Report to:

COPPER FOX METALS INC.



Technical Report and Resource Estimate on the Schaft Creek Cu-Au-Mo-Ag Project, BC, Canada

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TECHNICAL REPORT AND RESOURCE ESTIMATE ON THE SCHAFT CREEK CU-AU-MO-AG PROJECT, BC, CANADA

EFFECTIVE DATE: MAY 23, 2012

Prepared by Robert Morrison, Ph.D., MAusIMM (CP), P.Geo.
Laura Karrei, M.Sc., P.Geo.



Suite 900, 330 Bay Street, Toronto, Ontario M5H 2S8
Phone: 416-368-9080 Fax: 416-368-1963

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Prepared by	*"Original document signed by Robert Morrison, Ph.D., MAusIMM (CP), P.Geo."* Robert Morrison, Ph.D., MAusIMM (CP), P.Geo.	Date	June 21, 2012
Prepared by	*"Original document signed by Laura Karrei, M.Sc., P.Geo."* Laura Karrei, M.Sc., P.Geo.	Date	June 21, 2012
Reviewed by	*"Original document signed by Jeff Wilson, Ph.D., P.Geo."* Jeff Wilson, Ph.D., P.Geo.	Date	June 21, 2012
Authorized by	*"Original document signed by Jeff Wilson, Ph.D., P.Geo."* Jeff Wilson, Ph.D., P.Geo.	Date	June 21, 2012

JW/jc

TETRA TECH WARDROP

Suite 900, 330 Bay Street, Toronto, Ontario M5H 2S8
Phone: 416-368-9080 Fax: 416-368-1963

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GLOSSARY

UNITS OF MEASURE

above mean sea level	amsl
acre	ac
ampere	A
annum (year)	a
billion	B
billion tonnes	Bt
Billion years ago	Ga
British thermal unit	BTU
centimetre	cm
cubic centimetre	cm^3
cubic feet per minute	cfm
cubic feet per second	ft^3/s
cubic foot	ft^3
cubic inch	in^3
cubic metre	m^3
cubic yard	yd^3
Coefficients of Variation	CVs
day	d

days per week	d/wk
days per year (annum)	d/a
dead weight tonnes	DWT
decibel adjusted	dBa
decibel	dB
degree	°
Degrees Celsius	°C
diameter	ø
dollar (American)	US$
dollar (Canadian)	Cdn$
dry metric ton	dmt
foot	ft
gallon	gal
gallons per minute (US)	gpm
gigajoule	GJ
gigapascal	GPa
gigawatt	GW
gram	g
grams per litre	g/L
grams per tonne	g/t
greater than	>
hectare (10,000 m^2)	ha
hertz	Hz
horsepower	hp
hour	h
hours per day	h/d
hours per week	h/wk
hours per year	h/a
inch	"
kilo (thousand)	k
kilogram	kg
kilograms per cubic metre	kg/m^3
kilograms per hour	kg/h
kilograms per square metre	kg/m^2
kilometre	km
kilometres per hour	km/h
kilopascal	kPa
kilotonne	kt
kilovolt	kV
kilovolt-ampere	kVA
kilovolts	kV
kilowatt	kW
kilowatt hour	kWh
kilowatt hours per tonne (metric ton)	kWh/t
kilowatt hours per year	kWh/a
less than	<

litre	L
litres per minute	L/m
megabytes per second	Mb/s
megapascal	MPa
megavolt	MV
megavolt-ampere	MVA
megawatt	MW
metre	m
metres above sea level	masl
metres Baltic sea level	mbsl
metres per minute	m/min
metres per second	m/s
metric ton (tonne)	t
microns	µm
milligram	mg
milligrams per litre	mg/L
millilitre	mL
millimetre	mm
million	M
million bank cubic metres	Mbm^3
million bank cubic metres per annum	Mbm^3/a
million hectare	Mha
million tonnes	Mt
minute (plane angle)	'
minute (time)	min
month	mo
ounce	oz
pascal	Pa
centipoise	mPa·s
parts per million	ppm
parts per billion	ppb
percent	%
pound(s)	lb
pounds per square inch	psi
revolutions per minute	rpm
second (plane angle)	"
second (time)	s
specific gravity	SG
square centimetre	cm^2
square foot	ft^2
square inch	in^2
square kilometre	km^2
square metre	m^2
thousand tonnes	kt
Three Dimensional	3D
Three Dimensional Model	3DM

tonne (1,000 kg)	t
tonnes per day	t/d
tonnes per hour	t/h
tonnes per year	t/a
tonnes seconds per hour metre cubed	ts/hm^3
volt	V
week	wk
weight/weight	w/w
wet metric ton	wmt
year (annum)	a

ABBREVIATIONS AND ACRONYMS

Accurassay Laboratories	Accurassay
Acme Analytical Laboratories Ltd.	AcmeLabs
ALS Chemex Laboratories	ALS Chemex
AMEC Americas Limited	AMEC
Application Information Requirements	AIR
BC Environmental Assessment Act	BCEAA
BGC Engineering Inc.	BGC
British Columbia	BC
British Columbia Ministry of Energy and Mines	BCMEM
Cabo Drilling Corp.	Cabo Drilling
calcium	Ca
calculated vertical gradient	CVG
Cambria Geosciences Inc.	Cambria
Canadian Environmental Assessment Act	CEAA
Canadian Institute of Mining, Metallurgy and Petroleum	CIM
chromium	Cr
controlled source audio magnetotelluric	CSMAT
copper equivalent	CuEq
Copper Fox Metals Inc.	Copper Fox
copper	Cu
detection limit	DL
digital terrain model	DTM
direct current induced polarization	DCIP
electrical imaging	EI
environmental assessment	EA
Environmental Assessment Office	EAO
Environmental Impact Statement	EIS
Geotech Drilling Services Ltd	Geotech Drilling
global positioning system	GPS
gold	Au
G&T Metallurgical Services	G&T
Hecla Mining Company	Hecla
high pressure grinding roll	HPGR

Hy-Tech Drilling Ltd.	Hy-Tech
induced polarization	IP
inductively coupled plasma-emission spectroscopy	ICP-ES
inductively coupled plasma-mass spectrometry	ICP-MS
International Organization for Standardization	ISO
International Electrotechnical Commission	IEC
inverse distance squared	ID^2
iron	Fe
Knight Piésold Ltd.	Knight Piésold
kriging efficiency	KE
Land and Resource Management Plan	LRMP
lead	Pb
Liard Copper Mines Limited	Liard Copper Mines
Lyncorp Drilling Services	Lyncorp Drilling
magnesium	Mg
magnetotelluric	MT
McElhanney Associates Consulting Services Ltd.	McElhanney
memorandum of understanding	MOU
metal leaching and acid rock drainage	ML/ARD
Metal Mining Effluent Regulations	MMER
molybdenum disulphide	MoS_2
molybdenum	Mo
National Instrument 43-101	NI 43-101
nearest neighbour	NN
net smelter return	NSR
niobium	Nb
North American Datum	NAD
Northwest Transmission Line	NTL
Notice of Work	NoW
ordinary kriging	OK
Paramount Mining Ltd.	Paramount
personal protective equipment	PPE
Precision GeoSurveys Inc.	Precision GeoSurveys
Process Research Associates	PRA
Qualified Person	QP
quality assurance/quality control	QA/QC
Quantile-quantile	QQ
rock quality designation	RQD
run-of-mine	ROM
semi-autogenous grinding	SAG
SAG mill comminution	SMC
Schaft Creek Project	the Project
Schaft Creek Property	the Property
SGS Lakefield Research Limited	Lakefield Research
Silver Standard Mines Ltd.	Silver Standard
silver	Ag

Spatsizi Remote Services Corporation	SRSC
Standards Council of Canada	SCC
Standards Council of Canada	SCC
Stantec Consulting Ltd.	Stantec
Stewart Bulk Terminals Ltd.	Stewart Bulk Terminals
Tahltan Drilling Services Corporation	TDSC
Tahltan Nation Development Corporation	TNDC
Tahltan Northern Exploration Services Ltd.	TNES
tailings storage facility	TSF
Teck Resources Limited	Teck
Tetra Tech Wardrop	Tetra Tech
theoretical slope of regression	Z/Z*
Toronto Stock Exchange Venture	TSXV
total field magnetic data	TF
trace	Tr
Universal Transverse Mercator	UTM
very-low frequency electromagnetic	VLF-EM

1.0 SUMMARY

Copper Fox Metals Inc. (Copper Fox) is a Canadian-based resource company listed on the Toronto Stock Exchange Venture (TSXV), trading under the symbol “CUU”, and is focused on the exploration and development of the Schaft Creek copper-molybdenum-gold-silver deposit. Tetra Tech Wardrop (Tetra Tech) was commissioned to complete a technical report and resource estimate update on the Schaft Creek Project (the Project). The Schaft Creek Property (the Property) is located in northwestern British Columbia (BC), situated approximately 1,050 km northwest of Vancouver and 375 km northwest of Smithers.

This report has been prepared in accordance with National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects, Companion Policy 43-101CP to NI 43-101, and Form 43-101F of NI 43-101.

The Qualified Persons (QPs) responsible for this report are Robert Morrison, Ph.D., MAusIMM (CP), P.Geo., a Lead Resource Geologist at Tetra Tech, and Laura Karrei, P.Geo., a Geologist at Tetra Tech. Ms. Karrei conducted a site visit on the Property on February 5 and 6, 2012 where she examined core, along with logging and sample cutting facilities. Due to heavy snow cover and winter conditions, drill sites were viewed from the air in a helicopter.

1.1 PROPERTY DESCRIPTION

Copper Fox holds title and a 100% working interest in a total of 142 mineral tenures, comprising 44,265.52 ha of land in northwestern BC. Six contiguous mineral tenures are included in this land package, which constitute the Property and cover 8,334.34 ha. These six mineral tenures are subject to “Schedule A” terms, as discussed in Section 4.2, and the currently defined deposit is situated within the southern boundary of mineral tenure ID 514603 and the northern boundary of mineral tenure ID 514637.

1.2 GEOLOGY AND MINERALIZATION

The Schaft Creek deposit is hosted by Stuhini Group (Stikine Terrane) basaltic to andesitic volcanic rocks of the Mess Lake facies. These volcanics are intruded by dacite to granodiorite dikes, whose origin is interpreted to be the nearby Hickman batholith. The Mess Lake facies is a vent-proximal, submarine to sub-aerial volcanic assemblage, and the whole sequence is estimated to be upwards of 800 m thick. There is an abundance of overlapping alteration zones, as well as a complex series of predominantly brittle structures.

The Schaft Creek deposit is considered a calc-alkalic copper-molybdenum porphyry system related to an elongate, high-energy, structurally controlled breccia system. The deposit has historically been divided into three zones; the Liard (Main) Zone, the Paramount Zone, and the West Breccia Zone. For estimation purposes, and due to the geometry of the mineralization, the West Breccia Zone has been included within the Liard Zone. The Liard Zone is related to the intrusion of feldspar quartz-porphyry dikes, while the Paramount Zone is closely related to a north-south trending breccia zone.

Mineralization in the Liard Zone consists of irregular sulphide stockworks (chalcopyrite, bornite, molybdenite, and lesser pyrite) forming a tabular zone overlapping all rock types, though preferentially hosted in coarse fragmental volcanic rocks. In the Paramount Zone, mineralization consists of fine veinlets and disseminated patches of sulphides (chalcopyrite, bornite, and molybdenite) hosted predominantly in the altered fine-grained matrix of the breccia system.

1.3 STATUS OF EXPLORATION

The Property was first discovered in the late 1950s, and has an extensive history including the completion of 410 drillholes totalling 98,445.82 m. The Project is at an advanced stage of exploration, with a prefeasibility study completed in 2008 and a feasibility study currently underway.

1.4 RESOURCE ESTIMATE

With an effective date of May 23, 2012, the Schaft Creek resource estimate is based on a Datamine™ block model using 15 m^3 parent cells and 5 m^3 sub-cells. No rotation was applied to the block model. Metals estimated include copper, molybdenum, gold and silver, with grade interpolation using ordinary kriging (OK). Density was interpolated using inverse distance squared (ID^2) and values were assigned to cells which failed to be estimated. No values were assigned to metals.

Metal (copper, molybdenum, gold and silver) and density sample outlier populations were identified in the raw assay data using histograms and lognormal cumulative plots. Top-cuts (or “caps”) were applied to the metal outlier populations, while the density outlier population was assigned a null value. Diamond drillhole assay and density data were composited to 4 m lengths for grade estimation. A total of 65,833 m of drill samples (16,501 individual composite samples) were used in the resource estimation.

Tetra Tech created two copper-equivalent (CuEq) grade shell solids using a 0.25% nominal cut-off of the composited and capped sample data. These solids generally matched the solids generated by AMEC Americas Limited (AMEC) in the previous 2011 resource estimate for the Schaft Creek deposit of Kulla et al. (2011). One solid formed the basis for estimation of the Liard Zone to the southeast, and the other formed the basis for estimation of the Paramount Zone to the northwest.

Isatis™ software was used for variography, which was completed for each metal using composited and capped data.

In addition to metals and density, the F-Function and LaGrange Multiplier values were estimated into cells using the copper grade. From these values were calculated the kriging efficiency (KE) and theoretical slope of regression (Z/Z*). Resource categories were assigned to each cells using Z/Z*, such that cells with greater than 0.95 Z/Z* were assigned as a Measured Resource, while cells between 0.25 and 0.95 Z/Z* were assigned as an Indicated Resource and cells less than 0.25 Z/Z* were assigned as an Inferred Resource.

Mineral resources for the Schaft Creek deposit were classified under the 2010 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves by application of copper-equivalent cut-offs which reflect commodity prices. The prices used include US$2.97/lb for copper, US$16.80/lb for molybdenum, US$1,256/troy ounce for gold and US$20.38/troy ounce for silver. Table 1.1 provides a summary for the entire Schaft Creek Resource (i.e. both the Liard Zone and Paramount Zone combined).

Table 1.1 Summary of the Schaft Creek Resource – Liard and Paramount Zones Combined

Resource Category	Cut-off CuEq%	Volume (m^3)	Tonnes	Density	Tonnes			Ounces		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Measured	0.05	54,921,900	147,979,067	2.694	710,181	455,400	25,280	1,153,898	8,457,472	0.480	0.308	0.017	0.243	1.778
	0.10	54,794,250	147,635,596	2.694	709,909	455,262	25,275	1,153,196	8,444,100	0.481	0.308	0.017	0.243	1.779
	0.15	**54,416,250**	**146,615,287**	**2.694**	**708,572**	**454,548**	**25,238**	**1,149,944**	**8,402,626**	**0.483**	**0.310**	**0.017**	**0.244**	**1.783**
	0.20	53,423,325	143,941,114	2.694	703,786	451,685	25,093	1,140,495	8,295,854	0.489	0.314	0.017	0.246	1.793
	0.25	51,190,275	137,927,871	2.694	690,087	443,086	24,687	1,115,692	8,041,256	0.500	0.321	0.018	0.252	1.813
	0.30	47,069,175	126,829,423	2.695	659,244	423,451	23,736	1,061,997	7,553,077	0.520	0.334	0.019	0.260	1.852
	0.35	41,014,050	110,534,082	2.695	606,161	389,880	22,096	967,410	6,775,078	0.548	0.353	0.020	0.272	1.906
	0.40	34,230,000	92,271,368	2.696	537,531	345,890	19,980	848,292	5,871,693	0.583	0.375	0.022	0.286	1.979
	0.45	27,547,650	74,277,384	2.696	461,099	296,713	17,472	720,235	4,930,538	0.621	0.399	0.024	0.302	2.065
	0.50	21,376,200	57,645,235	2.697	382,035	245,617	14,641	594,891	4,010,802	0.663	0.426	0.025	0.321	2.164
Indicated	0.05	410,498,250	1,105,697,109	2.694	4,345,344	2,784,969	182,101	6,298,821	59,248,807	0.393	0.252	0.016	0.177	1.667
	0.10	409,486,800	1,102,969,036	2.694	4,342,975	2,783,763	182,031	6,292,801	59,169,486	0.394	0.252	0.017	0.177	1.669
	0.15	**401,707,200**	**1,081,939,528**	**2.693**	**4,315,345**	**2,769,692**	**181,360**	**6,218,068**	**58,335,449**	**0.399**	**0.256**	**0.017**	**0.179**	**1.677**
	0.20	379,482,825	1,021,909,252	2.693	4,208,686	2,709,474	178,138	5,983,941	55,645,466	0.412	0.265	0.017	0.182	1.694
	0.25	339,968,625	915,477,325	2.693	3,966,748	2,556,808	169,794	5,584,025	50,932,173	0.433	0.279	0.019	0.190	1.730
	0.30	286,106,100	770,430,025	2.693	3,566,919	2,294,959	154,453	5,020,199	44,435,161	0.463	0.298	0.020	0.203	1.794
	0.35	227,489,925	612,662,375	2.693	3,053,899	1,957,733	133,946	4,317,656	37,027,689	0.498	0.320	0.022	0.219	1.880
	0.40	172,406,625	464,552,311	2.695	2,499,086	1,596,667	110,819	3,550,138	29,522,275	0.538	0.344	0.024	0.238	1.977
	0.45	127,310,100	343,308,026	2.697	1,984,814	1,264,944	88,415	2,837,462	22,967,207	0.578	0.368	0.026	0.257	2.081
	0.50	89,803,875	242,367,103	2.699	1,506,209	958,560	67,076	2,166,438	17,166,035	0.621	0.395	0.028	0.278	2.203

table continues…

Resource Category	Cut-off CuEq%	Volume (m^3)	Tonnes	Density	Tonnes			Ounces		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Inferred	0.05	232,068,900	625,134,106	2.694	2,154,900	1,319,749	94,296	3,444,780	32,423,450	0.345	0.211	0.015	0.171	1.613
	0.10	228,899,775	616,607,156	2.694	2,149,258	1,314,696	94,205	3,443,000	32,400,049	0.349	0.213	0.015	0.174	1.634
	0.15	221,727,900	597,191,283	2.693	2,123,136	1,303,101	93,581	3,359,565	31,601,369	0.356	0.218	0.016	0.175	1.646
	0.20	199,885,500	538,065,824	2.692	2,018,913	1,247,192	91,028	3,095,694	28,800,765	0.375	0.232	0.017	0.179	1.665
	0.25	167,424,000	450,670,341	2.692	1,822,334	1,128,998	84,380	2,725,750	24,815,546	0.404	0.251	0.019	0.188	1.713
	0.30	132,156,675	355,826,449	2.692	1,561,588	966,790	73,365	2,321,034	20,533,048	0.439	0.272	0.021	0.203	1.795
	0.35	98,202,825	264,462,368	2.693	1,264,919	780,660	59,756	1,894,709	16,148,473	0.478	0.295	0.023	0.223	1.899
	0.40	71,670,000	193,060,107	2.694	998,088	611,650	46,871	1,535,576	12,597,631	0.517	0.317	0.024	0.247	2.030
	0.45	51,542,175	138,916,161	2.695	768,777	468,363	35,316	1,224,170	9,603,460	0.553	0.337	0.025	0.274	2.150
	0.50	35,177,925	94,914,213	2.698	560,445	340,682	25,029	916,792	6,945,542	0.590	0.359	0.026	0.300	2.276

1.5 CONCLUSIONS AND RECOMMENDATIONS

In Tetra Tech's opinion, the updated mineral resource estimate, that is the subject of this report, is a fair and reasonable representation of the Schaft Creek deposit. The model is sufficiently advanced and sophisticated to be used to support a feasibility study.

