008	0.004
22418		2.56	0.2	7	258	47	0.012	<0.005	0.008
22419		2.33	0.3	5	164	31	0.002	<0.005	<0.001
22420		2.30	0.2	17	109	25	0.020	<0.005	<0.001
22421		2.01	0.4	20	582	10	0.059	<0.005	<0.001
22422		1.00	0.6	38	1360	18	0.048	<0.005	<0.001
22423		2.36	0.5	39	543	34	0.044	<0.005	<0.001
22424		0.96	0.6	49	510	83	0.072	<0.005	<0.001
22425		3.03	<0.2	17	40	55	0.004	<0.005	<0.001
22426		2.42	0.4	26	58	45	0.005	<0.005	<0.001
22427		2.47	1.6	24	100	40	0.013	<0.005	<0.001
22428		2.03	1.6	28	70	59	0.006	<0.005	<0.001
22429		2.61	0.4	19	43	89	0.058	<0.005	0.002
22430		2.29	0.3	8	28	43	0.090	<0.005	<0.001
22431		1.35	0.4	7	43	33	<0.001	<0.005	<0.001
22432		0.94	1.0	10	138	41	0.026	<0.005	<0.001
22433		2.13	1.1	27	78	26	0.053	<0.005	<0.001
22434		2.26	1.7	30	131	39	0.219	<0.005	<0.001
22435		1.36	1.1	23	57	30	0.443	<0.005	<0.001
22436		2.32	2.0	37	311	75	0.306	<0.005	<0.001
22437		2.29	1.6	34	301	32	0.112	0.005	<0.001
22438		1.71	0.3	10	66	29	0.086	<0.005	<0.001
22439		1.69	0.6	31	10	27	0.052	<0.005	<0.001
22440		2.21	0.7	18	46	38	0.092	<0.005	<0.001
22441		2.90	0.4	27	14	22	0.219	<0.005	<0.001
22442		1.89	0.6	15	122	31	0.046	<0.005	<0.001

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalized Date: 16-DEC-2019
Account: CACOWO

Project: Castle Silver Mine

CERTIFICATE OF ANALYSIS RY19298754

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	ME-ICP41 Ag ppm 0.2	ME-ICP41 Co ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Ni ppm 1	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
22443		0.81	1.2	10	413	45	0.060	<0.005	0.001
22444		1.63	1.0	23	98	103	0.081	0.007	0.005
22445		2.68	1.0	23	82	65	0.231	0.006	0.003
22446		2.87	0.6	16	84	79	0.199	0.006	0.003
22447		2.14	1.1	32	174	62	0.184	<0.005	0.002
22448		2.90	0.6	15	91	22	0.247	0.013	0.007
22449		2.30	0.4	39	230	46	0.073	0.009	0.003
22450		1.88	0.5	15	122	39	0.033	<0.005	<0.001
22451		3.63	0.2	19	97	56	0.006	<0.005	<0.001
22452		2.26	0.3	28	339	58	0.019	<0.005	<0.001
22453		2.23	0.2	44	127	43	0.193	<0.005	<0.001
22454		2.18	<0.2	20	138	41	0.036	<0.005	<0.001
22455		2.98	<0.2	20	262	38	0.001	<0.005	<0.001
22456		1.51	0.2	21	179	45	0.008	<0.005	<0.001
22457		2.29	<0.2	27	27	32	0.033	<0.005	<0.001
22458		2.79	<0.2	30	73	34	0.188	<0.005	<0.001
22459		3.38	<0.2	19	136	30	0.014	<0.005	<0.001
22460		3.97	<0.2	43	76	132	0.021	0.008	0.006
22461		3.97	<0.2	36	85	182	<0.001	<0.005	0.003
22462		1.05	<0.2	12	81	15	<0.001	<0.005	<0.001
22463		3.10	0.3	34	47	163	<0.001	<0.005	0.002
22464		2.54	<0.2	25	6	185	0.005	<0.005	0.001
22465		2.37	0.2	25	25	107	0.019	<0.005	<0.001
22466		2.46	0.2	25	11	137	0.009	<0.005	<0.001
22467		2.39	0.2	20	56	152	0.028	<0.005	<0.001
22468		2.61	0.2	15	25	35	0.002	<0.005	<0.001
22469		2.54	<0.2	18	35	37	0.010	<0.005	<0.001
22470		1.66	<0.2	15	25	26	<0.001	<0.005	<0.001
22471		2.54	0.2	32	35	66	<0.001	<0.005	<0.001
22472		2.29	0.2	20	29	46	<0.001	<0.005	<0.001
22473		2.22	<0.2	33	49	77	0.001	<0.005	<0.001
22474		2.67	<0.2	25	31	53	<0.001	<0.005	<0.001
22475		2.37	<0.2	19	38	44	0.004	<0.005	<0.001
22476		2.22	0.2	31	52	86	0.005	<0.005	0.001
22477		2.64	0.2	25	40	61	0.010	<0.005	<0.001
22478		2.34	0.2	27	46	54	0.002	<0.005	<0.001
22479		1.86	0.2	23	42	47	<0.001	<0.005	<0.001
22480		2.36	0.2	18	46	41	0.016	<0.005	<0.001
22481		2.63	<0.2	17	42	39	0.008	<0.005	<0.001
22482		1.89	0.2	17	30	43	<0.001	<0.005	<0.001

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalized Date: 16-DEC-2019
Account: CACOWO

Project: Castle Silver Mine

CERTIFICATE OF ANALYSIS RY19298754

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	ME-ICP41 Ag ppm 0.2	ME-ICP41 Co ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Ni ppm 1	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
22483		2.26	0.2	22	16	56	0.085	<0.005	<0.001
22484		2.62	0.5	18	52	52	0.015	<0.005	<0.001
22485		2.27	0.4	14	8	37	0.032	<0.005	<0.001
22486		2.27	0.3	15	1	36	0.008	<0.005	<0.001
22487		2.08	0.7	15	44	42	0.002	<0.005	<0.001
22488		3.84	0.2	15	22	39	0.002	<0.005	<0.001
22489		2.23	0.5	32	115	215	0.011	0.005	0.016
22490		2.96	0.4	24	305	76	0.127	<0.005	<0.001
22491		3.17	0.3	24	280	42	0.122	<0.005	<0.001
22492		2.26	0.3	23	173	38	0.081	<0.005	<0.001
22493		2.19	0.2	15	12	30	0.051	<0.005	<0.001
22494		2.15	0.4	14	9	24	0.146	<0.005	<0.001
22495		2.58	0.2	12	13	29	0.019	<0.005	<0.001
22496		2.33	<0.2	10	11	40	0.035	<0.005	<0.001
22497		2.65	0.3	13	43	83	0.044	<0.005	<0.001
22498		2.91	0.3	32	172	101	0.034	<0.005	<0.001
22499		2.68	<0.2	17	129	65	0.013	<0.005	<0.001
22500		3.25	<0.2	11	17	33	0.011	<0.005	<0.001
22501		2.66	<0.2	24	294	137	0.010	<0.005	<0.001
22502		2.31	<0.2	12	39	106	0.013	<0.005	<0.001
22503		1.98	<0.2	27	43	109	0.004	<0.005	<0.001
22504		2.23	<0.2	31	15	126	0.030	<0.005	<0.001