Furthermore, it is Tetra Tech's opinion that additional exploration expenditures are warranted, and two separate exploration programs are proposed. Phase I is designed to identify and delineate new mineralized zones and chargeability anomalies identified from the Quantec Titan and High Resolution Magnetic surveys, and to infill drill part of the northern portion of the Paramount Zone to upgrade the resource category from inferred to indicated. Pending positive results of Phase I, Phase II is designed to further explore the GK, ES and Mike chargeability anomalies, and the area of mineralization west of the West Breccia Zone, situated outside of the current mineral resource estimate.

2.0 INTRODUCTION

Copper Fox is a Canadian-based resource company listed on the TSXV as CUU, and is focused on the exploration and development of the Schaft Creek copper-molybdenum-gold-silver deposit located in northwest BC, Canada.

Copper Fox's corporate office is located at 650, 340 - 12th Avenue SW, Calgary, AB, T2R 1L5 and their operations office is located at Suite 908, 510 Burrard Street, Vancouver, BC, V6C 3A8.

This technical report and resource estimate refers to the Property, which is situated approximately 1,050 km northwest of Vancouver and 375 km northwest of Smithers.

2.1 TERMS OF REFERENCE AND PURPOSE OF REPORT

Tetra Tech was retained by Copper Fox to produce a resource estimate on the Project in accordance with CIM Best Practices, and to disclose it in a technical report that has been prepared in accordance with NI 43-101 and Form 43-101F1.

The objectives of this study are to:

- produce a current resource estimate and to compile a NI 43-101 technical report on the Project, including an updated geological model, summary of land tenures, exploration history, geophysics, and drilling. This resource estimate includes drilling results from the 2011 program, and supersedes that of Kulla et al. (2011).
- provide recommendations and a budget for additional work on the Project.

The QPs responsible for this report are Robert Morrison, Ph.D., MAusIMM (CP), P.Geo., a Lead Resource Geologist at Tetra Tech, and Laura Karrei, M.Sc., P.Geo., a Geologist at Tetra Tech. Ms. Karrei conducted a site visit to the Property on February 5 and 6, 2012. During the site visit, Ms. Karrei visited the Project area, where she examined core, along with logging and sample cutting facilities. Due to heavy snow cover and winter conditions, drill sites were viewed from the air in a helicopter.

The accompanying resource estimate is also being used in the feasibility study, which is currently underway and being led by Tetra Tech. The study is expected to be completed later in 2012. It will include this updated geological model and resource estimate, along with a reserve estimate, revised capital cost and operating cost estimates, and other technical, socio-economic and financial reports related to the Property.

2.1.1 UNITS OF MEASUREMENT

All units of measurement used in this technical report and resource estimate are in metric, and currency is expressed in US dollars, unless otherwise stated.

On the effective date of the report, the exchange rate was US$1.00 equal to CDN$1.03.

2.2 EFFECTIVE DATE

The effective date of the mineral resource estimate and this report is May 23, 2012.

2.3 INFORMATION AND DATA SOURCES

All the data files reviewed for this study have been provided by either Copper Fox, or Cambria Geosciences Inc. (Cambria), on behalf of Copper Fox. Cambria was retained by Copper Fox to manage the 2011 diamond drilling exploration program, together with a program re-sampling and re-logging historical core from the Project.

Information was given to Tetra Tech in the form of .pdf reports, .xls files, .jpeg files, .dxf files, from acQuire Technology Solutions Pty Ltd. (acQuire), a geological database in the form of an export into Access, email correspondences, and personal communication. The Gemcom GEMS™ database used by AMEC for the 2011 resource estimate was also provided. Exploration work completed by Copper Fox includes years of historical data compilation, geophysical surveying, drilling and sampling.

The main sources of information in preparing this report are:

- Bender M., and McCandlish, K., 2008. Copper Fox Metals, Inc. Canadian National Instrument 43-101 Amended Technical Report: Preliminary Feasibility Study on the Development of the Schaft Creek Project Located in Northwest British Columbia, Canada: unpublished technical report prepared by Samuel Engineering Inc. for Copper Fox, effective date September 15, 2008, amended and restated June 17, 2010.
- Caron, M.E., Carter, G., and McGuigan, P.J. 2012. Progress Report – 2011 Exploration Program for the Schaft Creek Property, Schaft Creek, Northwestern British Columbia. Prepared by Cambria Geosciences Inc. April 2012, 77 pages.
- Kulla, G., Thomas, D., and Lipiec, T. 2011. Copper Fox Metals Inc. Schaft Creek Polymetallic Project, British Columbia, BC, NI 43-101 Technical report on Updated Mineral Resource Estimate. Prepared by AMEC, effective date July 26, 2011, 169 pages.

A complete list of references is provided in Section 19.0 of this report.

3.0 RELIANCE ON OTHER EXPERTS

In preparation of this report, Tetra Tech has relied upon others for information pertaining to mineral tenure, property ownership, surface rights, environment, royalties, and social issues. The majority of the information has been sourced from Copper Fox internal reports, company press releases, Bender et al. (2007), Caron et al. (2012), and Kulla et al. (2011). Neither Tetra Tech nor the authors are qualified to provide extensive comment on legal issues, including mineral tenure status associated with the Project and ownership.

Copper Fox has provided a description of the Property, which is disclosed in Section 4.0, and ownership is sourced from the following:

- Ministry of Energy and Mines of British Columbia website (http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/ARIS/BUILDMAPS/Pages/faq2.aspx), May 2012
- Stewart, E. 2012. Property description WEI Report, prepared by Elmer B. Stewart, President and Chief Executive Officer, Copper Fox Metals Inc., provided to Tetra Tech on May 17, 2012.

Tetra Tech has not conducted an examination of mineral tenures for the Project.

4.0 PROPERTY DESCRIPTION AND LOCATION

Copper Fox holds title and a 100% working interest in a total of 142 mineral tenures, comprising 44,265.52 ha of land in northwestern BC. Six contiguous mineral tenures are included in this land package, which constitute the Property and cover 8,334.34 ha.

4.1 LOCATION

The Property is located:

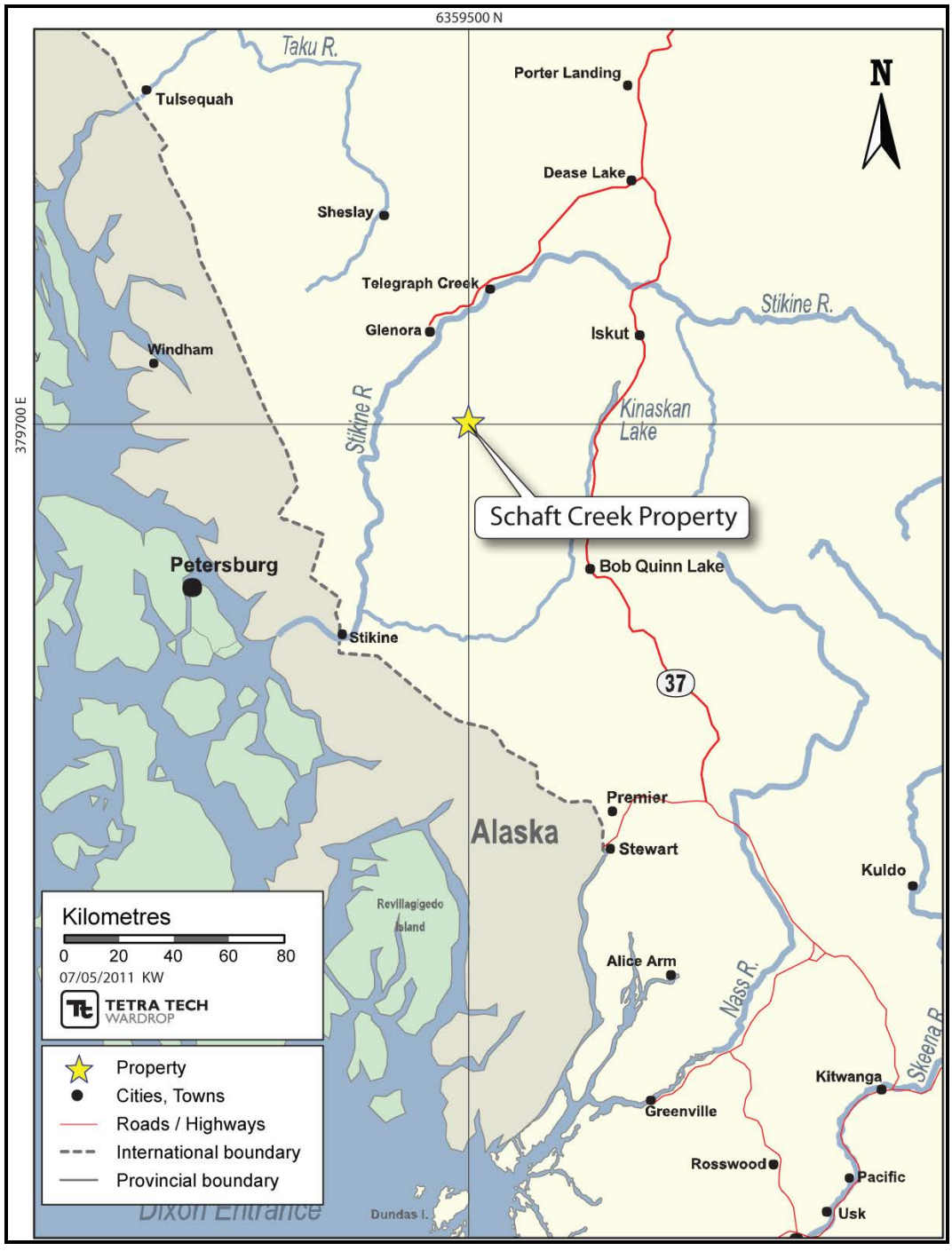
- within National Topographic System (NTS) 1:50,000 scale topographic map sheets 104G/6 and 7
- at Universal Transverse Mercator (UTM) coordinates 379700 E, 6359500 N, North American Datum (NAD)83, Zone 9 datum
- at latitude 57° 22’ north, longitude 131° 00’ west
- 1,050 km northwest of Vancouver
- 375 km northwest of Smithers
- 130 km southwest of Dease Lake
- 80 km southwest of the village of Iskut
- approximately 60 km south of the village of Telegraph Creek
- 9 km west of the southeast edge of Mount Edziza Provincial Park
- approximately 45 km west of Highway 37
- within the Liard Mining Division and the Cassiar Iskut-Stikine Land and Resource Management Plan (LRMP) area
- within the traditional territory of the Tahltan Nation
- on the eastern edge of the Coast Mountain Range in northwestern BC.

The Property is situated as illustrated in Figure 4.1 and Figure 4.2.

Figure 4.1 General Property Location Map



Figure 4.2 Property Location Map of the Schaft Creek Deposit



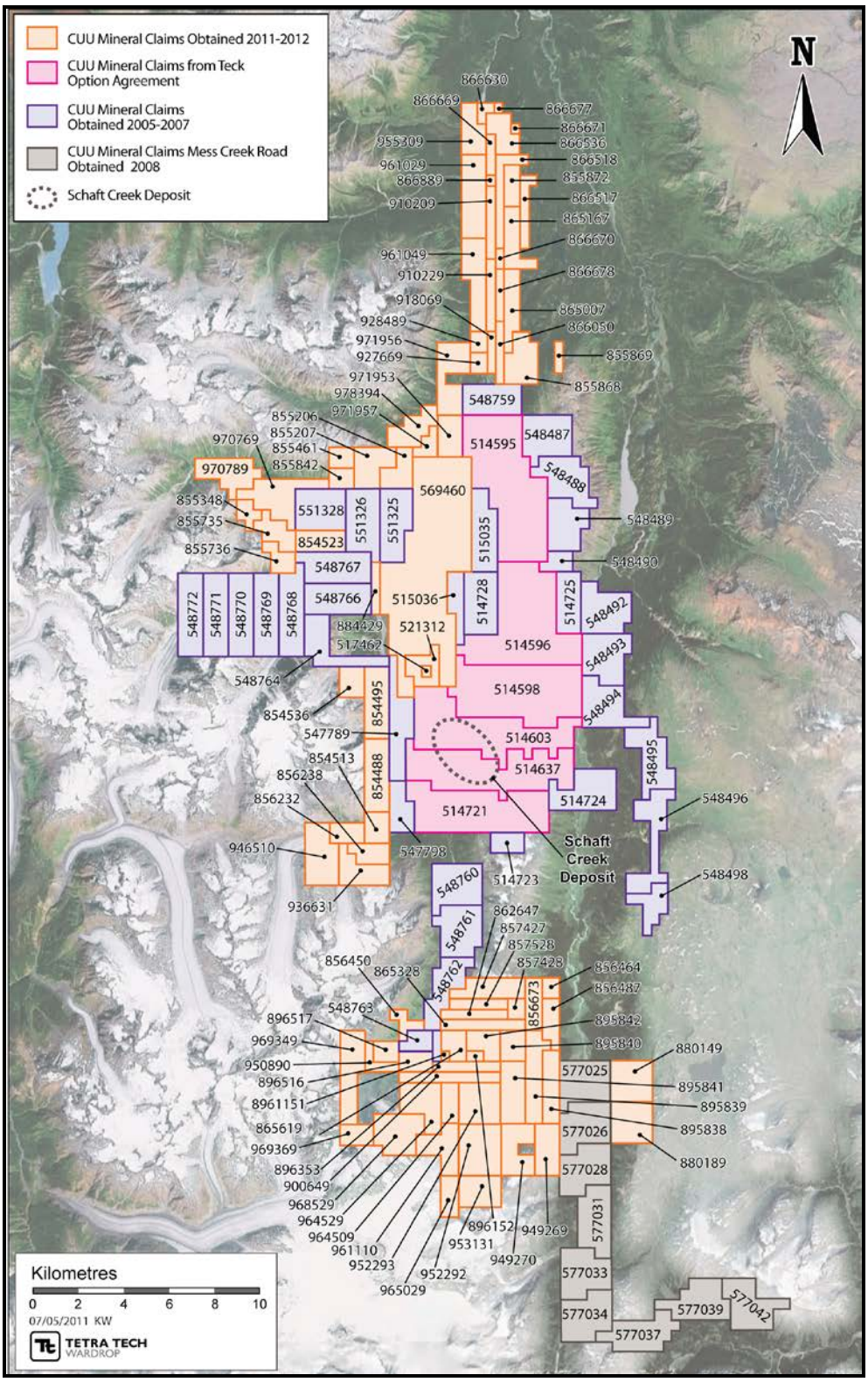
4.2 PROPERTY DESCRIPTION – MINERAL TENURES AND AGREEMENTS

Copper Fox holds title and a 100% working interest in a total of 142 mineral tenures, comprising 44,265.52 ha of land (Appendix A) in northwestern BC (Figure 4.3). Included in this land package are the six contiguous "Schedule A" mineral tenures which constitute the Property and covers 8,334.34 ha (Table 4.1). As illustrated in Figure 4.3, the Schaft Creek copper-gold-molybdenum-silver deposit is located within the southern boundary of mineral tenure ID 514603 and the northern boundary of mineral tenure ID 514637.

Table 4.1 Mineral Tenures Defining the Property

Tenure Number	Issue Date	Good To Date	Status	Area (ha)
514595	2005/Jun/16	2018/Oct/30	GOOD	1,653.04
514596	2005/Jun/16	2018/Oct/30	GOOD	1,550.96
514598	2005/Jun/16	2018/Oct/30	GOOD	1,412.62
514603	2005/Jun/16	2018/Oct/30	GOOD	1,291.06
514637	2005/Jun/17	2018/Oct/30	GOOD	1,256.71
514721	2005/Jun/17	2018/Oct/30	GOOD	1,169.95

Figure 4.3 Mineral Tenures Held by Copper Fox – Schaft Creek Property and Surrounding Areas



The mineral tenures that constitute the Property were originally conveyed to Copper Fox, formerly 955528 Alberta Ltd., pursuant to the 2002 Option Agreement between Copper Fox and Teck Resources Limited (Teck). The 2002 Option Agreement contains an Area of Interest clause that extends for a maximum distance of 2 km from the outside boundary of the "Schedule A" mineral tenures. Copper Fox has earned a 100% working interest in the Project subject to a 30% net proceeds interest held by Liard Copper Mines Limited (Liard Copper Mines), a private company 78% owned by Teck, and a 3.5% net profits interest held by Royal Gold Inc. The 78% equity interest in Liard Copper Mines represents 23.4% of Liard Copper Mines' 30% net proceeds interest in the Project referred to as "Teck's indirect interest". Copper Fox can earn Teck's "indirect interest" by completing and delivering to Teck a Positive Bankable Feasibility Study, under the terms of the 2002 Option Agreement. Teck may at any time elect to exercise one of its earn-back options pursuant to the terms and conditions of the 2002 Option Agreement. On receipt of a Positive Bankable Feasibility Study, as defined in the 2002 Option Agreement, Teck has 120 days in which to elect to either: i) exercise one of its earn-back options, or ii) retain a 1% net smelter return (NSR) royalty, or iii) receive shares of Copper Fox to a value of $1,000,000 (Stewart 2012).