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **CANADA COBALT WORKS**
2875 AVE GRANADA
ROUYN-NORANDA QC J9Y 1J1

Finalized Date: 16-DEC-2019
Account: CACOWO

Project: Castle Silver Mine

CERTIFICATE OF ANALYSIS RY19298754

CERTIFICATE COMMENTS

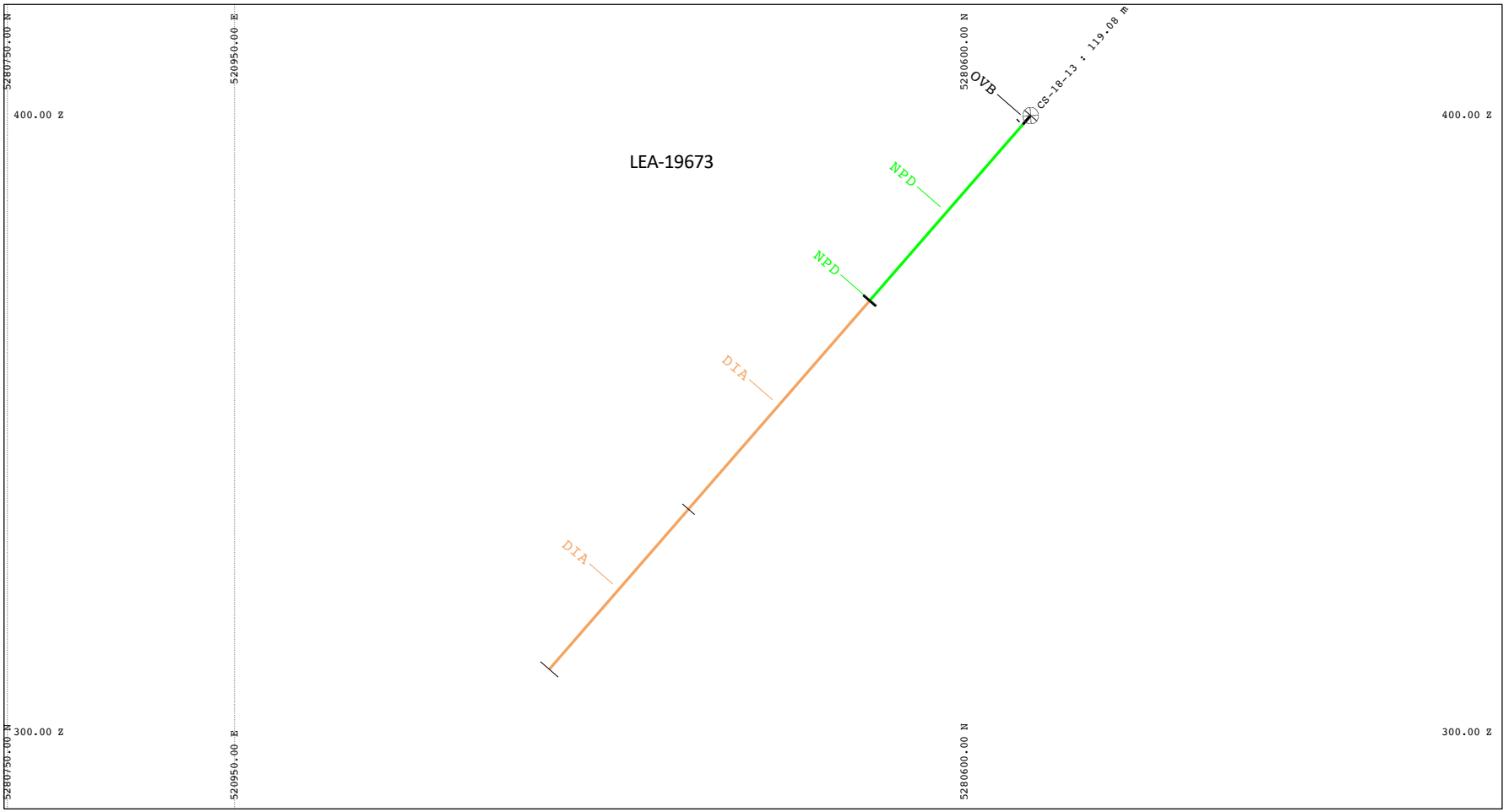
LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:	ME-ICP41	PGM-ICP23

Processed at ALS Rouyn-Noranda

Applies to Method:	CRU-31	CRU-QC	LOG-22	PUL-31
	PUL-QC	SPL-21	WEI-21	



ASSAYS

-1.00 <= Au < 0.30	
0.30 <= Au < 0.50	
0.50 <= Au < 1.00	
1.00 <= Au < 3.00	
3.00 <= Au < 100.00	

LITHOLOGY

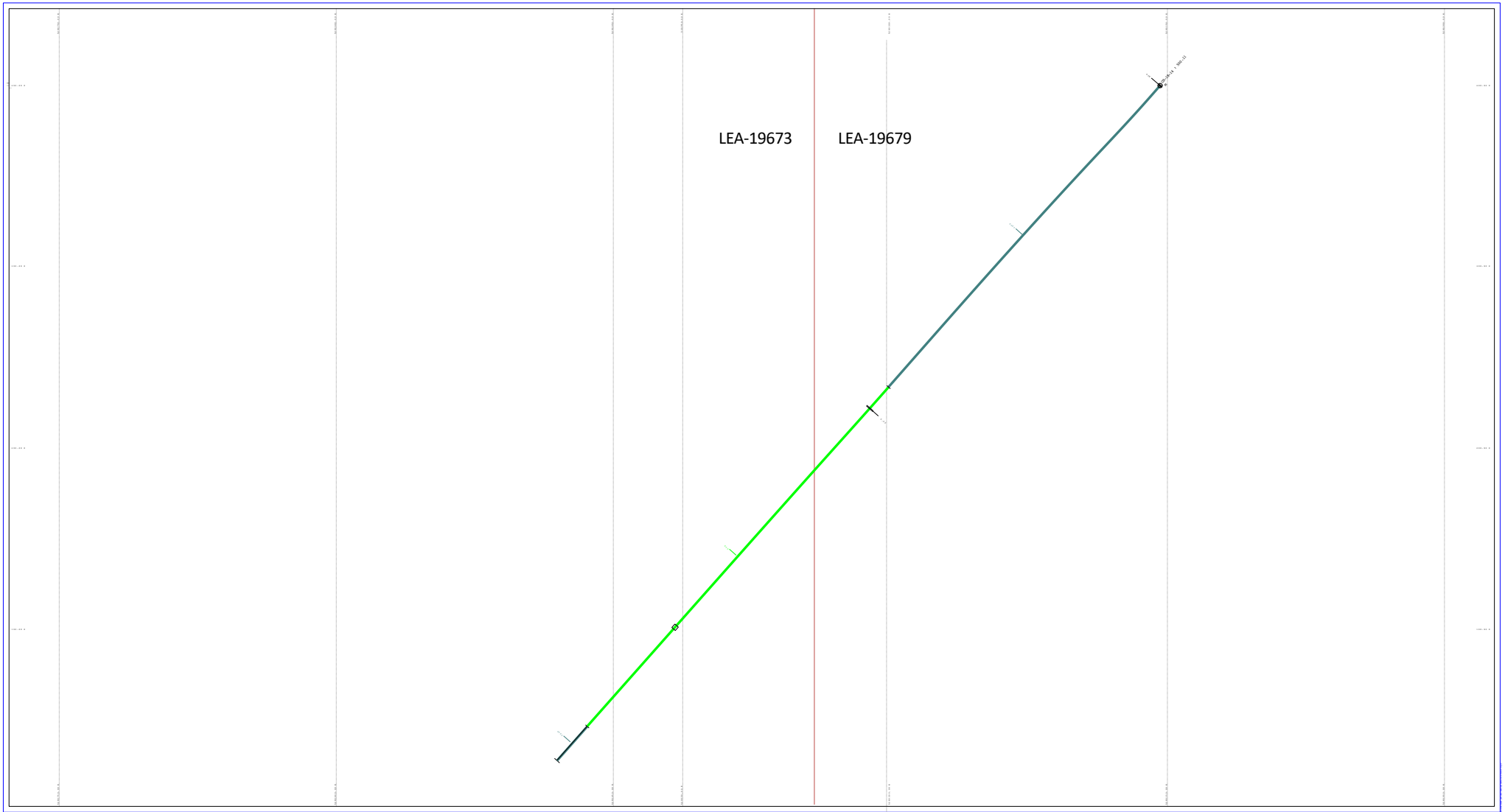
Alteration Zone	Felsic Dike	Alteration Zone	
Archean Felsic Volcanics	Feldspar Porphyry	Felsic Intrusive	
Archean Sediments	Archean Gabbro	Micro-Feldspar Porphyry	
Graphitic Argilite	Gabbroic-Diabase	Microporphyric feldspar dike	
Breccia	Hornblende Porphyry		
Basalt	Mafic Intrusive		
Felsic Dike Chert	Pyroxenite		
Wipissing Diabase	syenite		
Huronian Sediments	Tuff		
Diabase	Ultramafic		