If Teck exercises the earn-back option, then it can elect to acquire either 20%, 40% or 75% of Copper Fox's interest in the Project by solely-funding subsequent expenditures that are equal to either 100%, 300% or 400% of Copper Fox's prior expenditures. As of the end of January 2012, Copper Fox expenditures totalled approximately $75.9 million. Should Teck elect to earn-back a 75% working interest, Teck will be responsible for arranging Copper Fox's share of project financing and recover such project financing funds from Copper Fox's share of metal sales until payout is reached (Stewart 2012).

The remainder of the mineral tenures totaling 35,931.18 ha in the area are held 100% by Copper Fox and have been obtained by Copper Fox through mineral tenure acquisitions and mineral tenure purchase agreements with several vendors. Some of these mineral tenures are subject to inclusion within the Project under the terms of the Area of Interest provisions of the Option Agreement.

These mineral tenures are subject to various NSR royalties retained by the vendors that range from 0.5% NSR to 2% NSR. The NSRs held by the vendors are subject to a "Partial NSR Buyout Option" which allows Copper Fox at any time to purchase half of the NSR from each vendor for cash payments that range from $0.25 million to $1.5 million (Stewart 2012). The reader should refer to www.copperfoxmetals.com for details pertaining to each agreement.

The aforementioned mineral claims cover all of the known mineralized area within the Project described within this report, and contain sufficient land for exploration and development purposes.

4.3 COMMUNITY RELATIONS AND THE CASSIAR ISKUT-STIKINE LAND AND RESOURCE MANAGEMENT PLAN

The Schaft Creek mineral claims are located in traditional lands of the Tahltan Nation. Copper Fox has initiated discussions with Tahltan Nation Development Corporation (TNDC), which represents the economic arm of the Tahltan Nation, to set out the joint understanding and intention of both parties to co-operate in performing work on the Project. On May 4, 2007, Copper Fox and the Tahltan Nation announced that they had completed a memorandum of understanding (MOU). The agreement defines the scope of work, program commitments, cooperation, and communication that Copper Fox will follow at Schaft Creek and recognizes that the TNDC are a preferred contractor (Kulla et al. 2011). Tahltan Northern Exploration Services Ltd. (TNES) of Dease Lake and Smithers, and Spatsizi Remote Services Corporation (SRSC) of Dease Lake, managed and supported the Schaft Creek camp in 2011 on behalf of Copper Fox.

Schaft Creek is situated within the Liard Mining Division and the Cassiar Iskut-Stikine LRMP area, which encompasses 5.2 Mha in northwestern BC (Caron et al. 2012). The LRMP was finalized in May 2000, and supports further exploration and development of the mineral resources in the area by providing information to be considered during the permitting and impact assessment processes. The LRMP is primarily in territory claimed by the Tahltan Nation. The Tahltan Joint Councils, representing the Tahltan Band from Telegraph Creek and the Iskut Band, were full table members throughout the process and endorse the LRMP. Neighbouring First Nations include the Nisga'a, Kaska, and Tlingit Nations. The LRMP identifies 15 geographic resource management zones, covering 31% of the plan area. The Project is part of the Telegraph Creek Community Watershed and therefore falls under Area-Specific Management requirements stipulated in the LRMP. This zone includes the domestic water supply for the community of Telegraph Creek and is formally designated as a Community Watershed. The objective of the management approach is “to maintain the quality and quantity of community water supply and to maintain natural stream flow regimes within the natural range of variability”. The LRMP states that mineral exploration, including road construction, maintenance and deactivation, is to be conducted according to the guidelines for community watersheds outlined in the Mineral Exploration Code (Kulla et al. 2011).

Copper Fox has posted a reclamation bond with the British Columbia Ministry of Energy and Mines (BCMEM) to reclaim the Property. This includes removing all surface facilities and reclaiming areas of disturbance. The bond has been deemed sufficient by the BCMEM to reclaim the Property in the event that Copper Fox abandons the Property (Bender et al. 2007).

4.4 SOCIO-ECONOMIC AND ENVIRONMENTAL STUDIES AND ISSUES

Schaft Creek environmental and socio-economic baseline studies began in October 2005 and are ongoing. Baseline studies completed in 2006 included wildlife (moose,

goats and bird studies), water quality, aquatic biology, fisheries, hydrology, meteorology, archaeology and metal leaching and acid rock drainage (ML/ARD). The results of the 2006 studies were reviewed by Federal and Provincial regulators and the Tahltan Nation. The scope of work for the 2007 environmental and socio-economic baseline studies was increased significantly and was aimed at fulfilling requirements of both a Federal and Provincial environmental assessment process and the specific studies requested by the Tahltan Nation. Studies in 2007 consisted of aquatic and fisheries surveys, archaeological studies, meteorological baseline studies, a bat and Western toad survey, hydrological and road assessment studies, wetlands, groundwater and hydrology baseline studies, noise, soils and vegetation baseline studies, ML/ARD studies and a Tahltan foods baseline assessment. The work and scope of the 2007 and 2008 environmental and socio-economic baseline studies were presented and approved by government authorities and the Tahltan Nation (Kulla et al. 2011).

During 2008, studies included additional fisheries, bird, aquatic, vegetation, and ungulate surveys, ecosystem and vegetation mapping surveys, a navigable waters assessment, ML/ARD assessments, and an access route geohazard survey. Update studies were performed in 2009 to assess the site meteorology and air quality, update the country foods assessment and complete the baseline hydrological survey. During 2010, studies performed included moose and wildlife habitat suitability surveys, ML/ARD studies, land use and soils baseline studies, a socio-economic baseline study, archaeological and hydrometeorological studies, and a channel assessment and migration hazard study on Upper Mess Creek (Kulla et al. 2011). Environmental baseline studies show that the Schaft Creek deposit contains a very low amount (approximately 5%) of potential acid generating rock and that the streams in the immediate vicinity of the proposed open pit mine, waste rock storage areas and tailings areas are non-fish-bearing (press release February 15, 2011).

In addition to these baseline studies, Copper Fox has commissioned studies on environmental and social work plans, alternatives assessments, geohazard options for tailings storage facility (TSF) locations, water management studies for the TSF and assessment of likely access routes (Kulla et al. 2011).

The Project has a long exploration history, with a 60-person camp and an existing airstrip on site. Additional disturbances are related to access roads and drill sites. Copper Fox has posted a reclamation bond with the BCMEM to reclaim the Property. This includes removing all existing surface facilities and reclaiming areas of disturbance. The bond has been deemed sufficient by the BCMEM to reclaim the Property in the event that Copper Fox abandons the Project. Closure costs estimated for a mining operation in the 2008 prefeasibility study were about $87 million. This figure will be reviewed during feasibility-level studies (Kulla et al. 2011).

The Project will require a BC environmental assessment certificate as well as provincial permits, authorizations and licenses to construct and operate the Schaft Creek mine. The Project may also require a federal decision on the likelihood of

environmental impacts if the *Canadian Environmental Assessment Act* (CEAA) applies to the Project. The Project constitutes a reviewable project pursuant to Part 3 of the Reviewable Projects Regulations (British Columbia Reg. 370/02) of the *BC Environmental Assessment Act* (BCEAA). The Project was launched in the BC environmental assessment (EA) process on August 14, 2006, with the Issuing of Order under Section 10(1)(c) of the BCEAA. The Canadian EA process is governed by the CEAA. At this time, it is not known if the CEAA will apply to the Project. The CEAA applies when a federal department or agency is required to make a decision on a proposed project. Federal regulatory agencies require specific project details to determine if and how the CEAA will apply. Upon receipt of the BC environmental assessment certificate, permits, authorizations and licenses will be sought to construct and operate the Schaft Creek mine (Bender et al. 2007). Copper Fox is working towards completing an EA application (press release April 20, 2012).

Copper Fox has worked with the Tahltan Heritage Resources Environmental Assessment Team and provincial and federal regulators to finalize the Application Information Requirements (AIR) (formerly the Terms of Reference) for the EA application for the Project. The collection of environmental baseline data including detailed environmental and socio-economic studies related to development of the Schaft Creek deposit has occurred. The AIR is the last major milestone in the pre-application stage of the EA process for the Project. The approval for the terms and conditions of the AIR was received on February 7, 2011. Copper Fox will submit an application for the BC environmental assessment certificate for review at the end of 2012. The EA application will also serve as the Environmental Impact Statement (EIS) as required under the CEAA. Stantec Consulting Ltd. (Stantec) has been contracted to assemble the environmental data collected over the past five years and to prepare the EA application for the Project. Copper Fox's goal is to minimize the impact on the environment and develop the Schaft Creek deposit in an environmentally responsible manner (press release February 15, 2011).

4.5 PERMITS

4.5.1 CURRENT PERMITS

Copper Fox is currently working under an amended Notice of Work (NoW) and reclamation program from BCMEM under the *Mines Act* (BC) (Permit #MX-1-647, Approval #11-0100455-0705; Mine #01400455, dated March 31, 2011 and valid for a four-year term). Use of the Schaft Creek airstrip is also covered under the NoW and reclamation program. Copper Fox has filed an amended NoW for 2011 (Mine #0100455) which has been subsequently approved. The planned start date was filed as May 25, 2011 and the NoW had a planned end date of December 30, 2014 (Kulla et al. 2011). The types of activities that were advised to be undertaken in the application included:

- grids, camps and helicopter pads
- surface drilling

- access construction, modification or reclamation work.

The BCMEM will send the permit amendment application to various government agencies and First Nations to review. These parties have 30 days to review the amendment application. Copper Fox has received preliminary indication that the Government of BC will grant the permit (Kulla et al. 2011).

Copper Fox has previously obtained an "Occupation Licence to Cut" from the BC Ministry of Forests, Lands and Natural Resource Operations (Permit # L47555). This permit allowed Copper Fox to cut trees for the purpose of exploration activities. This permit was valid until June 14, 2009. During 2010, Copper Fox brushed out old trails and did not require a renewal of the permit (Kulla et al. 2011). In 2011, Copper Fox was issued a free use permit (Permit #MX-1-647:2011) for tree-cutting for the approved work program beginning July 5, 2011 and ending on March 31, 2015. Copper Fox has also been issued an equivalency certificate (#SA103322 Ren 1.) by Transport Canada Safety and Security to handle or transport dangerous goods, by cargo aircraft. The certificate was issued on April 20, 2012 and is valid until April 30, 2014.

4.5.2 PERMITS TO SUPPORT PROJECT DEVELOPMENT

The information in this subsection is taken directly from Kulla et al. (2011), which derived the information from Bender et al. (2008), and Copper Fox personnel.

The Schaft Creek Mine Project constitutes a reviewable project pursuant to Part 3 of the Reviewable Projects Regulation (B.C. Reg. 370/02) as the Project is a planned new mining facility that during operations is proposed to have a production capacity of greater than 75,000 t/a.

As required by British Columbia (BC) Environmental Assessment Act and specified in the section 10 order issued by the BC Environmental Assessment Office (EAO) on August 14, 2006, Copper Fox must submit an application for an environmental assessment certificate (Application) and receive and Environmental Assessment Certificate (EA Certificate) before proceeding with activities related to construction and operation of the Project. The BC EAO is responsible for administering the EA review and presenting its findings to the Ministers of Environment and Mines for a decision on issuance of an EA Certificate.

The Project is currently in the first of the Province's two staged EA process. The pre-application stage focuses on identification of the issues and concerns to be addressed in the EA Application. The pre-application stage is considered completed on acceptance of the EA Application for review by the BC EAO, initiating the Application Review stage of the EA process.

The Application must assess potential adverse environmental, social, economic, heritage and health effects, and practical means to prevent or reduce to acceptable level any potential adverse effects. The Application must also assess

potential adverse effects on First Nation Aboriginal Interests and to the extent appropriate propose means to avoid, mitigate, or otherwise accommodate such potential adverse effects.

The Project is also subject to federal review under the Canadian Environmental Assessment Act, SC 1992, c.37 (CEAA) due to the requirement for federal statutory authorizations. Natural Resources Canada (NRCan) is a confirmed Responsible Authority (RA) under section 11(1) of the CEAA, due to the requirement for issuance of a licence under section 7(1)(a) of the Explosives Act. Fisheries and Oceans Canada (DFO), is also a confirmed RA due to the requirement for authorisation under subsection 35(2) of the Fisheries Act. Environment Canada has also confirmed RA status due to the likelihood that it will need to issue a licence under subsection 10(1) of the International River Improvements Regulations. Transport Canada (TC) is a potential RA as it may need to issue an approval under section 5 of the Navigable Waters Protection Act. Since the Project is listed in the schedule of the Comprehensive Study List Regulations (i.e. a proposed metal mine with a capacity of greater than 3,000 tonnes per day), it will be subject to a comprehensive study.

Pursuant to subsection 11.01 (1) of the CEAA, the Canadian Environmental Assessment Agency (CEA Agency) will exercise the powers and perform the duties and functions of the RAs until the comprehensive study report is provided to the Minister of the Environment.

The Canada/British Columbia Agreement on Environmental Assessment Cooperation (2004) provides for cooperative EAs to minimize duplication whenever possible. A cooperative assessment will be undertaken, pursuant to this agreement, and will be led by the EAO and CEA Agency. To ensure the EA of the Project is harmonized to the greatest extent possible, the EAO and CEA Agency will develop a work plan covering aspects of the EA such as timelines, Aboriginal and public consultation, and agency/departmental roles and responsibilities.

Copper Fox will submit a draft Application to the EAO and CEA Agency for screening to ensure compliance with the AIR. Following any changes required by the EAO based on feedback from a technical Working Group made of Government regulators and First Nations, Copper Fox will submit the final Application to the EAO and EAO will initiate the Application review phase, to be completed within 180 days. The Application will be made available to First Nations listed on the EAO's section 11 order, Government agencies, local governments, and the public. In the early stages of the Application review, the EAO will initiate a 45 day public comment period on the Application, as set out in the section 11 order. Following the public comment period, Copper Fox will track and address the issues raised during the Application review. At the end of the review the EAO will submit an assessment report, and recommendations to the Provincial Minister of Environment and Minister of Mines on the issuance of the EA Certificate.

The Federal government, on completing its review under the CEAA, will submit its conclusions and recommendations, in the form of a comprehensive study report, to the Federal Minister of the Environment for a decision under section 23 of the CEAA, whether to refer the Project back to the RAs for a course of action decision under section 37 of the CEAA.

Providing that Provincial and Federal EA approvals are obtained, Copper Fox will require a number of permits and authorizations from both Provincial and Federal departments before construction and operation can be initiated. Copper Fox has indicated that it intends on submitting applications for Provincial permits and authorizations related to the construction of the access road, concurrently during the Application review. While the Province's Concurrent Approval Regulation (B.C. Reg. 371/2002) allows for submission of eligible approvals required to construct and operate the Project during the province's review of the Application for an Environmental Assessment Certificate, a decision on those approvals cannot be made until and unless the certificate has been issued. There is no federal concurrent approval mechanism, and RAs will move into their permitting/authorization decision processes if and after making a course of action decision under section 37 of the CEAA.

Copper Fox has completed numerous environmental baseline studies in the fields of water quality, hydrology, hydrogeology, climate, fish and aquatics, wildlife, vegetation, soils, economics, social, health and heritage (refer to Section 4.7). Copper Fox will use this information together with the final Project Description from the planned Feasibility Study to compete a draft EA Application for submission to the BC EAO and CEA Agency. Copper Fox intends to submit the draft EA Application in the fourth quarter of 2011.

4.5.3 OTHER PERMITS

Copper Fox is anticipating the following federal triggers (Kulla et al. 2011):

- Transport Canada (*Navigable Waters Act*)
- Department of Fisheries and Oceans (*Fisheries Act*; Metal Mining Effluent Regulations)
- Natural Resources Canada (*Explosives Act*)
- Permit Approving Work System and Reclamation Program (*Mines Act*)
- Water License (*Water Act*)
- Construction Permit (*Drinking Water Protection Act*)
- Operation Permit (*Drinking Water Protection Act*)
- Occupant License to Cut (*Forest Act*)
- Special Use Permit (*Forest Act*)
- License of Occupation (*Land Act*)

- Investigative Permit (*Land Act*)
- Surface Lease (*Land Act*)
- Right of Way (*Land Act*)
- Highway Access Permit (*Transportation Act*)
- Permit to Construct a Water Works (*Drinking Water Protection Act*)
- Waste Management Permit (*Environmental Management Act*)
- Camp Operations Permit (*Environmental Management Act*).

The following is a list of key federal approvals and licenses likely required to develop the Schaft Creek Project:

- Metal Mining Effluent Regulations (MMER) (*Fisheries Act*/Environment Canada)
- Fish Habitat Compensation Agreement (*Fisheries Act*)
- Section 35(2) Authorization for harmful alteration, disruption or destruction of fish habitat (*Fisheries Act*)
- Navigable Water: Stream Crossings Authorization (*Navigable Waters Protection Act*)
- Tailings Dam Permit (Letter of Application) (Navigable Waters Works Regulations)
- Explosives Factory License (*Explosives Act*)
- Explosives Magazine License (*Explosives Act*)
- Ammonium Nitrate Storage Facilities (*Canada Transportation Act*)
- Radio Licenses (*Radio Communication Act*).

4.6 TETRA TECH COMMENTS

The mineral tenures are on Crown land and do not confirm exclusive surface rights to a mineral claims holder. Tetra Tech is not aware of any other environmental or social issues regarding the Property. All exploration activities conducted on the Property are in compliance with relevant environmental permitting requirements. To Tetra Tech's knowledge, Copper Fox has obtained permits required to undertake exploration activities which are sufficient to ensure that activities are conducted within the regulatory framework. Additional permits will be required for Project development; preliminary discussions have been held with the relevant statutory authorities. A number of permits will be required to support Project development and operation.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESSIBILITY

The Property is remotely located with no developed roads leading into the area. It is best accessed via helicopter and fixed-wing aircraft, utilizing the gravel airstrips at the camp. Helicopter service is normally available at Dease Lake and at Bob Quinn. Alternatively, fixed wing aircraft can be chartered from Smithers, BC and flown directly to the Schaft Creek camp. Mobility within the Project area is achieved via rough-service bulldozer trails.