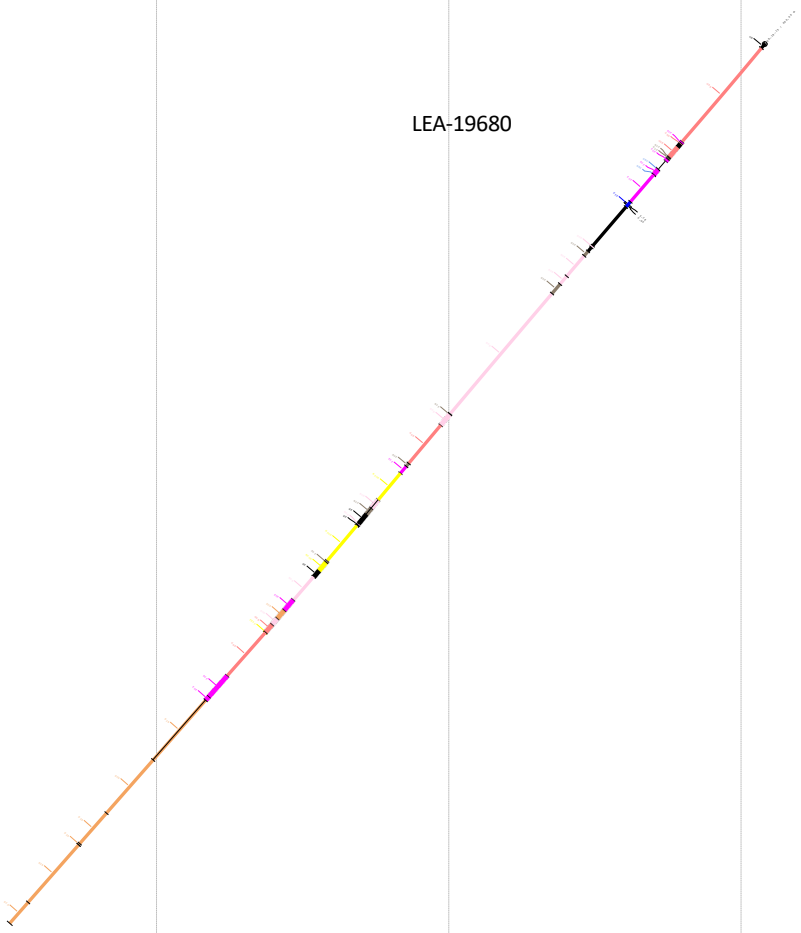
10 0 10 20 m

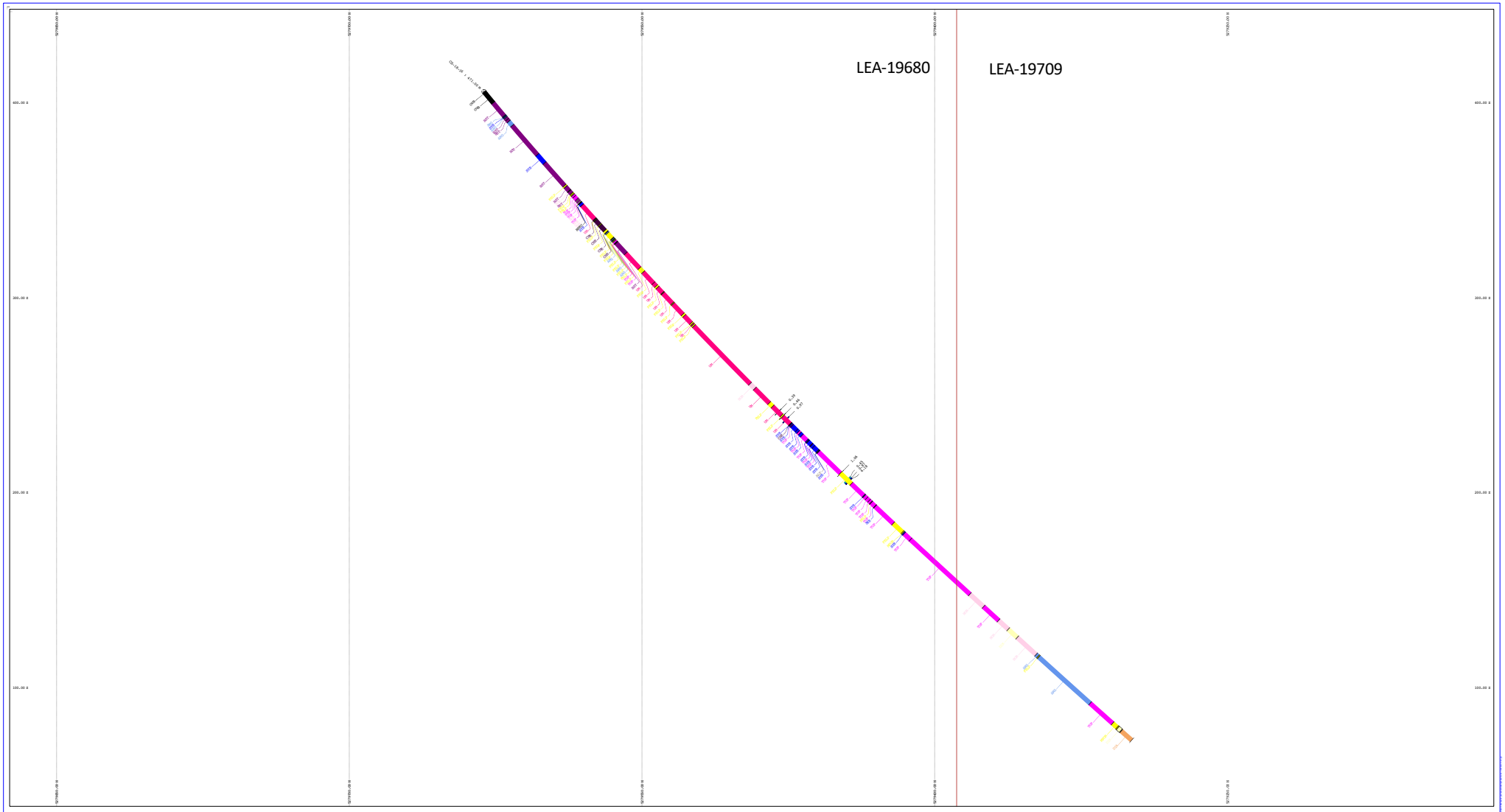
DRAWN BY	DATE	Canada Silver Cobalt Works
M. Rachidi P.Geo		
REVISED BY	DATE	

SCALE 1 : 500

DWG Sections : CS-18-13


LEA-19673
LEA-19679

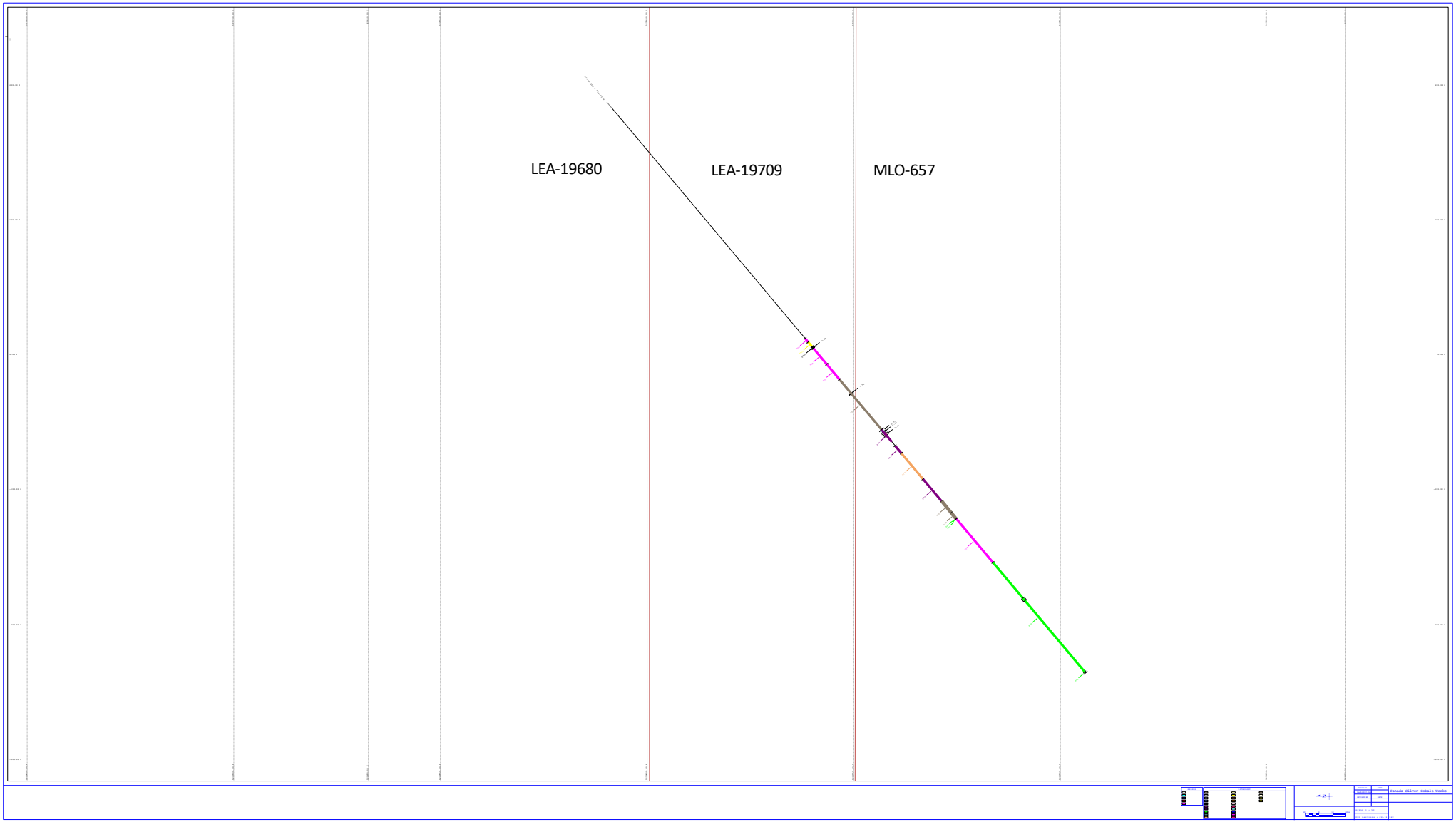

LEA-19680

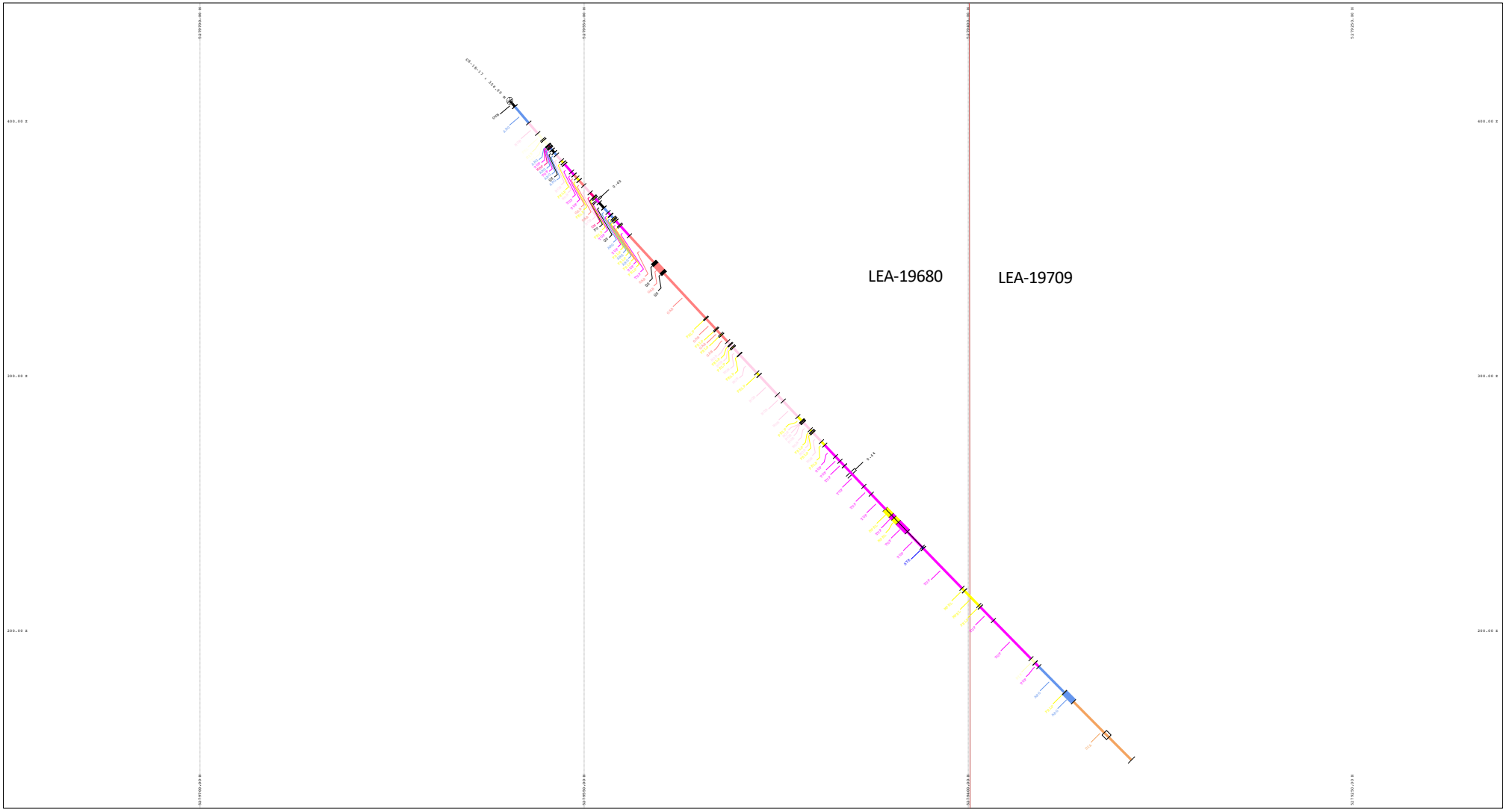


Canada Silver Cobalt Works

SCALE 1 : 500

DWG Sections : CS-19-14

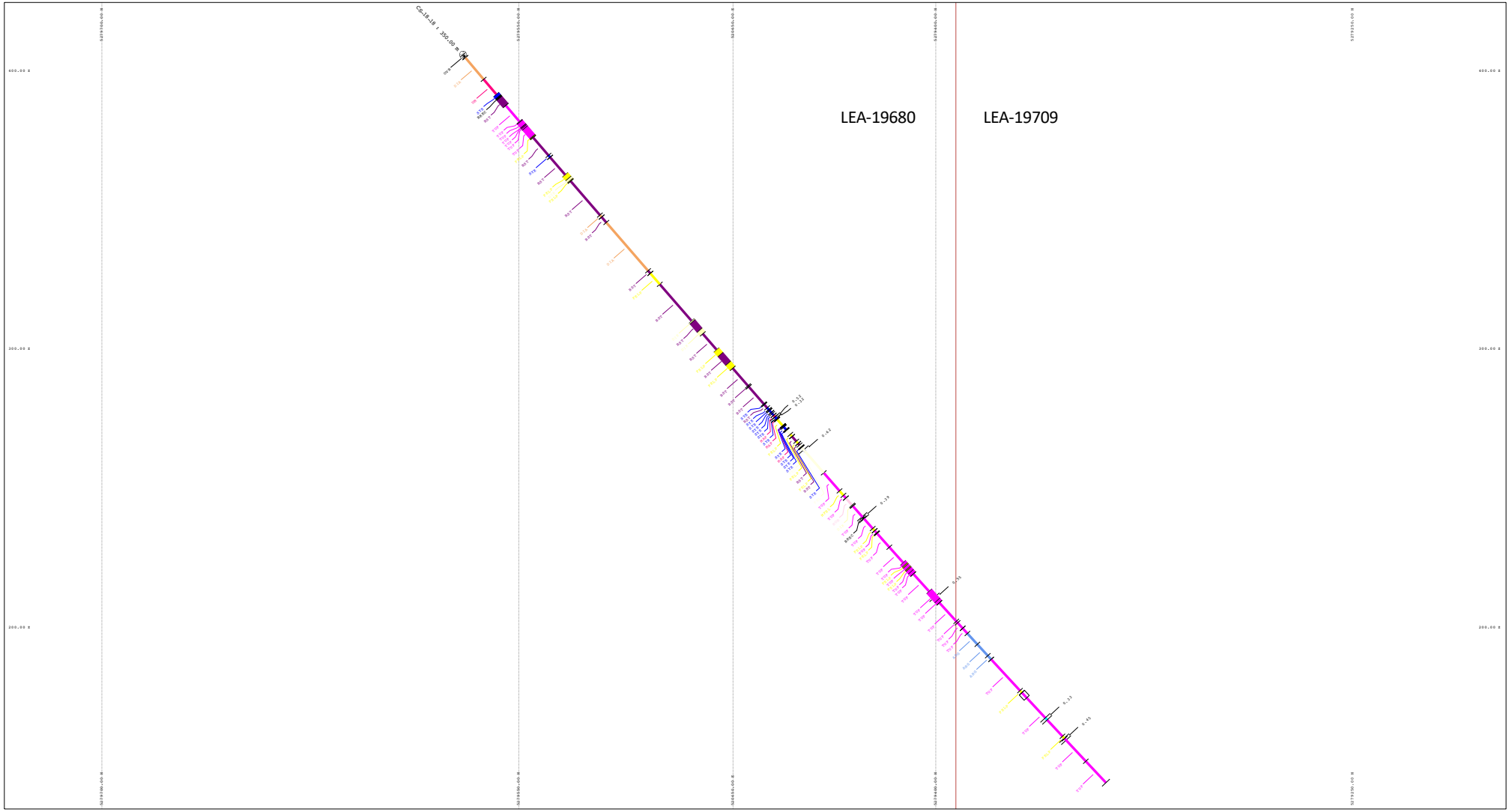

LEA-19680
LEA-19709
MLO-657



Canada Silver Cobalt Works

SCALE 1 : 500

DWG Sections : CS-16-17a



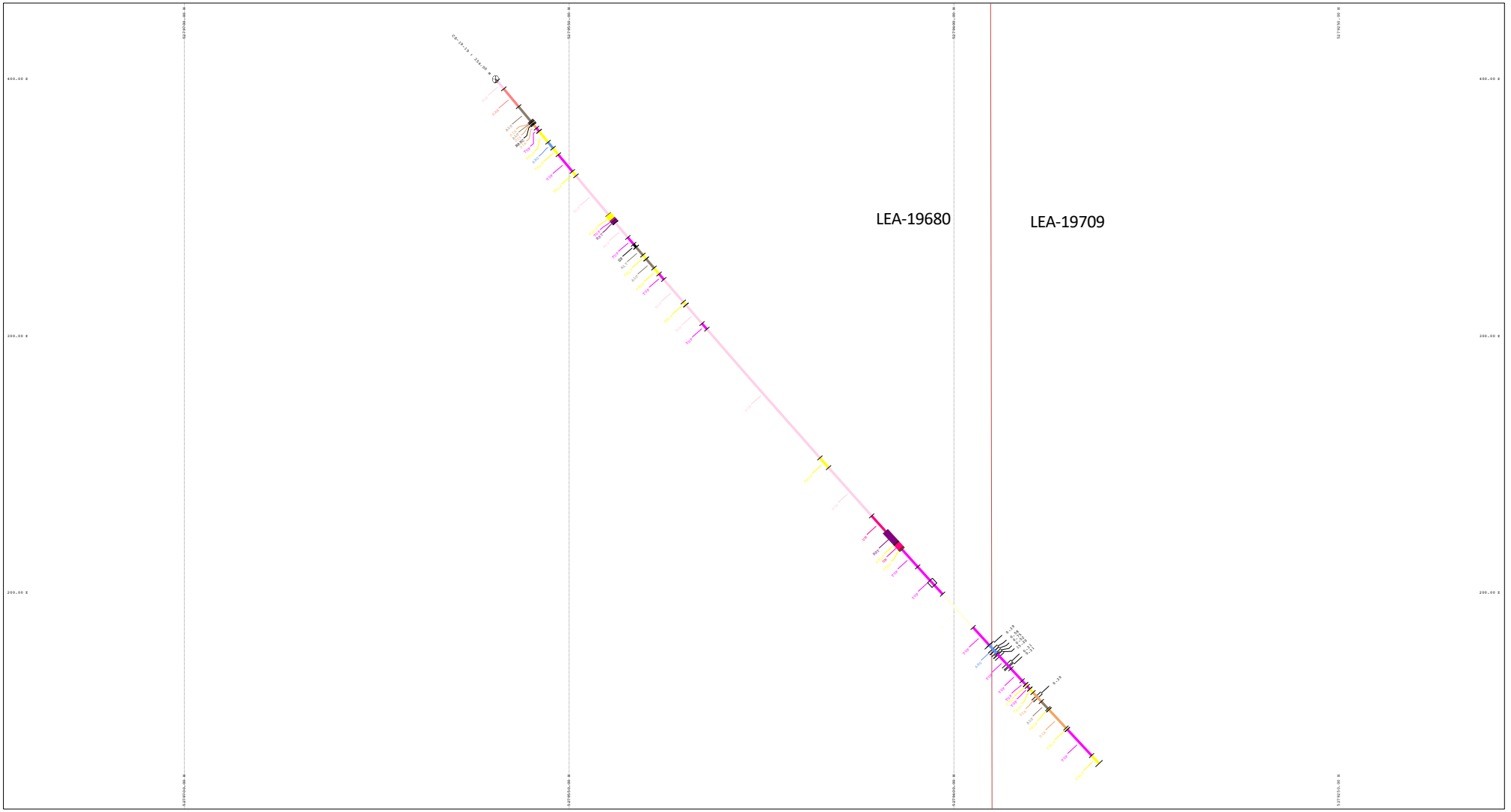
ASSAYS

LITHOLOGY

Canada Silver Cobalt Works

SCALE 1 : 500

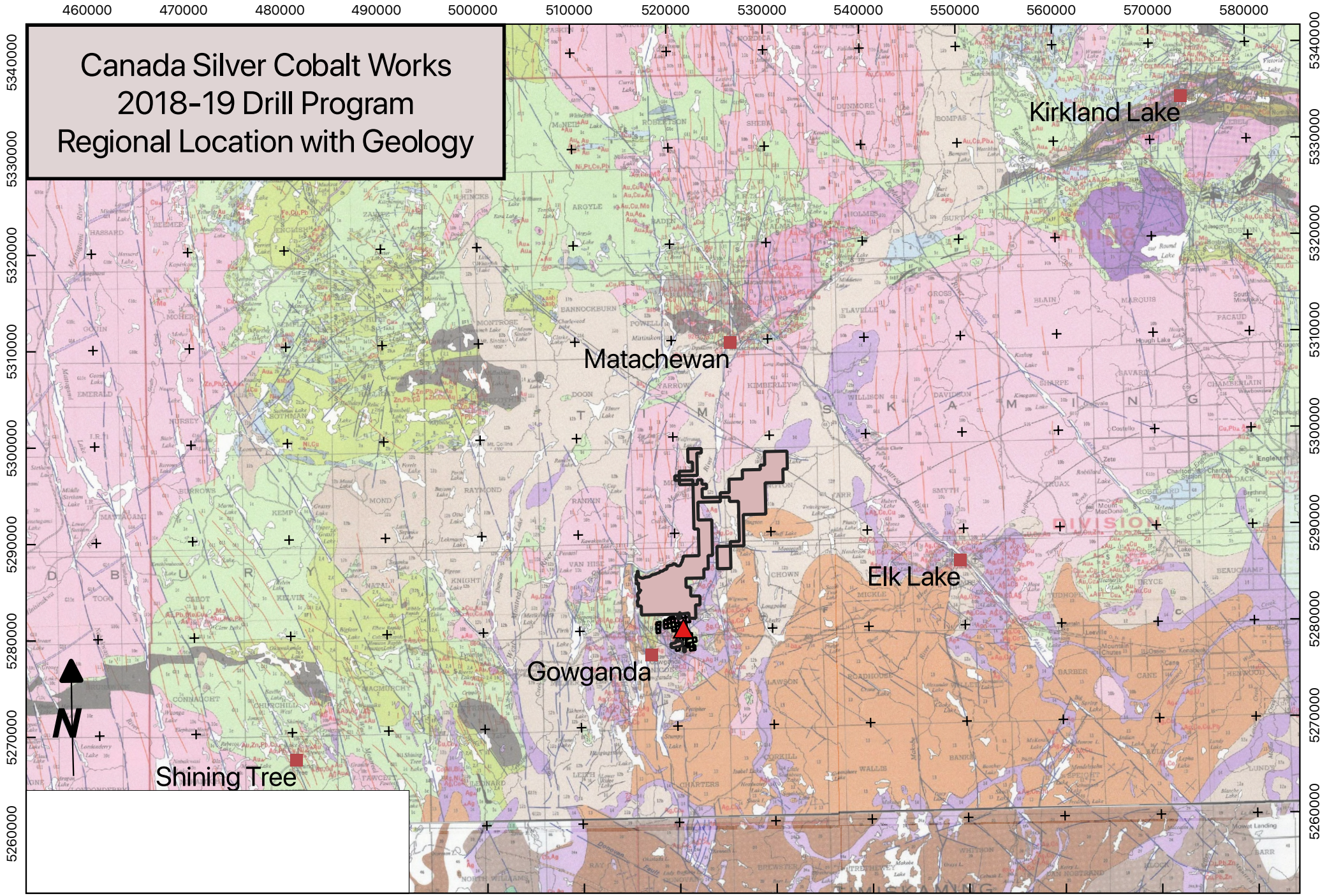
DWG Sections : CS-18-18