5.2 CLIMATE AND PHYSIOGRAPHY

The Property is situated within the mountainous terrain just east of the junction between Hickman Creek and Schaft Creek. Rugged coastal mountains and ice fields are present to the west of the Property, while the Edziza Plateau lies to the east, with its gentler terrain. Snowfields and small, retreating hanging-valley glaciers are typically present year-round on the mountaintops. Schaft Creek flows northerly into Mess Creek, which in turn flows northward to the Stikine River. Elevation in the area varies between approximately 900 masl to over 1,990 masl (Caron et al. 2012). The deposit is situated on the lower west-facing slopes south of Mount LaCasse, partially in and to the west of a low saddle between the Schaft and Mess Creek Valleys, immediately west of Snipe Lake.

The Property is located in an alpine environment, with a climate characterized by mild summers and cold winters. The minimum and maximum mean annual temperatures in the region are -6.9°C and 4.6°C respectively. July and January average temperatures are 12.6°C and -18.1°C respectively. The mean annual rainfall for the region is 398.3 mm (www.worldclimate.com – Dease Lake). Approximately 60% of precipitation occurs as snow, which can reach a depth greater than 2 m and persist into June (Bender et al. 2007). The dominant wind direction in the area is from the south and southeast, and wind speed is highly dependent upon location. Monthly average wind speeds were observed to vary between 1.0 and 3.0 m/s in more sheltered areas and up to 7.0 m/s in more exposed areas (Kulla at el. 2011). Due to the high volume of snowfall in the area, exploration activities typically take place between May and November. It is expected that mining activities will be conducted throughout all seasons.

The Schaft Creek area is located within the Boundary Range of the Coast Mountains. The Schaft Creek valley, at an elevation of 866 m, is the up-stream extension of the

Telegraph Creek Lowlands. The immediate Project area is approximately 3 km by 3 km in size, rising rapidly eastward from the valley bottom to near-tree line elevation at the saddle in the vicinity of Snipe Lake, and towards Mess Creek to the east. The surrounding mountain to the south and west of the deposit is steep and rugged. The Project area rises to above 2,000 m from the valley floor to snow-capped mountain peaks and ice fields within a few kilometres of the camp. To the east the elevation drops from the Snipe Lake saddle to Mess Creek. To the north of the deposit is the west-facing slope of Mount LaCasse, at 2,200 masl. The broad, 1 km wide, north-south-trending valley of Schaft Creek to the west of the camp site is a braided stream plain made up of thick, glacio-fluvial and fluvial deposits. The valleys and associated tributaries are typical alpine and sub-alpine glaciated valleys that exhibit broad U-shaped cross sections and steep valley slopes. The elevation of the tree line is variable but alpine vegetation predominates above the 1,100 masl level. Below that, forests are made up of balsam fir, sitka spruce, alder, willow, devils club and cedar. Higher up the valleys, glacial moraines are bare to sparsely overgrown by sub-alpine vegetation (Kulla et al. 2011).

5.3 LOCAL RESOURCES AND INFRASTRUCTURE

5.3.1 EXISTING INFRASTRUCTURE

The main supply point for the Project area is Smithers, BC, situated approximately 375 km southeast of the Property. The Property is situated within the traditional territory of the Tahltan Nation and the nearest villages are Telegraph Creek, Dease Lake, and Iskut. These communities provide labourers and machine operators, diamond drill crews, and camp management services. Dease Lake is the centre of government for the Tahltan Nation and is a local supply point for basic goods and medical services (Caron et al. 2012). The Tahltan native population has a long history of involvement in the mineral exploration industry and in recent years has developed a thriving business supplying transportation, construction and catering services to mining operations at competitive rates (Kulla et al. 2011). TNES of Dease Lake and Smithers, and SRSC of Dease Lake, managed and supported the Schaft Creek camp in 2011 on behalf of Copper Fox.

Copper Fox maintains a permanent camp in the Schaft Creek valley that can accommodate approximately 70 people. Original construction of the camp facilities commenced in the mid-1960s. Between 1968 and 1981, when Hecla Mining Company (Hecla) and subsequently Teck aggressively explored the Property, most of the site infrastructure was established. Copper Fox re-built the camp to include a fuel storage depot, bunk houses, a new kitchen and dining facility, a new shower and laundry facility attached to the lavatory building, mechanic's shop, generator shack, core shack, log assay shack, recreation hall, sleep cabins, and office and first-aid buildings (Bender et al. 2007). There is no power available to site and the closest major power line is located approximately 150 km south in Meziadin Junction. Potable water is sourced from wells, and process water for the mill will be supplied from pit dewatering wells and would be reclaimed from the tailings pond (Kulla et al. 2011).

Two gravel airstrips, approximately 700 m in length, allows for fixed-wing aircraft and helicopters to access the camp. One is oriented in a general north-south direction and was established immediately west of the camp, adjacent to the eastern bank of Schaft Creek, while the second one is oriented in a northeast-southwest direction (Bender et al. 2007). The camp is primarily serviced via flights from the paved runway in Dease Lake, from gravel strips in Telegraph Creek, from the Burrage Creek strip on Highway 37, and from the airport in Smithers. Fixed-wing aircraft from Dease Lake (Tsayta Aviation Ltd.) and helicopters from Dease Lake (Pacific Western Helicopters Ltd.) have serviced the Project. Access within the Project area is available via a network of rough-service bulldozer trails (Caron et al. 2012).

In May 2011, the federal government announced the approval of the 287 kW Northwest Transmission Line (NTL) project to extend the BC hydropower grid 344 km north to Bob Quinn Lake, which is within 90 km of the deposit (press release May 9, 2011; Caron et al. 2012).

Various studies pertaining to the transportation, storage and loading of concentrate from the proposed Project have been completed by Copper Fox. Copper Fox has secured facilities for concentrate storage, loading, and shipping requirements at the Port of Stewart, BC, with Stewart Bulk Terminals Ltd. (Stewart Bulk Terminals). The Port of Stewart has the required capacity to accommodate the Schaft Creek concentrate, and it is the shortest distance from site to a deep-water seaport, rendering it as the most economic location from which to export the concentrate (press release October 13, 2011). The agreement reserves space for Copper Fox at the facilities for construction of a concentrate storage warehouse to store up to 50,000 t of concentrate and the use of the loading facilities at Stewart Bulk Terminals to meet the anticipated monthly loading requirements of the Project. Pursuant to the terms and conditions of the agreement, Copper Fox and Stewart Bulk Terminals are required to negotiate a Terminal Services Agreement that covers the terms and conditions for the storage and loading of bulk concentrate onto ocean going freighters for shipment of bulk concentrate. The agreement is assignable to another party and covers a term from October 12, 2011 through April 1, 2019 (press release October 13, 2011).

5.3.2 PROPOSED INFRASTRUCTURE

In 2008, a prefeasibility study was completed on the Project (Bender et al. 2008). In this study, proposed infrastructure to support a 100,000 t/d fly-in-fly-out mining operation included access road, airstrip upgrade, office, mine and process buildings, open pit mine, tailings storage facility, three waste rock facilities, ground water wells, and a power transmission line.

Two access route options were identified for the Project in Bender et al. (2008). The first option (Mess Creek access route) extends north from More Creek along Upper Mess Creek, entering the proposed mine site area and Schaft Creek drainage near Snipe Lake. A second option (Tahltan Highland route) traverses a high-elevation plateau south of Mess Creek and descends slopes on the east side of Mess Creek to

intersect the first road option at km 25.5. A partially constructed access road parallel to More Creek extends to Highway 37 east of the Iskut River. The prefeasibility study assumed that the Mess Creek access route was the preferred alternative.

It is Tetra Tech's opinion that there is sufficient suitable land available within the concessions for any future tailings disposal, mine waste disposal, and installations such as a process plant and related mine infrastructure.

6.0 HISTORY

Various exploration-related activities occurred on the Property prior to ownership by Copper Fox. The majority of such activities were completed between 1957 and 2002, and are summarized in Table 6.1.

Table 6.1 Summary of Ownership and Exploration Activities, 1957-2002

Year	Company	Activity	Comments	Source
1957	BIK Syndicate	Claim staking, trenching	• Nearby discoveries led to exploration activities northward, mineral claims first staked in the region by prospector Nick Bird for the BIK Syndicate (consortium of Silver Standard Mines Ltd. (Silver Standard), McIntyre Porcupine Mines Limited, Kerr Addison Mines Ltd. and Dalhousie Oil Ltd.), 914.4 m hand trenching, rock chip sampling	Bender et al. (2007), Kulla et al. (2011), Caron et al. (2012)
1965-1966	Silver Standard	Mapping, geophysical survey, drilling	• Geological mapping (eight traverses), hand-trenching (3,000 ft), induced polarization (IP) survey, three diamond drillholes (629 m), (prospecting syndicate was re-organized into Liard Copper Mines in order to recognize the respective interests of its members and to consolidate the holdings in the area, Silver Standard, with a 66% interest, was the operator of the Project)	Bender et al. (2007), Kulla et al. (2011), Caron et al. (2012)
1966	Paramount Mining Ltd. (Paramount)	Soil sampling, geophysical surveys	• 450 soil samples, IP and magnetic geophysical surveys, performed by Adera Mining Ltd. (the contractor), claim 517462	Kulla et al. (2011)
1966	Liard Copper Mines	Consolidation	• Consolidated mineral tenures in area, optioned ground to Asarco	Caron et al. (2012)
1966	ASARCO	Option property, airstrip	• Airstrip constructed, camp built	Bender et al. (2007), Caron et al. (2012)
1966	ASARCO	Geological mapping, drilling, geophysical survey	• 24 diamond drillholes (3,353 m), IP survey	Bender et al. (2007)
1967	ASARCO	Airstrip	• Second airstrip constructed	Bender et al. (2007)

table continues…

Year	Company	Activity	Comments	Source
1968-1977	Hecla	Exploration, drilling, geophysical surveys	• ASARCO options property to Hecla, airstrip extended, 30,891 m diamond drilling (contracted Canadian Longyear Limited to undertake the drill campaigns. The Hecla drill campaigns used Longyear 44 and Longyear 38 drill rigs to drill core with BQ and NQ size diameters), percussion drilling (6,500 m), IP and resistivity surveys, geological mapping (covered area of 10 by 6 miles at a scale of 1:400), aerial photography, engineering studies, local grid established (performed by Underhill and Underhill surveyors)	Bender et al. (2007), Kulla et al. (2011), Caron et al. (2012), Copper Fox database
1969-1972	Paramount	Drilling	• 10 drillholes (2,924 m)	Copper Fox database
1971	Geological Survey of Canada	Regional mapping	• Regional geology mapped at a scale of 1:250,000	Kulla et al. (2011)
1972	Phelps Dodge Corporation of Canada Ltd.	Geochemical survey, trenching	• Soil and silt geochemical survey, cobra drill and bulldozer trenching (generally disappointing results, but one 10 ft sample in the longest trench, of 143 ft, yielded 0.38% copper), IP and magnetometer geophysical surveys (weak and discontinuous anomalies)	Kulla et al. (2011)
1974	Hecla	Geophysical and topographical surveys	• Established grid of cut lines, low level air photography, IP surveys completed by McPhar Geophysics Ltd. revealed the distribution of sulphides (in particular, the pyritic halo, which proved to be a reliable tool for predicting trends of mineral zones)	Kulla et al. (2011)
1978	Hecla/ Teck	Interest sold	• Hecla sold interest to Teck	Caron et al. (2012)
Late 1970s	Teck	Sampling	• 17 rock chip samples on claim 517462 (low copper and molybdenum grades)	Kulla et al. (2011)
1980	Teck	Geophysical survey	• IP survey (performed by Phoenix Geophysics), dipole-dipole array with dipole lengths of 100 m on 300 m-spaced lines, results showed presence of strong northeast-striking IP anomaly associated with Main Zone (Liard Zone)	Kulla et al. (2011)
1980-1981	Teck	Drilling	• 119 diamond drillholes (24,810 m) (Thirty-Two Albert Crescent Limited contracted for drilling), contracted McElhanney Consulting Services Ltd. (McElhanney) to survey all drillhole collars using laser theodolite, resource estimate: 1 Bt @ 0.30% copper and 0.034% molybdenum disulphide (resource not NI 43-101 compliant)	Caron et al. (2012), Bender and McCandlish (2010), Copper Fox database

table continues…

Year	Company	Activity	Comments	Source
1981	Teck	Sampling	• 5 rock chip samples (45 m) on claim 517462 (insignificant results)	Kulla et al. (2011)
1980-2002	Teck	Engineering studies	• Various engineering studies and reviews, little to no exploration work	Caron et al. (2012)
2002	Teck/ Copper Fox	Option transfer	• Copper Fox acquired claims, total of 230 diamond drillholes (60,200 m) and percussion drilling (6,500 m) completed by that time	Bender et al. (2007), Caron et al. (2012)
2005	Pembrook	Mapping and sampling	• On Pembrook claim, limited reconnaissance mapping program, collected five rock samples (3.56 g/t gold, 4.6 ppm silver, 2.06% copper, and 805 ppm molybdenum, and 1.52 g/t gold, 32.5 g/t silver, 6.40% copper, and 679 ppm molybdenum. In addition, a 4.0 m chip sample yielded 0.610 g/t gold, 3.8 g/t silver, 0.848% copper, and 98 ppm molybdenum)	Kulla et al. (2011)
2006	Pembrook	Sampling	• Follow-up work to 2005 program, 24 rock samples on Pembrook claims, identified two gold and copper anomalous zones	Kulla et al. (2011)
2008	Greig and Kreft	Sampling	• Reconnaissance sampling spaced 25 m apart, 183 soil samples, 17 grab and chip samples (averaged 1.24% copper, 16 g/t silver and 0.07 g/t gold)	Kulla et al. (2011)

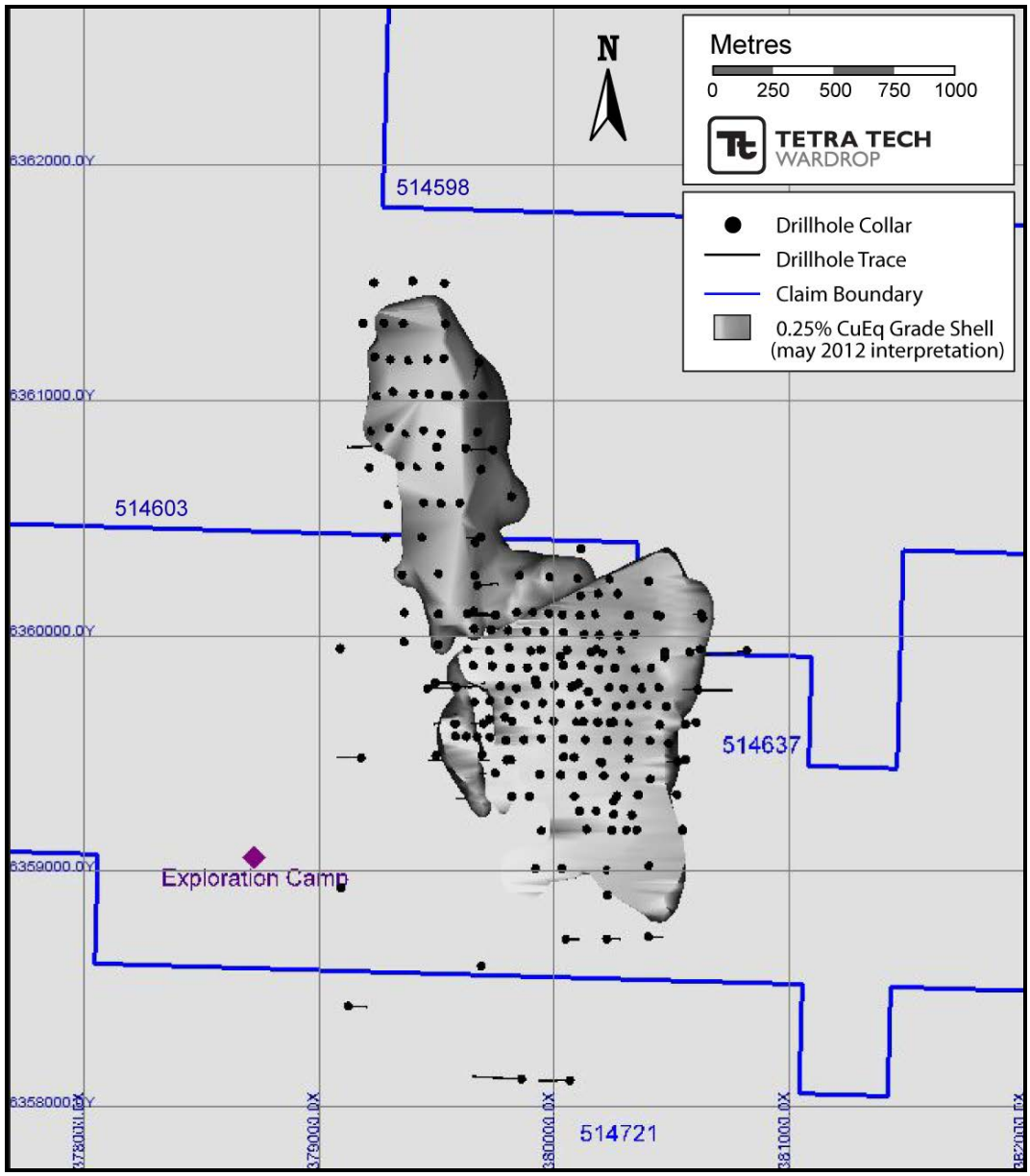
The positive results from the grab sampling performed by Pembrook and Greig/Kreft prompted Copper Fox to acquire those mineral tenures.

Two hundred and thirty one holes, totalling 59,567 m, were drilled prior to Copper Fox's ownership of Schaft Creek. This drilling is summarized in Table 6.2 and locations are shown in the plan map provided in Figure 6.1.

Table 6.2 Summary of Historic Drilling

Year	Company	Number of Drillholes	Total Length (m)
1956	Silver Standard	3	629
1966	ASARCO	24	3,334
1968-1977	Hecla	75	27,869
1969-1972	Paramount	10	2,924
1980-1981	Teck	119	24,810
Total	**-**	**231**	**59,567**

Figure 6.1 Location Map (Plan View) of Drillholes Completed Prior to Copper Fox Ownership of Schaft Creek



7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 GEOLOGICAL SETTING

7.1.1 REGIONAL GEOLOGY

The following description of the regional geology is paraphrased from Caron et al. (2012), unless otherwise stated.

The Schaft Creek deposit is hosted by Stuhini Group (Stikine Terrane) basaltic to andesitic volcanic rocks of the Mess Lake facies, which are Upper Triassic in age. These volcanics are intruded by dacite to granodiorite dikes, whose origin is interpreted to be the nearby Hickman batholith (Scott et al. 2008). The regional geology of the area is depicted in Figure 7.1. Caron et al. (2012), attribute most of the following geological description to Logan et al. (2000).

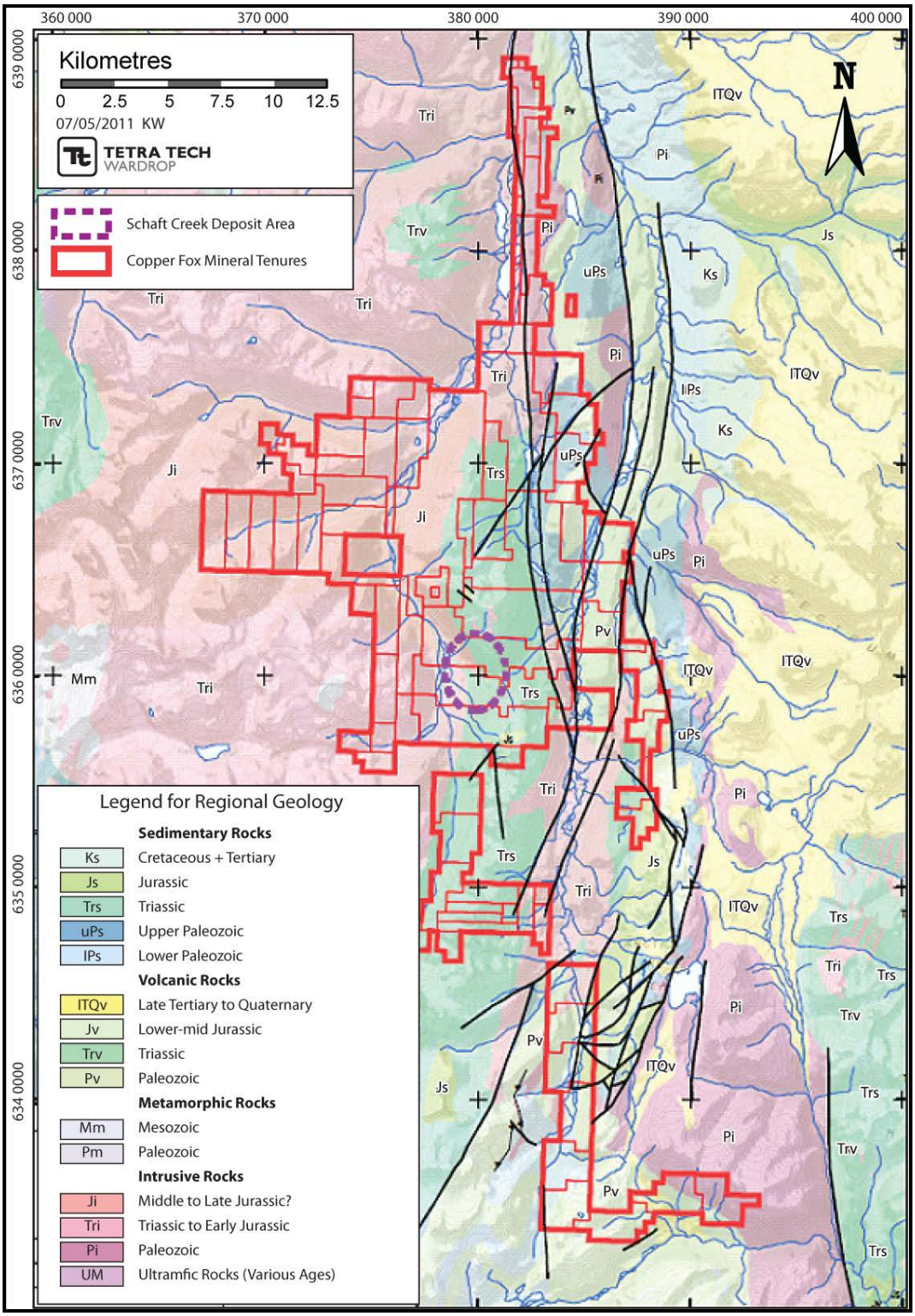
The Mess Lake facies is a vent-proximal, submarine to sub-aerial volcanic assemblage that unconformably overlies the Lower Permian limestone. This facies is, in turn, unconformably overlain by Lower Jurassic conglomerate. The Mess Lake volcanic sequence is estimated to be upwards of 800 m thick, but is truncated on the west side by the Hickman and Yehiniko plutons, while the south side is faulted against Paleozoic rocks.

The generalized stratigraphy, as interpreted in Logan et al. (2000), and simplified in Caron et al. (2012), consists of:

> *(1) a basal sedimentary succession or mafic tuffaceous succession (uTSmt), (2) a medial volcanic succession characterized by flows and breccias with a central tuff unit (uTSvb, uTSvt, uTSpp), and (3) an upper tuffaceous sedimentary succession. West of Mess Creek, maroon to green amygdaloidal plagioclase and pyroxene-phyric basalt flows, breccias and tuffs, and dun-weathering, olivine-rich basaltic tuffs at least 800 m thick are intruded by trachytic sills of coarse-bladed plagioclase and pyroxene porphyry, probable feeders to overlying volcanics.*

The medial volcanic succession consists of dark grey, massive, plagioclase phyric basalt and similarly textured sub-volcanic rocks. This basalt is typically fine-grained with 0.5 to 1 mm plagioclase phenocrysts to approximately 30%, as well as several percent of pyroxene phenocrysts. Outcrops are generally massive with rare visible extrusive textures; however, breccia and amygdaloidal textures are recognized locally in talus blocks. The contacts of the basalt are not well exposed, except where it is intruded by hornblende diorite to monzonite dikes of the Hickman batholith.

Figure 7.1 Regional Geology of the Schaft Creek Deposit



Source: Modified after Caron et al. (2012)

On Mount LaCasse (7 km north of the Schaft Creek camp), tuffs of the central volcanic unit are observed to overlie basaltic rocks of the medial volcanic unit. These tuffs are mostly massive to weakly bedded, polylithic, grey to mauve lapilli and crystal tuffs, which form thick sections underlying the east-facing slope of the mountain overlooking Mess Creek. Crystal fragments consisting of plagioclase and augite are common constituents of the tuff. Due to the inconsistency of observable beds, measurable attitudes are rare, although those noted indicate steep dips. This same succession of the central volcanic unit underlies the west-facing slopes above Schaft Creek.

The upper tuffaceous/sedimentary succession is generally made up of well-bedded, very fine-grained green tuffs, tuffaceous siltstone-sandstones, and wackes. These can be found exposed on the northwestern slopes of Mount LaCasse. This succession is up to approximately 150 m thick, but is thinned considerably along the western margin, where it is faulted against the lower basaltic unit. The succession also thins to the northeast, meaning its usefulness as a marker unit are limited. At 4 km to the south of Schaft Creek, the exposed areas of the upper succession consist of volcanic conglomerate, interbedded sandstone and siltstone, pyroxene crystal sandstone, and limy siltstone. Fossils that have been identified in these layers are from the Late Triassic.

The Hickman batholith is interpreted to be the source of the hydrothermal fluids that formed the mineralization at Schaft Creek. It is a large, complexly zoned felsic to intermediate intrusive body to the west of the deposit.

For more comprehensive and detailed investigations of the regional and property geology, more information can be found in Scott et al. (2008), and Logan et al. (2000).

7.1.2 PROPERTY GEOLOGY

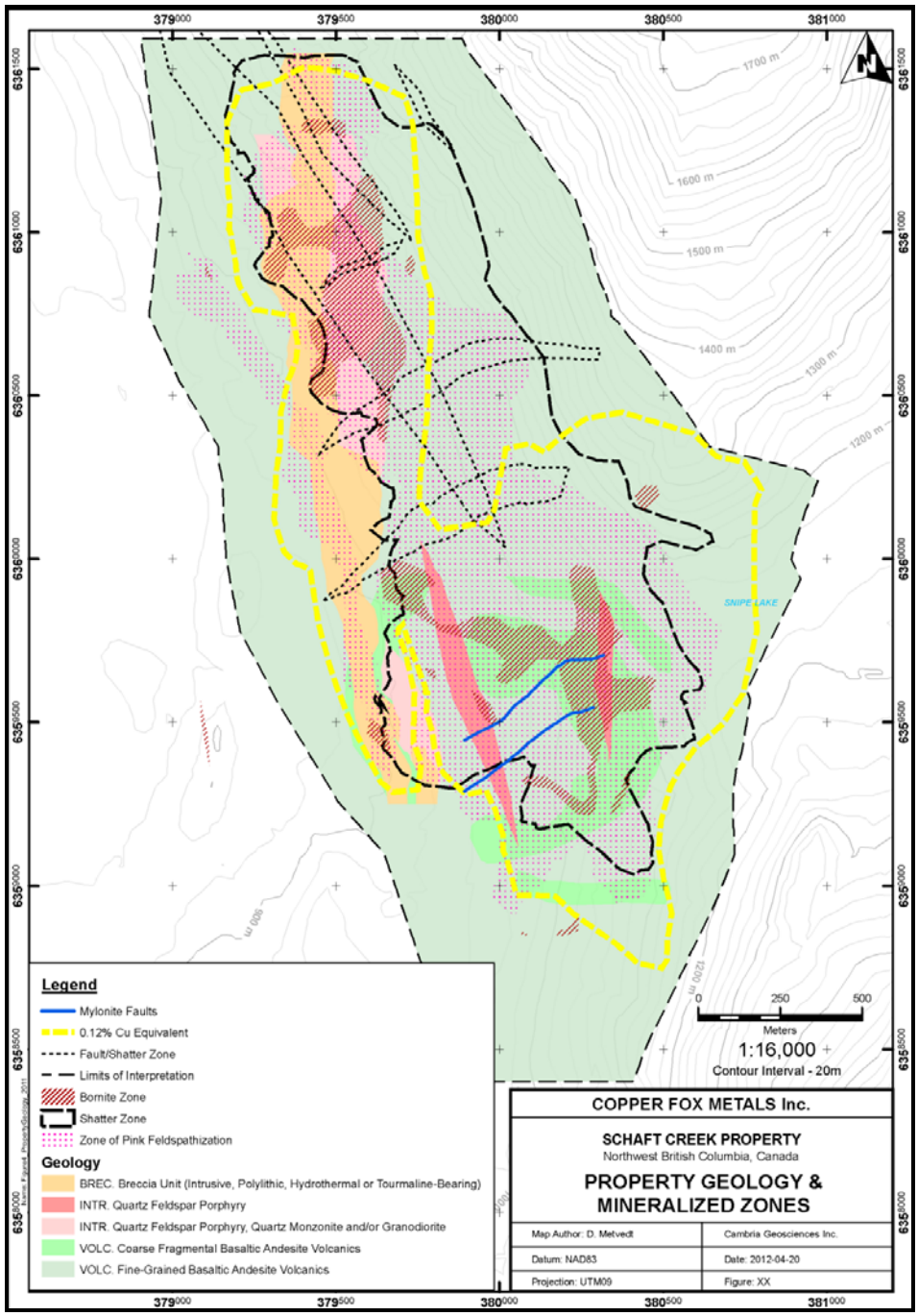
Recent work on the Property by Cambria includes a re-interpretation of the deposit type. Although this interpretation is presented below, it can be considered at this point only a hypothesis. The common interpretation of Schaft Creek as a porphyry deposit remains the working model. Figure 7.2 depicts the Property geology. The following description of the Property geology is modified from Caron et al. (2012).

LITHOLOGIES

Previous work on the Schaft Creek deposit has generally considered the deposit in terms of a calc-alkalic copper-molybdenum porphyry system related to an elongate, high-energy, structurally controlled breccia system. Work by Cambria in 2010 and 2011 has led to the conclusion that a rather different deposit model may better describe the deposit. Although the Schaft Creek deposit bears some characteristics of a calc-alkalic porphyry copper deposit (broadly disseminated sulphide mineralization, certain alteration sequences including potassic and phyllic alteration), several key characteristics are notably absent, including a significant distal pyrite halo and significant argillic alteration. Schaft Creek may be better described as a

polymetallic (copper, molybdenum, gold, and silver), structurally controlled, low-sulphidation, hydrothermal replacement deposit, with mineralization and alteration related to intrusion of a series of dike-like feldspar-quartz porphyry bodies along a splay of the Mess Creek fault. The deposit formed in a volcanic arc setting, likely on a back-arc rifted continental fragment.

Figure 7.2 Property Geology of the Schaft Creek Deposit



Source: Caron et al. (2012)

From Caron et al. (2012):

The Schaft Creek property lies between the Mess Creek valley and Schaft Creek in a north-south oriented complex of intermediate to mainly mafic volcanic rocks (Mess Creek volcanic facies of the Stuhini Group) dominated by basalt and andesite tuffs and flows. The thickest volcanic unit of the medial volcanic succession (Mess Creek facies) (identified by Logan et al. 2000) hosts the Schaft Creek deposit. This unit varies in colour from maroon to green and is comprised of roughly equal amounts of flows and tuffs of variably augite phyric, plagioclase phyric, augite-plagioclase phyric, and aphyric basaltic andesite. Sub-volcanic intrusive rocks are difficult to distinguish from the extrusive volcanics in this sequence. Logan et al. (2000) reported the basaltic andesite is locally pillowed for 3 km north and south of Schaft Creek, and bedding attitudes in intercalated tuffs are steeply inclined to the northeast or southwest. In the deposit area, bedding orientations are not obvious; however, in the Main Zone, the bedding orientations are thought to be shallow to moderate, easterly to westerly dipping.

The west facing slopes above Schaft Creek consist of maroon and green, fine ash and plagioclase-rich crystal tuff, intermixed with purple monolithic augite phyric lapilli tuff and thin purple basalt flows. Epiclastic horizons include polylithic cobble to boulder conglomerates with clasts of green and black augite phyric basalt; maroon plagioclase porphyry; green, epidote-rich altered volcanic rock; and purple aphyric basalt.

It is unlikely the chemical composition of the andesitic basalt host rock had significant control, if any, on mineralization at Schaft Creek. Instead, local areas of coarse pyroclastic volcanics with correspondingly greater permeability and porosity may have served as a preferential host for mineralized hydrothermal fluids emanating from nearby the intrusive rocks.

A number of outcrops of aphanitic rhyolitic volcaniclastic rocks are reported (Scott 2008) north of the deposit area and are likely analogous to the roughly 150 m thick succession of tuffaceous siltstone-sandstone and well-bedded, fine-grained tuffs that comprise the upper units of the Stuhini Group.

Between Schaft Creek and Snipe Lake on the lower southwestern slopes of Mount LaCasse, the andesitic to basaltic volcanic rocks are locally intruded and brecciated by narrow and locally discontinuous dikes and apophyses emanating from the Hickman batholith. The most mineralized and altered intrusions are generally proximal to the breccias in the northern portion of the deposit, where breccias cross-cut one of the larger intrusive dikes. Further south, intrusive dikes in the Main Zone are found a few hundred metres to the east of the breccia.

These intrusive bodies follow a series of shatter zones and near-vertical faults that trend north-northwest. The dikes are quartz modal and are predominantly granodiorite in composition.

The intrusive rocks exercised significant control on distribution and type of mineralization and alteration, and multiple phases of quartz-modal intrusive rock may be present at Schaft Creek. Both equigranular granitic and feldspar quartz-porphyritic varieties have been noted, with considerable variation in the degree of alteration and mineralization among individual examples.

Positive identification of the intrusive rocks is hampered by strong to intense, and often overlapping, alteration assemblages that obscure primary textures. Recent work by Cambria has led to the conclusion that many of the sill-like or flat-lying intrusive bodies that have been mapped to the east of the breccia are actually porphyritic volcanic flows that have been overprinted by strong albitic alteration.

As mentioned above, Cambria has re-interpreted the deposit type and revised the geological interpretation of Schaft Creek. Historically, the deposit has been divided into three mineralized zones: the Main (Liard) Zone, the Paramount Zone, and the West Breccia Zone. Cambria has re-interpreted the Paramount Zone and the West Breccia Zone as a single contiguous breccia zone running roughly north-south for approximately 2.1 km.

The Main Zone is roughly circular in plan view. It lies immediately to the west of Snipe Lake in the saddle zone south of Mount LaCasse. The dominant host rocks of the Main Zone mineralization are andesitic to basaltic fragmental rocks of varying textures and degrees of sorting. These are crosscut by dike-like intrusive bodies. According to Cambria's interpretation, the fragmental rocks form a ring-shaped, pipe-like body with a steep plunge to the north-northwest. The recent re-interpretation suggests that the volcanic pyroclastic rocks, may in fact be hydrothermal breccias.

The West Breccia Zone (to the immediate west of the Main Zone) and the Paramount Zone (to the north) are now interpreted as a single, continuous zone, which is simply named the Breccia Zone. This zone generally consists of variably altered intrusive and volcanic rocks, occurring frequently as heterolithic (polymictic) breccias. The clasts occur in a wide range of sizes from millimetre to cobble-sized, as well as subangular to angular. The matrix consists of altered rock flour, hydrothermal cement, or, in some cases, fine-grained igneous material, which ranges from matrix-supported to clast-supported. The Paramount Zone contains a relative abundance of igneous matrix material when compared with the West Breccia Zone, which could indicate a greater depth within the system. The Paramount Zone also features hypidiomorphic, equigranular to porphyritic granodiorite dikes.

ALTERATION

From Caron et al. (2012):

Hydrothermal activity at Schaft Creek was a complex series of overlapping events related to fault reactivation, hydraulic fracturing, intrusion, and fluid degassing. This has resulted in early developed alteration facies being overprinted by later alteration facies, both retrograde and prograde, particularly within the breccia in

the Paramount Zone, where field evidence supports several stages of breccia reactivation. Alteration zoning is accordingly complex, with telescoping and overprinting of both pro-grade and retrograde phases. In detail, alteration assemblages sometimes appear contradictory but can generally be appreciated when considered in the light of complex structural reactivation and hydrothermal overprinting.