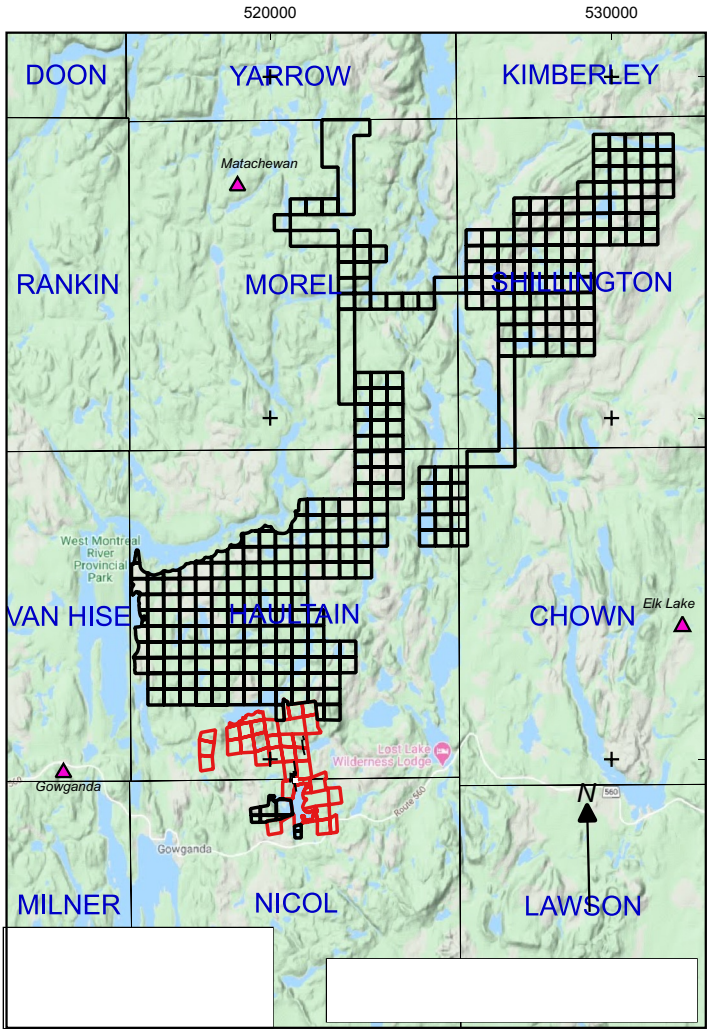


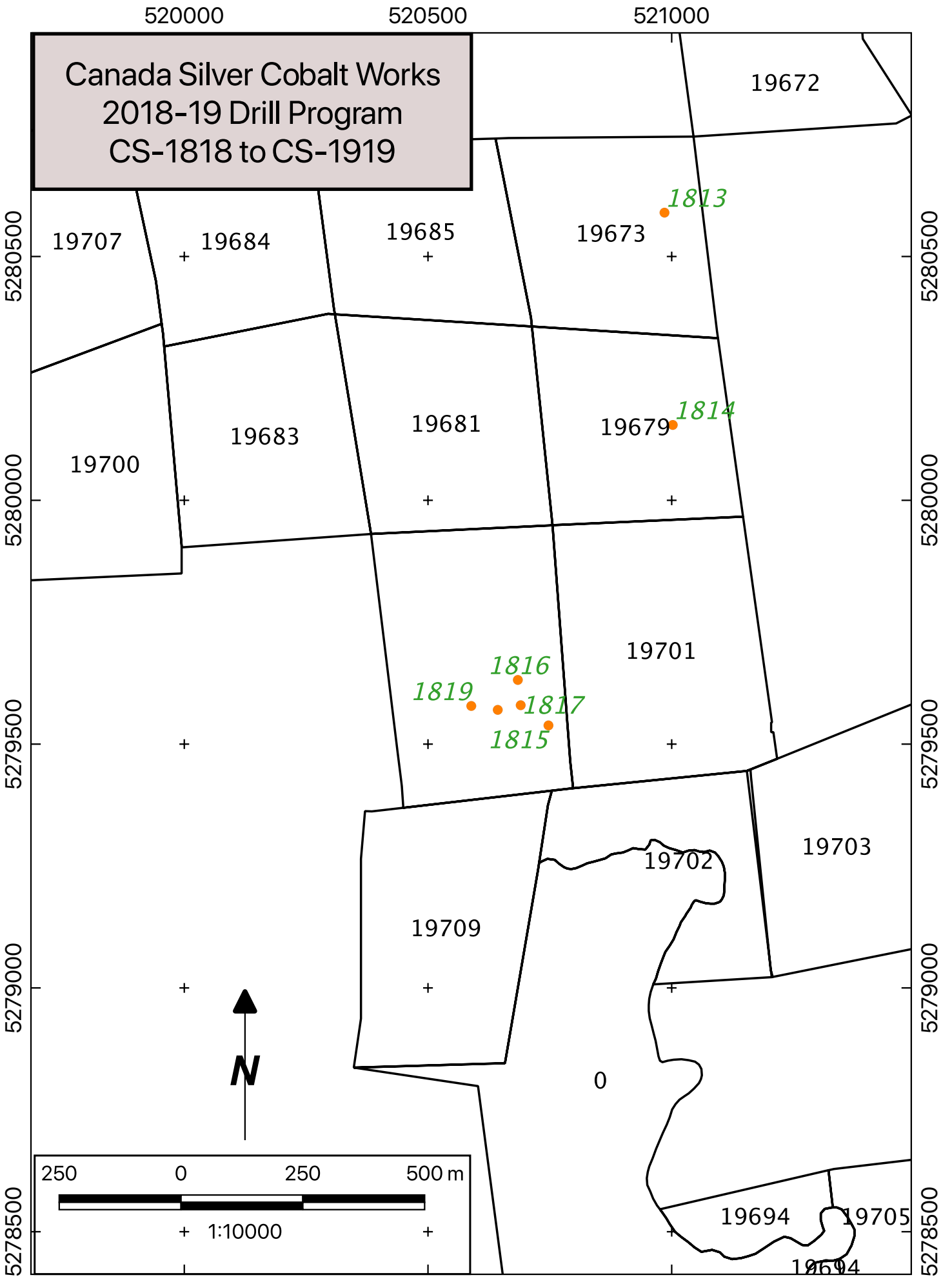
Canada Silver Cobalt Works

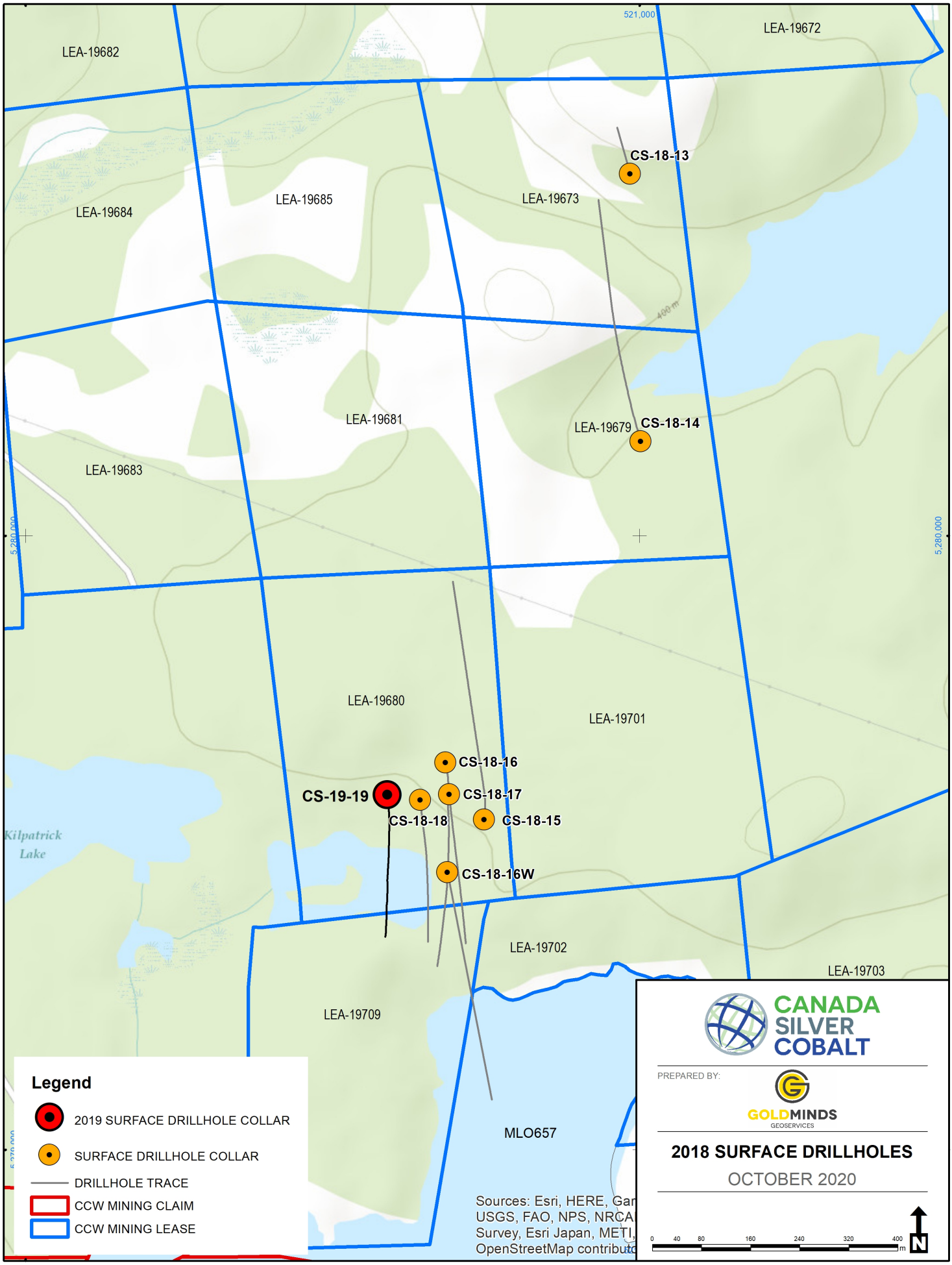
SCALE 1 : 500

DWG Sections : CS-19-19


Canada Silver Cobalt Works
2018-19 Drill Program
Regional Location with Geology
460000
470000
480000
490000
500000
510000
520000
530000
540000
550000
560000
570000
580000
5340000
5330000
5320000
5310000
5300000
5290000
5280000
5270000
5260000
Kirkland Lake
Matachewan
Elk Lake
Gowganda
Shining Tree
N


520000
530000
5300000
5290000
5280000
DOON
YARROW