Extensive re-logging of existing drill core stored at the Schaft Creek camp was carried out during the 2011 field season. This work, combined with core re-logging performed by Cambria in 2010 and logging by Cambria of new core from the 2010 and 2011 drilling programs, has provided sufficient data to define the following general alteration framework for the Schaft Creek deposit, with alteration phases listed from oldest to youngest. Ongoing QEMSCAN microanalysis, chemical analysis, and petrographic work by Dr. Nicholas Le Boutillier have also contributed to this discussion:

- *Widespread diagenetic development of chlorite and minor carbonate in the mafic basaltic andesite volcanic pile (this alteration predates hydrothermal alteration and mineralization). Development of hematite in some parts of the volcanic pile (e.g., purple volcanics seen to the northeast of the Main Zone) may also be diagenetic.*
- *Ubiquitous weak to moderate phyllic alteration consisting of sericitization of primary feldspar phenocrysts as a precursor to the main sodic alteration and mineralization phase…*
- *Sodic feldspathization, primarily affecting extant feldspar phenocrysts, with alteration ranging from rims of sodic feldspar to complete replacement… The primary pulse of sulphide mineralization (disseminated and fracture-filling chalcopyrite, bornite, and molybdenite) appears to have been synchronous with this prograde alteration, and both alteration and mineralization appear to be closely related to intrusion of irregular sub-vertical, dike-like bodies of quartz-bearing feldspar porphyry. Sodium metasomatism occurred at fairly deep levels in response to increasing temperatures within highly saline fluids as they approached the axis of faulting and intrusion along a prograde thermal path. In the Main Zone at least, this phase of alteration and sulphide mineralization appears to be preferentially hosted, in part, within coarse fragmental volcanics (aerial lapilli tuffs to coarse agglomerates) that have been structurally prepared by faulting that both preceded and was synchronous with intrusion, alteration, and mineralization…*
- *Potassic alteration, consisting of development of fine-grained biotite hornfels proximal to intrusive bodies within the Paramount Zone and orthoclase replacement/veining in the Main Zone and both the West Breccia Zone and Paramount Zone. Some of the potassic hornfels in the Paramount Zone was subsequently incorporated into breccias, where biotite hornfels clasts are locally significant components of polylithic breccias… To a significant degree, potassic alteration (i.e., pink*

feldspathization) correlates with mineralization in both the Main Zone and the breccia zone… [There is] *a zone of pink feldspathization that includes most of the Main Zone and extends along the east side of the breccia in the Paramount Zone. Another narrow zone of potassic alteration is coincident with the West Breccia Zone in the area west of the Main Zone but diverges to the northwest from about 6360500N. Perhaps not coincidentally, the attitude of the portion of this alteration zone that diverges to the northwest mirrors the attitude of several zones of northwest-trending steep faulting, including a major fault zone located ~200 m to the northeast.*

- *Patchy phyllic alteration, consisting of local silicification (quartz flooding) and development of local stringer and disseminated pyrite. This alteration, most likely contemporaneous with or slightly later than potassic alteration, is a lower temperature prograde event. The liberation of abundant hematite due to the destruction of mafic minerals such as hornblende may be part of this alteration event. Hematite is far more abundant than pyrite at Schaft Creek, forming during diagenesis as well as during phyllic alteration.*
- *Retrograde propylitic alteration, resulting in the development of dark (iron-rich?) chlorite and locally strong epidote overprinting ... This alteration phase has also resulted in the remobilization of some considerable fraction of the sulfides into veins and fractures.*
- *Late-stage development of ubiquitous carbonate, both within the matrix and as fine irregular stringers. A very weak argillic overprint as sparse alunite within carbonate veins is most likely contemporaneous with carbonate development. Sparse gypsum and anhydrite veins are also part of this late-stage alteration.*

STRUCTURE

From Caron et al. (2012):

…Brittle deformation at Schaft Creek is primarily reflected in shattering, shearing, and faulting at all scales, ranging from crushing and grinding of individual rock-forming minerals to very significant large-scale faults that are represented by thick zones of clay gouge and mylonite. As a result, topographic expression of the deposit is generally recessive and the near-surface levels of the deposit (particularly in the Paramount Zone) are strongly broken and rubbly to depths exceeding 100 m, resulting in difficult drilling with poor core recoveries, as well as challenges in correlation of structures between sections.

…the faults and fault-related structures (shears, shatter zones, etc.) at Schaft Creek can be generally categorized into three sets:

- *An en echelon set of shatter zones that trend northwest (319°) and dip steeply to the northeast (~85°). This structural set is congruent with*

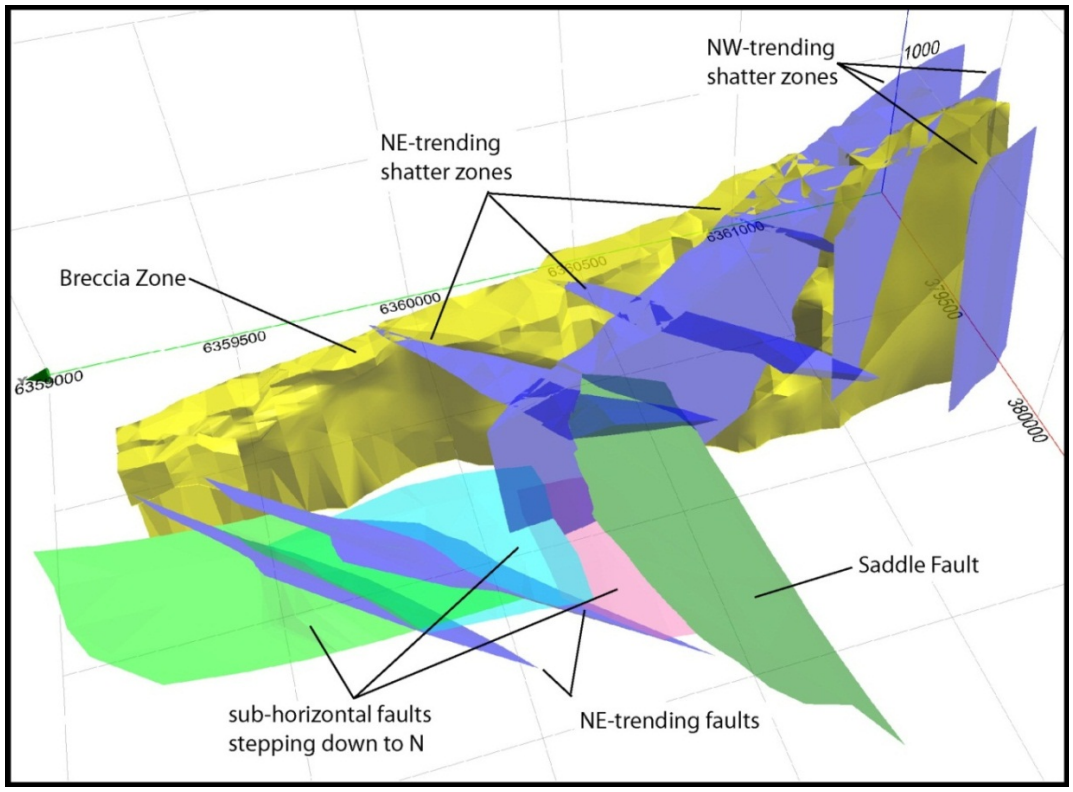
fundamental linear features noted in the resistivity survey and with several strong features that are evident in the topographic lineament study. Additionally, a significant intrusive dike generally follows this trend... The shattering is likely part of early regional faulting.

- *A set of faults and shatter zones that trend northeast (44°) and dip moderately to the northwest (45°). Three shatter zones along this trend can be mapped over the Paramount Zone, and two well-defined individual fault planes are found in the Main Zone to the south. These faults and shatter zones appear to slightly displace earlier faulting, including faults that trend to the northwest (described above) and a set of sub-horizontal faults described below. In addition, the breccia zone appears to show local minor displacement along this trend, suggesting that motion along this fault trend was episodic over a period of time.*
- *An early set of sub-horizontal faults that strike to the northwest and dip gently at ~10° to the northeast. These faults occur in the Main Zone where they appear to provide a general downward bound to both mineralization and alteration. The faults are, in part, stacked and are cut by the northeast-trending fault set described above. It is likely that these faults represent several sub-horizontal planar faults that have been disrupted by normal faulting (i.e., northwest-side down) along faults belonging to the northeast-trending fault and shatter zone set.*

[Figure 7.3] *depicts a three dimensional model of the fault structures at Schaft Creek, looking to the northwest.*

A well-defined, contiguous zone of breccias (West Breccia Zone and Paramount Zone) extends along the west margin of the Main Zone and to the north for a total length of at least 2.1 km. Geophysical mapping to the south of the Main Zone shows quite clearly that the breccia extends at least another 1.1 km to the south, for a total of at least 3.2 km. The breccia most likely extends even further to the south, but available data do not allow additional projections. To the north, drilling and currently available geophysical mapping do not support extending the breccia beyond the current limits of mapping (6361300N), although the breccia may be offset in this area toward the northwest along a steep northwest-trending fault zone…

Figure 7.3 3D Structures of the Schaft Creek Deposit



Source: Caron et al. (2012)

7.2 MINERALIZATION

From Caron et al. (2012):

> [In works completed prior to Cambria in 2011,] *mineralization at Schaft Creek has been described in terms of three separate zones: the Main (or Liard) Zone, the Paramount Zone, and the West Breccia Zone. Although mineralization in the Main Zone and the West Breccia Zone is found in two generally spatially separate areas in the southern portion of the Schaft Creek deposit, the same cannot be said for mineralization found further to the north. There, most mineralization is hosted within structurally prepared and altered breccias, with a lesser amount of mineralization found in proximal volcanic units. It seems clear that mineralization at Schaft Creek can be readily described in terms of an earlier phase of mineralization in the Main Zone and a later phase of mineralization related to breccias and proximal volcanics found along the west margin of the Main Zone and extending to the north.*

7.2.1 MAIN (LIARD) ZONE

The description of the Main Zone is extracted from Caron et al. (2012):

… the Main Zone forms a tabular zone that extends up to 1.1 km in the east-west direction and more than 1.2 km in the north-south direction. The base of this zone dips shallowly toward the north at ~15°, as well as to the west at ~15°. The majority of the mineralization and alteration lies above a series of sub-horizontal faults that dip gently to the northwest.

Some of the mineralization in the Main Zone is related to intrusion of feldspar quartz-porphyry dikes that follow the trend of a series of northwest-trending steep faults and shatter zones that strike at 319°. These dikes show some relatively minor right-lateral offset along faults that strike at 045° and dip 45° to the northwest. Another dike trends north-northeast and appears to be closely associated with the majority of the mineralization found in the Main Zone. This dike cuts the southern and eastern portions of a ring-shaped structure of coarse fragmental rocks that may represent an early breccia pipe. In general, these fragmental rocks are generally closely associated with mineralization and alteration, most likely due to relatively high permeability and porosity. Additional mineralization is also related to younger breccias in the West Breccia Zone, with mineralization hosted within and proximal to the breccias, as well as along relatively flat-lying structures that host significant molybdenite.

Sulphide mineralization in the Main Zone consists of chalcopyrite, bornite, molybdenite, and lesser pyrite, mostly present as irregular stockworks in all rock types, although it is preferentially hosted in coarse fragmental units to some degree. Relatively little disseminated mineralization is found, perhaps due to remobilization of sulphides during subsequent episodes of alteration.

7.2.2 BRECCIA (PARAMOUNT & WEST BRECCIA) ZONE

The description of the Breccia Zone is extracted from Caron et al. (2012):

The breccia zone apparently developed relatively late in the evolution of the Schaft Creek hydrothermal system, with linear, contiguous breccias cutting many faults and intrusive bodies. The only clear exception to this is found in the late northeast-trending, northwest-dipping fault set where small offsets in the breccias are noted.

Much of the mineralization in the breccia zone is hosted by the strongly altered and structurally prepared breccias. Some mineralization with fairly good grade is found in volcanic units proximal to the breccias, as well as along the margins of some intrusive dikes. Further removed from the breccias are areas of generally lower grade.

Sulphides in the breccia consist of chalcopyrite, bornite, molybdenite, and pyrite. Chalcopyrite and bornite occur as fine veinlets and disseminated patches in the altered finer-grained matrix of the breccia or as local patches of sulphide matrix, with minor amounts in intrusive and volcanic clasts. Minor grey quartz patches locally accompany Cu sulphides. Pyrite is generally not abundant in the breccia

zone, although a few locations are seen where pyrite is dominant. Early quartz-rich veinlets are present in local intrusive clasts. The Cu grades in the breccia zone exceed 0.5% Cu, most notably in the Paramount Zone between 6360700N and 6361050N. These relatively high grades are likely related to greater permeability and porosity, as well as to episodic alteration and mineralization along the breccia zone.

7.3 PROSPECTS

The high-resolution magnetic and Quantec Titan surveys, discussed later in Section 9.0, identified a number of significant structural features typical of a porphyry copper district within the Property area. These include the Discovery, ES, and GK Zones of copper mineralization, and the Mike chargeability anomaly. The Discovery Zone, located roughly 2.5 km northwest of the centre of the Paramount Zone was drill tested by 2011CF422 and confirmed the presence of mineralization. The Mike Zone is situated immediately east of the deposit, over the ridge of Mount LaCasse. The ES Zone is located approximately 3 km north of the Paramount Zone and has an extent of about 1,100 m long by 300 m wide. The 32 samples collected from this zone averaged 0.87% copper and 0.31 g/t gold. The GK Zone is located approximately 3 km north of the ES Zone and has an extent of least 1,700 m long by 250 m wide. The 17 grab and chip samples collected from the GK Zone averaged 1.24% copper, 16 g/t silver and 0.07 g/t gold. The locations of these anomalies are shown in Figure 9.3.

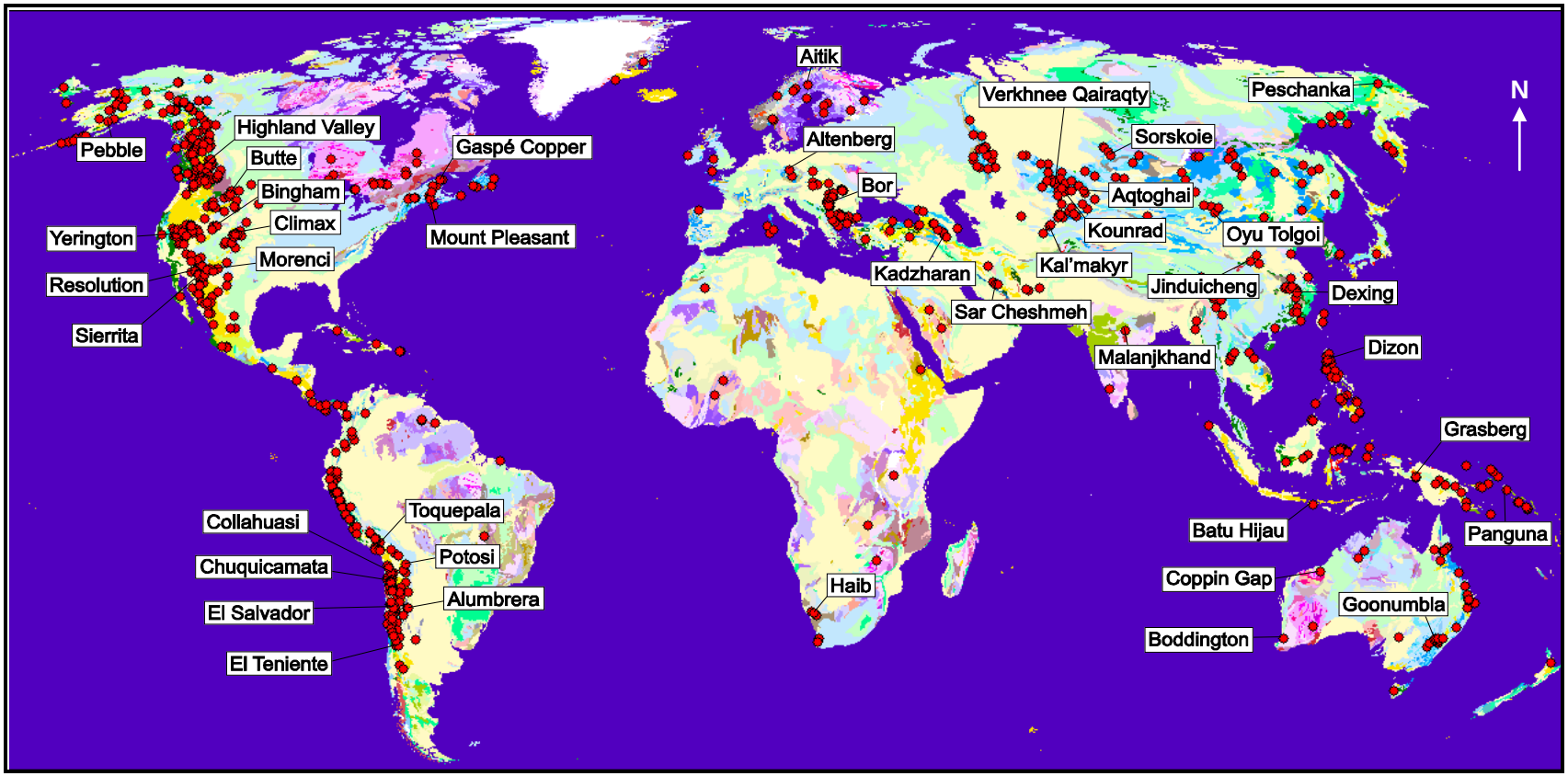
8.0 DEPOSIT TYPES

Schaft Creek is described as a calc-alkalic copper-molybdenum-gold-silver porphyry deposit.

8.1 DEPOSIT MODEL

Porphyry deposits are the world's most important source of copper and molybdenum, and can be major sources of gold and silver as well. Porphyries account for about 50 to 60% of world copper production and more than 95% of world molybdenum production. These deposits are large, low- to medium-grade deposits, characterized by structurally controlled primary sulphide mineralization related to felsic and/or intermediate porphyritic intrusions. Their large size, as well as their structural features and characteristic alteration systems distinguish them from other hydrothermal alteration-related mineral deposit types (Sinclair 2008).

Figure 8.1 Global Distribution of Porphyry Deposits



Source: Sinclair (2008)

Geographically, porphyry deposits occur throughout the world in narrow, but extensive linear metallogenic provinces (Figure 8.1). Predominantly they are associated with Mesozoic to Cenozoic orogenic belts, like the Western Cordillera of North and South America. Although there are examples of porphyries throughout earth's history, from Archean to present, the vast majority of economic deposits are Jurassic aged or younger (Sinclair 2008).

Tectonically, porphyry deposits occur in a variety of settings, both continental and island-arc related. Typically, however, porphyry copper deposits tend to form in the root zones of andesitic stratovolcanoes, in subduction-related settings. Schaft Creek is hosted by island-arc related volcanic rocks ranging from Andesitic to Basaltic, indicating that the deposit may have formed in either a period of subduction or extension during terrane formation. Large-scale, regional structures also tend to play a role, particularly in porphyry belts with multiple deposits. In addition, cross-structures also play a role in individual deposit formation. Schaft Creek is closely related to splays off of the Mess Creek fault, a relatively large-scale crustal feature in the area (Caron et al. 2012).

Porphyry deposits tend to form in close association with porphyritic epizonal to mesozonal intrusions, with a close temporal relationship between magmatic activity and hydrothermal mineralization. This can be denoted by the presence of intermineral intrusions and brecciation during and/or between periods of mineralization (Sinclair 2008).

Geometrically, porphyry deposits are highly variable, and can occur in irregular shapes as well as more regular oval or circular patterns. There may also be various amounts of overlap or overprinting of deposits. In addition, alteration patterns need not mimic that of the mineralization but may extend for hundreds to thousands of metres (Sinclair 2008).

The mineralogy of porphyry deposits can be highly varied, depending on many factors. The principal ore minerals of copper porphyries are chalcopyrite, bornite, chalcocite, tennantite, enargite, other copper sulphides and sulphosalts, molybdenite, and electrum, with associated minerals including pyrite, magnetite, quartz, biotite, K-feldspar, anhydrite, muscovite, clay minerals, epidote, and chlorite.

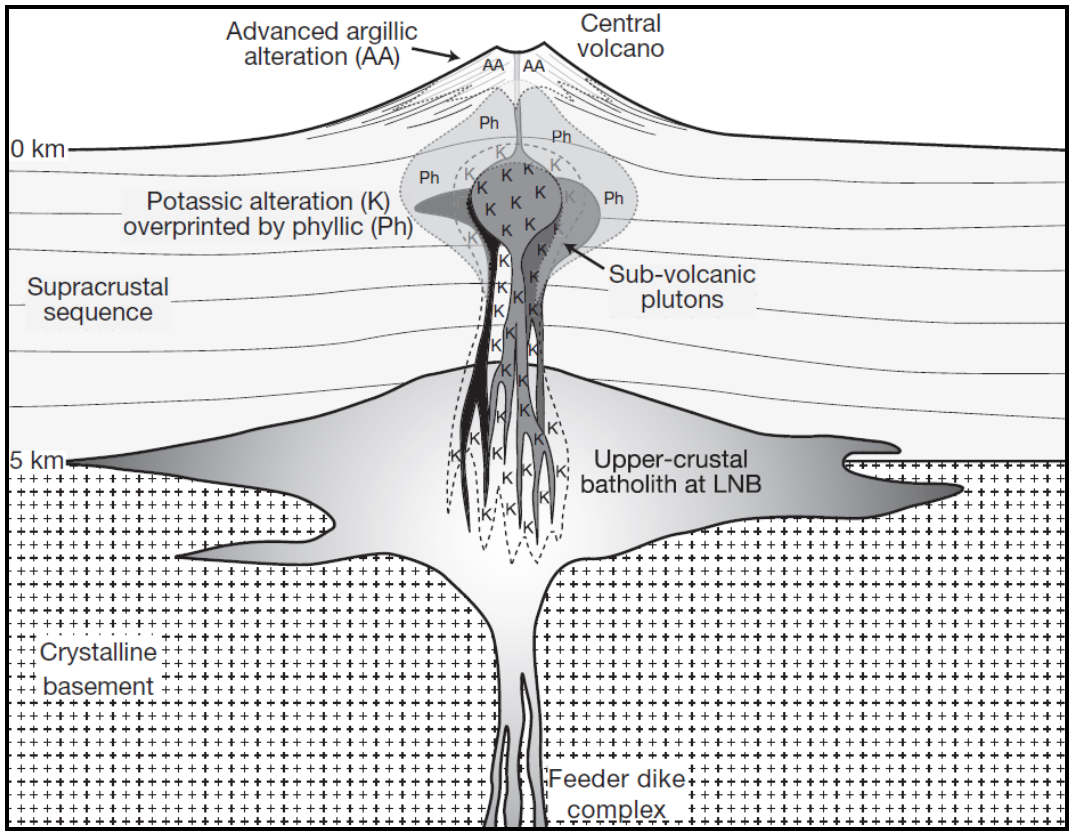
Hydrothermal alteration tends to be extensive in and surrounding porphyry deposits, and generally follows a zonation pattern on the deposit scale (Figure 8.2) as well as surrounding veins and/or fractures. Typically there is an inner potassic zone (characterized by K-feldspar and/or biotite), an outer zone of propylitic alteration (characterized by quartz, chlorite, epidote, calcite, and albite associated with pyrite), and variably intermediate zones of phyllic (quartz, sericite, and pyrite) and argillic (quartz, illite, pyrite, kaolinite, smectite, montmorillonite, and calcite) alteration. Economic sulphide zones are usually associated with the potassic alteration zone.

Porphyry deposits are categorized based on grade of the various contributing metals. Schaft Creek falls under the porphyry copper designation, having copper grades

between 0.2% to more than 1%; molybdenum grades between 0.005% to about 0.03%; gold grades from 0.004 to 0.35 g/t; and silver grades from 0.2 to 5 g/t. Although this designation can be a useful tool for deposit comparison, there exists a continuum between porphyry copper and porphyry molybdenum deposits, such that making clear distinctions is difficult.

Exploration models for porphyry copper deposits focus on the alteration halos and the commonly extensive pyritic halo surrounding most copper porphyries. Due to the apparent lack of this pyritic halo at Schaft Creek, as well as any argillic alteration zone, exploration has instead focused on structural trends, particularly the breccia unit hosting the Western Breccia and Paramount Zones.

Figure 8.2 Generic Cross-section of a Porphyry Copper-(Molybdenum-Gold) Deposit



Source: Richards (2003)

8.2 RECENT WORK

In recent work completed by Cambria, it has been suggested that the deposit type may better be described as a “polymetallic (copper-molybdenum-gold-silver), structurally controlled, low-sulphidation, hydrothermal replacement deposit” (Caron et al. 2012). Currently, the Cambria interpretation is a hypothesis, and further work will need to be done to verify this theory. For the purposes of this report, Tetra Tech has

treated the Schaft Creek deposit as a calc-alkalic copper-molybdenum-gold-silver porphyry deposit, with a low-sulphidation state, and overlapping mineralized zones.

In the opinion of the QPs, Schaft Creek is considered to be an example of a porphyry system based upon the following reasons:

- The tenor of copper, molybdenum, silver, and gold grades, along with large tonnage.
- Copper-bearing igneous rocks intrude the host volcanic and sedimentary rocks.
- Mineralization is spatially and temporally associated with the intrusive breccia and hydrothermal alteration of the intrusive and breccia bodies.
- There have been multiple emplacements of successive intrusive phases and numerous breccias
- The hydrothermal alteration is extensive and zoned. The alteration assemblages are consistent with a porphyry environment.
- Mineralization is generally situated within well-developed quartz-sulphide stockworks, veins, and breccia zones.
- Large zones of veining and stockwork mineralization, in conjunction with minor disseminated and replacement mineralization throughout large areas of intrusive breccia and hydrothermally altered rock.

9.0 EXPLORATION

Copper Fox acquired the Project in 2002 and work completed since then has included a photogrammetry survey, geological mapping program, various geophysical surveys, re-logging and sampling of historic core, drilling, and various studies including lithogeochemical, environmental baseline, petrographic, density measurement, mineralization characterization and metallurgical testing. A summary of the exploration work programs completed by Copper Fox to the report effective date are summarized below.

9.1 PHOTOGRAMMETRY SURVEY, 2005

In 2005, Copper Fox retained Eagle Mapping Ltd. to complete a photogrammetry survey at 5 m contour intervals and at a scale of 1:2,000. The purpose of the survey was to provide sufficient topographic resolution to support prefeasibility and feasibility level studies (Kulla et al. 2011).

9.2 GEOLOGICAL MAPPING, 2007

In 2007, Copper Fox conducted a prospect-scale geological mapping program on the Property. The program encompassed an area of 3.6 by 2.6 km (936 ha) and was performed at a scale of 1:5,000, using global positioning system (GPS) control. Targeted outcrops were identified by airphoto interpretation and archival geological maps. Locations were subsequently plotted on the 1:5,000 topographical base map derived from digital orthophoto geo-referenced maps produced by Eagle Mapping Ltd. in 2005 (Hanych and Ewanchuk 2007). The maps produced from this program are provided in Appendix B.

9.3 GEOPHYSICAL SURVEYS, 2007

In 2007, Copper Fox retained Associated Geosciences Ltd. to perform various geophysical surveys over the Property area. The main objectives for the surveys were to:

- map mineralization in a region to the north of the camp
- determine if known mineralization, occurring at relatively shallow depths, is continuous beneath a certain swampy region
- map bedrock topography at the planned location of mining process structures and on the eastern flank of the projected production mining pit
- determine the connectivity of two areas of mineralization (Paramount and Liard Zones).

To meet these objectives, a combination of methods such as IP, electrical imaging (EI), magnetic total field, very-low frequency electromagnetic (VLF-EM), seismic refraction and controlled source audio magnetotelluric (CSMAT) were utilized. The surveys covered approximately 8.1 km^2. Survey line lengths and number of stations used for each method are summarized in Table 9.1.

Table 9.1 Survey Line Lengths

Method	Total Line (km)	Total No. of Stations
IP/EI	4.5	-
Magnetics	25.3	-
VLF-EM	25.3	465
CSAMT	-	46
Seismic Refraction	4.3	-

The survey was performed between September 11 and 27, 2007, with a five-person field crew. A 250 to 300 m wide induced polarization-chargeability anomaly was found immediately east of the Liard Zone, in an area never previously explored by drilling or geophysical surveys. However, this anomaly has not been detected in subsequent geophysical surveys. The reader is referred to Robillard (2008) for further details regarding survey parameters and for results.

9.4 QUANTEC TITAN-24 DCIP AND MT SURVEYS, 2010-2011

9.4.1 PHASE I

In 2010, Copper Fox retained Quantec Geosciences Ltd. to conduct a Titan-24 direct current induced polarization (DCIP) and magnetotelluric (MT) survey. The objective of the survey was to map potential targets to depths of 1,500 m to assist in the definition of drill targets. Data were acquired over nine DC/IP/MT spreads along five lines with 100 m station intervals and approximately 400 m line spacing. A total of 28.2 km DC/IP survey lines and 22 km of MT survey lines were completed. The survey was performed between April 27 and May 21, 2010. For the DC and IP measurements, a pole-dipole configuration was used (Gharibi and Eadie 2010).

The DC, IP and MT data were inverted using the two dimensional inversion algorithms to produce cross-sections of the resistivity and chargeability distributions of the subsurface. The MT data were inverted using an inversion code to provide images of the resistivity distribution up to 1,500 m below the surface. All the inversions, including MT, incorporated topography. The main results of Phase I of the survey are as follows (Gharibi and Eadie 2010):

- The chargeability anomaly formed by the Schaft Creek deposit was extended an additional 800 m to the north and 800 m to the south, with the anomaly having a strike length of 3,200 m.

- At a depth of 700 m below surface, the chargeability anomaly located in the center of the Schaft Creek deposit measures 1,000 m long by 500 m wide and is open at depth.
- The chargeability anomaly suggests that the majority of the historical drilling was completed on a possible flank of the deposit (Liard Zone) and was too shallow to test the deeper part of the anomaly.
- The survey failed to reconfirm the chargeability anomaly identified in 2007.

9.4.2 PHASE II

Follow-up work to the Titan-24 DC/IP/MT survey was performed between September 22 and October 11, 2010. Phase II was an extension to the previous survey conducted over the same area, and data were acquired over five DC/IP/MT spreads along five lines with 100 m station intervals. Four survey lines were oriented in east-west direction with approximately 400 m line spacing. One tie-line was surveyed in north-south direction. A total of 12 km DC/IP survey line (plus current extension) and 12 km of MT survey line were surveyed. A pole-dipole configuration was used for DC and IP measurements. The main objective of Phase II was to comprehensively explore the Schaft Creek horizon for geophysical anomalies that had corresponding deposit signatures outlined in Phase I (Gharibi and Faucher 2010). Phase II surveyed the area over the Mike Zone and the recently acquired ES and GK Zones (all within a 6 km strike length) located north of the Schaft Creek deposit (press release September 6, 2011).

Primary results from Phase II are summarized in Gharibi and Faucher (2010):

> *The eastern part of the survey grid displayed a high resistivity background containing an elevated conductivity feature with resistivity of ~1500 Ωm in a ~N-S orientation. This anomaly displays an eastwards dipping trend that extends to great depth of more than 1000 m. The conductive anomalous body displays a resistivity of ~500 Ωm at this depth and constitutes the easternmost part of the survey grid. The western and northern parts of the survey grid display the most conductive materials with resistivity as low as 500 Ωm. A large conductive body in the westernmost part correlates with Hickman batholith. The shallow conductive zones resolved in the western part construct an elongated conductive body with a ~NNW-SSE trend. The elevated conductive features in this area associate with outcrop of Hickman rocks and volcanic rocks in the Main Zone and Paramount Zones. The West Breccia Zone is distinct in this area with slightly higher resistivity of ~2000 Ωm. The southern part of the survey grid generally displays resistive materials with resistivity of a few thousand of Ωm. This zone partially associates with Andesitic Volcanic rocks in this area. The chargeability models generally display a very low chargeability in the eastern part of the grid. In the western part of the grid the chargeability cross-sections display elevated chargeability in an area associated with Main, West Breccia, and Paramount Zones. The southern portion of the western part of the grid illustrates a highly chargeable subsurface that extend beyond the survey grid. The two southernmost lines (L800S and*

L400S) surveyed in the phase II of the Schaft Creek project revealed a large and highly chargeable area. A chargeable anomaly is resolved in the central part of these lines at a depth of ~100m with a chargeability of more than 40 mrads. The anomaly appears to extend to depths greater than 400 m. The northernmost lines (L2000N and L2400N) surveyed in the phase II display a slightly elevated chargeable feature in the central part of the line. The anomaly shows a maximum chargeability of ~20 mrads in a ~N-S orientation. This chargeable zone is the northern extension of the chargeable anomalies resolved in the central part of this area. A total of 16 potential targets with different priority levels have been resolved along the survey lines surveyed in phase II of the Schaft Creek project. The potential targets are prioritized as High, Moderate, or Low, and their intermediate ranges based on the category of the chargeability and conductivity of the anomalies as well as the size.

9.4.3 PHASE III

Following positive results obtained from Phases I and II, Phase III of the survey was executed between July 23 and August 22, 2011. The survey included 13 DC/IP/MT spreads along 12 lines with 100 m station intervals. Ten survey lines were oriented in east-west direction and two tie-lines were surveyed in a north-south orientation. The survey lines were spread over two survey grids. Three of the east-west oriented survey lines were located in the northern grid in an area northwest of the main grid (lines L8000N, L8400N, and L8800N). A total of 30 km DC/IP survey line and 30 km of MT survey line were surveyed. For DC and IP measurements, a pole-dipole configuration was used. The objectives of Phase II were to further explore the Schaft Creek horizon for geophysical anomalies initially defined in Phase I and Phase II (Gharibi et al. 2011).

Primary results from Phase II are summarized in Gharibi et al. (2011).

The most conductive subsurface is observed in the central and south-western parts of the main grid with a resistivity of less than 500 Ωm. The conductive materials in the south-western part are limited to shallow surface. In the central part the elevated conductivity region extends to more than 300 m in depth and constitutes an elongated anomalous area with a NNW-SSE orientation. The north-westernmost part of the main grid displays a surface conductivity feature associates with the river and river bed. Beneath this surface conductivity feature an eastward dipping moderate conductivity anomaly with a resistivity of ~1500 Ωm is observed along the survey lines. The moderate conductivity structure extends to more than 500 m in depth in the central part of the survey lines and appears to partially arise back to the surface in the eastern part of the profile. In the northern grid a background resistivity of ~2000 Ωm is observed along the survey lines. An eastward dipping conductive structure with resistivity as low as 500 Ωm is observed in this area. The conductive structure crops out in the western part of the northern grid and dips to more than 500 m in depth in the central and eastern parts. The south-western and central parts of the main grid display elevated chargeability regions with chargeability of more than 30 mrads. Elevated

chargeability zones appear to extend to the northwest part of the main grid along the lines surveyed in the phase III of the Schaft Creek project. In this area the elevated chargeability zones illustrate chargeability as high as 15 mrads. In the northern grid a background subsurface chargeability of ~7 mrads is observed. Within this background slightly elevated chargeability areas with chargeability of ~11 mrads are observed in the western part of the northern grid. A total of 31 potential targets with different priority levels have been resolved along the survey lines surveyed in phase III of the Schaft Creek project. The potential targets are prioritized as High, Moderate, or Low, and their intermediate ranges based on the category of the chargeability and conductivity of the anomalies as well as the size.