KIMBERLEY
Matachewan
RANKIN
MOREL
SHILLINGTON
West Montreal River Provincial Park
VAN HISE
HAULTAIN
CHOWN
Elk Lake
Lost Lake Wilderness Lodge
Gowganda
Route 560
560
N
Gowganda
MILNER
NICOL
LAWSON


Canada Silver Cobalt Works
2018-19 Drill Program
CS-1818 to CS-1919
520000
520500
521000
5280500
5280000
5279500
5279000
5278500
19672
19707
19684
19685
19673
19700
19683
19681
19679
19701
19703
19702
19709
19694
19705
0
1813
1814
1816
1819
1817
1815
N
250
0
250
500 m
1:10000


521,000
LEA-19672
LEA-19682
CS-18-13
LEA-19684
LEA-19685
LEA-19673
400 m
LEA-19681
LEA-19679
CS-18-14
LEA-19683
5,280,000
5,280,000
LEA-19680
LEA-19701
CS-18-16
CS-19-19
CS-18-17
CS-18-18
CS-18-15
Kilpatrick Lake
CS-18-16W
LEA-19702
LEA-19703
LEA-19709
MLO657
Legend
2019 SURFACE DRILLHOLE COLLAR
SURFACE DRILLHOLE COLLAR
DRILLHOLE TRACE
CCW MINING CLAIM
CCW MINING LEASE
Sources: Esri, HERE, Gar
USGS, FAO, NPS, NRCA
Survey, Esri Japan, METI,
OpenStreetMap contribut
CANADA SILVER COBALT
PREPARED BY:
GOLDMINDS GEOSERVICES
2018 SURFACE DRILLHOLES
OCTOBER 2020
0 40 80 160 240 320 400 m
N
09_montage07.mxd