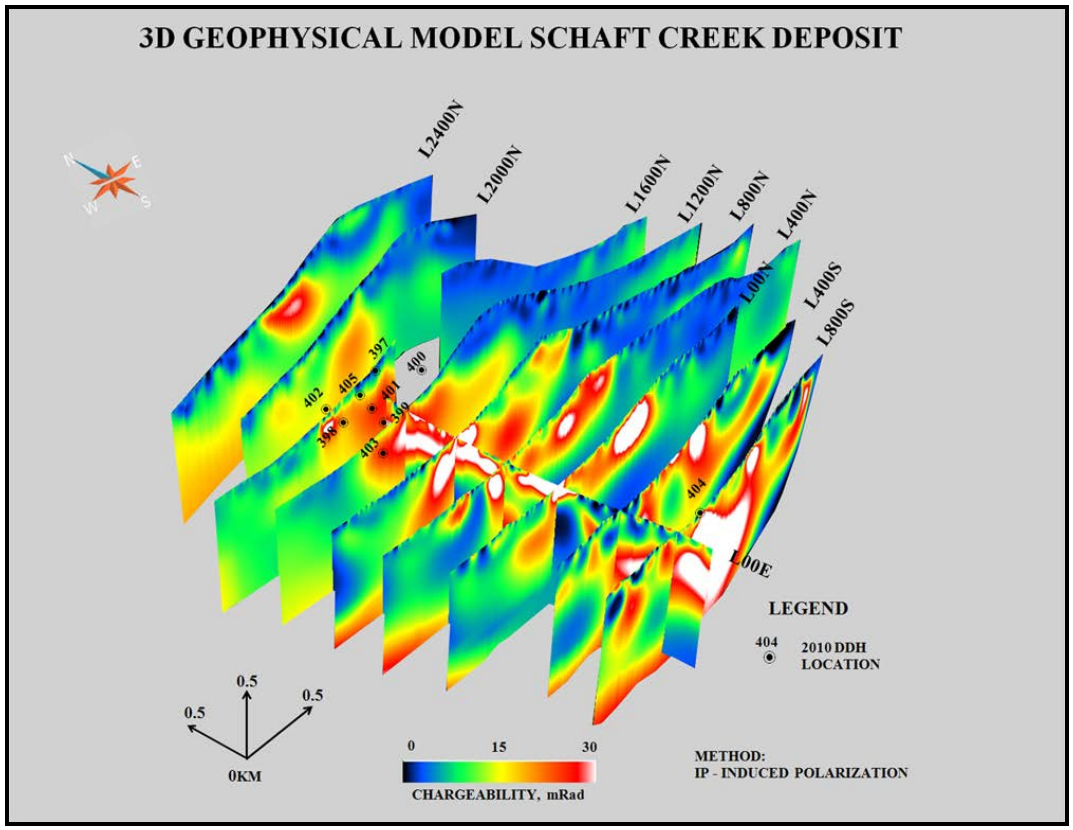
9.4.4 OVERALL SIGNIFICANT RESULTS

In order to better interpret the geophysical responses obtained by the surveys, lithologies, sulphide content and metal grades obtained from the diamond drilling were examined, wherever such data was available. From this, main results of the survey are as follows (press release October 17, 2011):

- A previously unknown chargeability anomaly exists west of the Liard Zone.
- The chargeability anomaly in the Paramount Zone has been extended 1,800 m to the north, and has a width of 400 to 1,000 m.
- The chargeability anomaly in the Mike Zone has been extended 600 m to the north and has a width between 500 to 600 m.
- The chargeability anomalies in the Mike Zone and the Paramount Zone appear to define a circular feature with a zero chargeability core, suggesting the central portion of a porphyry system.
- The ES Zone contains two moderate chargeability anomalies, one of which corresponds to the mineralized zone outlined on surface.
- Only the western portion of the GK Zone could be surveyed due to terrain issues. A 1,000 m long by 200 m wide weak chargeability anomaly has been detected along the western side of the mineralized zone exposed on surface.

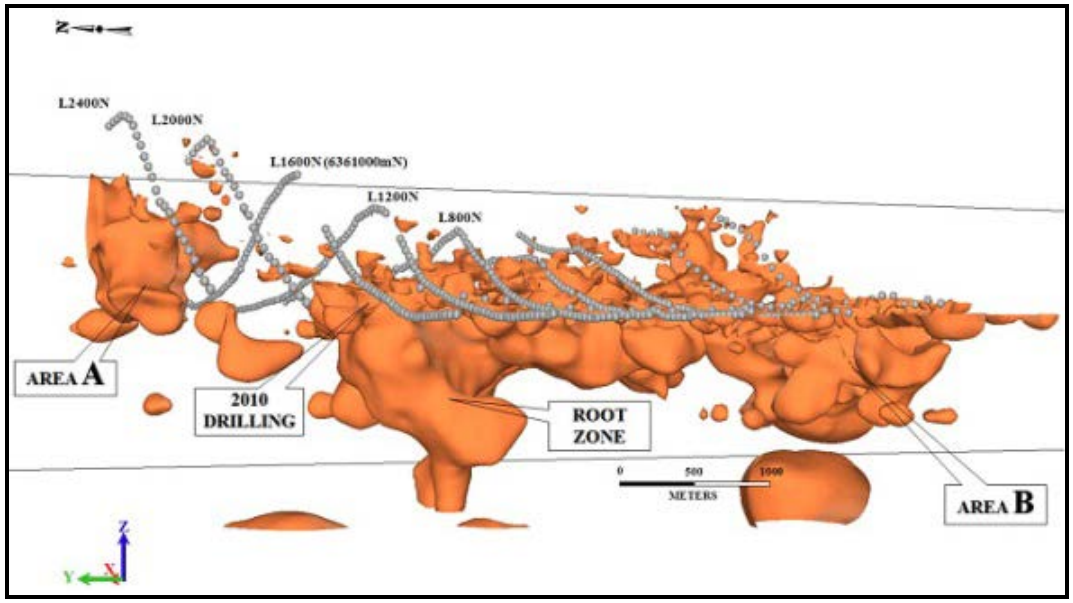
Results of the surveys are shown graphically in Figure 9.1 to Figure 9.3.

Figure 9.1 Results of Titan Survey – Schaft Creek Geophysical Model



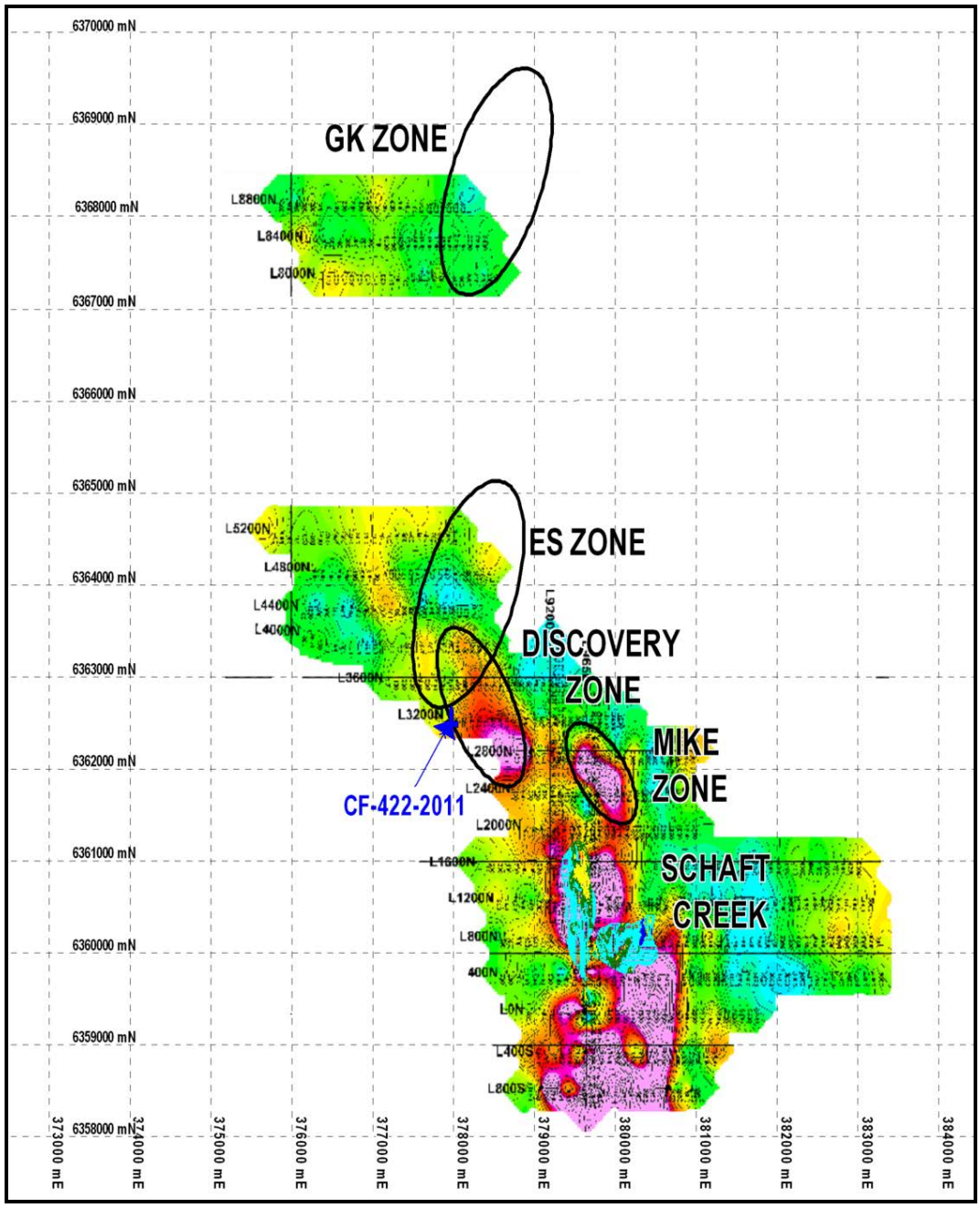
Source: www.copperfoxmetals.com

Figure 9.2 Results of Titan Survey – Schaft Creek 3D Chargeability Model (25 MRADS)



Source: www.copperfoxmetals.com

Figure 9.3 Results of the Quantec Titan 24 IP and MT Survey, with Chargeability Anomalies Outlined



Source: Copper Fox

A brief discussion on the IP anomalies is described below (press release October 17, 2011).

Paramount Zone

The survey has extended this strong chargeability anomaly (with corresponding resistivity low) a distance of 1,800m to the north of the current drilling. This chargeability anomaly in conjunction with the chargeability anomaly identified on the Mike Zone defines an interpreted circular feature that coincides with a large circular shaped resistivity low. The south side of this circular feature corresponds to the higher-grade zone of copper-gold-molybdenum-silver mineralization intersected by the drilling completed in 2010 and 2011. The northern side of this anomaly has not been tested by diamond drilling. This chargeability anomaly shows excellent correlation with the zone of argillic alteration within the Shaft Creek Mineral Trend.

Mike Zone

This strong chargeability anomaly appears to be a separate anomaly that defines the northeast portion of the interpreted circular feature noted above. It appears that this feature is cut by several north-south oriented faults that exhibit a good correlation with the 20km long magnetic feature defined by the airborne magnetic survey completed in early 2011. This chargeability target appears to be truncated by a strong northwest trending interpreted fault.

ES Zone

Two moderate chargeability anomalies have been located on this zone. The centre of the chargeability anomaly (with moderate resistivity) that correlates with the mineralized zone outlined on surface exhibits a distinct low chargeability over a distance of approximately 300m, possibly due to an interpreted northwest trending fault zone. The second anomaly (with associated moderate-strong resistivity) is located to the west of the mineralized zone and is interpreted to be the extension of the chargeability anomaly defined on the Paramount zone. The chargeability signature is accompanied by a moderate to strong resistivity signature possibly due to alteration.

GK Zone

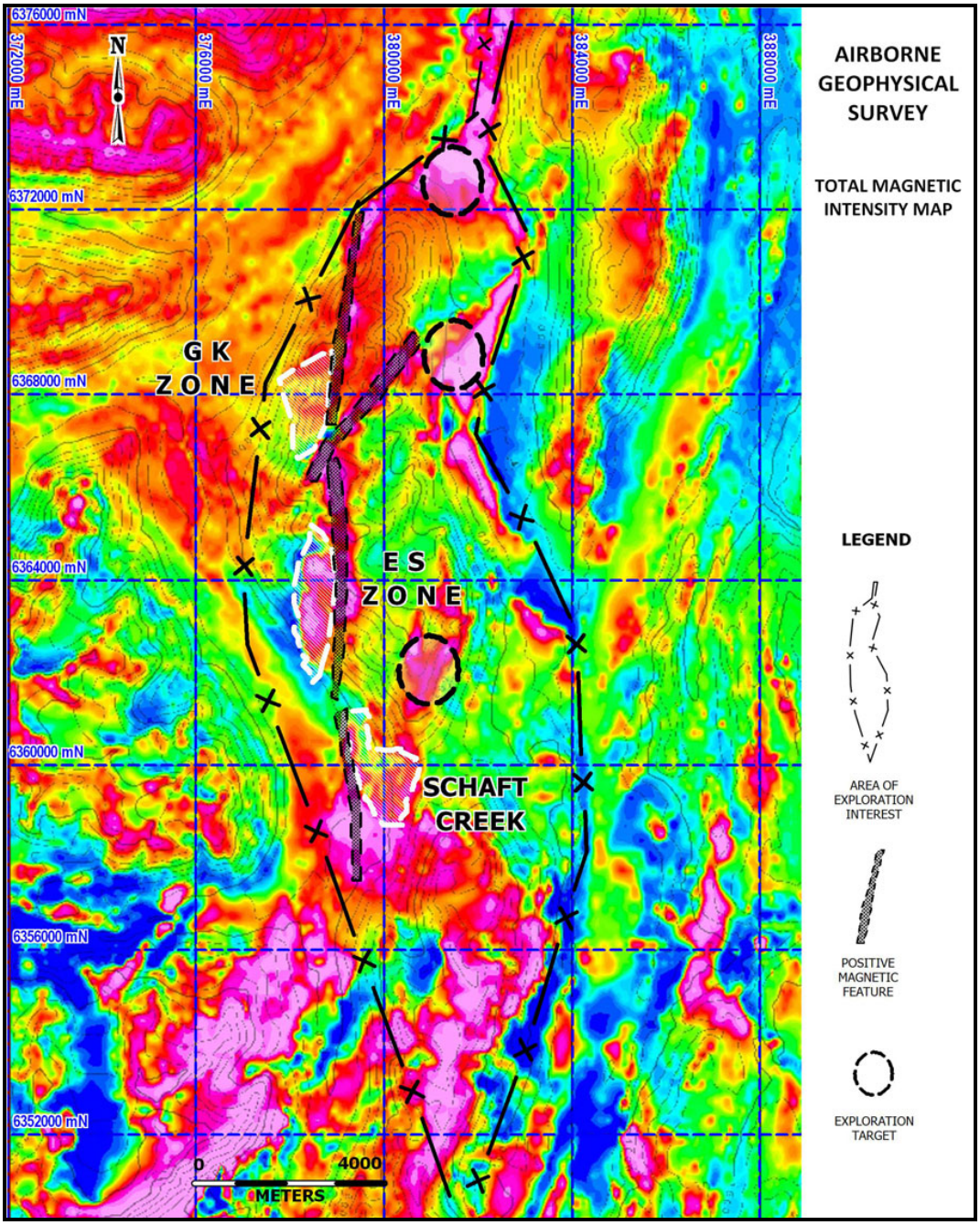
Only a limited portion of this zone was surveyed by the Titan-24 system. A broad zone (800m wide) of weak to sometime moderate chargeability (associated with a mixed low-moderate resistivity) was located at the interpreted southwest extension of the GK zone. The limited nature of the survey makes a thorough interpretation of this zone difficult. Additional surveying of this zone will be required to provide a better interpretation and significance of the chargeability anomaly and the mineralized outcrop on surface.

9.5 AIRBORNE MAGNETIC SURVEY, 2011 AND 2012

9.5.1 PHASE I, 2011

Precision GeoSurveys Inc. (Precision GeoSurveys) of Vancouver, BC, was retained by Copper Fox to conduct a high-resolution aeromagnetic survey over the Property area. The purpose of the survey was to identify the magnetic signature of the Schaft Creek deposit, and to use this signature in the identification of other potential mineralized zones within the interpreted Schaft Creek mineral trend. The survey was performed between May 4 and June 2, 2011, at 200 m-spaced flight lines at an average altitude of 39 m above ground and tie lines were spaced at 2 km intervals. A total of 2,520 line kilometres (including tie-lines) were completed, covering an area 25 km long by 17 km wide. The magnetic data were collected using a Scintrex cesium vapour CS-3 magnetometer, a high sensitivity/low noise magnetometer. The magnetometer and the base station used in the survey had absolute accuracy ranges of 0.1 nT (gamma) and a sensitivity of 0.1 nT (gamma) at a two-second sampling rate. A potential area of exploration interest was identified from the preliminary interpretation of the total field magnetic data (TF) and the calculated vertical gradient (CVG) magnetic data. The area of exploration interest is an elliptical shaped zone, approximately 4 km wide and 20 km long. It is bounded on both sides by narrow, linear, positive TF and CVG magnetic signatures, which are interpreted to be regional scale faults. The survey also identified three distinct positive magnetic signatures that correlate with the Schaft Creek deposit; the ES and GK Zones of copper mineralization, and the Mike chargeability anomaly. The airborne magnetic signature over the Schaft Creek deposit correlates well with the Quantec Titan-24 DCIP and MT survey results and suggests that the Schaft Creek deposit could extend for an additional 1,000 m to the south. Results are illustrated in Figure 9.4, and the reader is referred to Poon (2011) for further survey details.

Figure 9.4 Airborne Geophysical Survey – Total Magnetic Intensity Map



Source: www.copperfoxmetals.com

9.5.2 PHASE II, 2012

A follow-up survey to the 2011 helicopter-borne magnetic field survey was completed by Precision GeoSurveys in May 2012. The purpose of Phase II was to extend the limits to the north and south of the area covered in Phase I. A total of 2,514 line kilometres were flown with 200 m line spacings. Results were still pending at the time of preparing this report.

9.6 RE-LOGGING AND SAMPLING OF HISTORIC CORE, CAMBRIA 2011

Cambria was retained by Copper Fox to manage the 2011 diamond drilling exploration program and historical core re-sampling and re-logging program. Between and August and November of 2011, select holes and intervals of historic drill core were re-logged to test and formulate a consistent geological and structural interpretation, to provide input for the construction of a 3D model, and to provide a robust framework for future work. Additional purposes to this endeavour were to confirm or revise the descriptions for lithologies, alteration and structures (Caron et al. 2012). During this program, the rejects of 5359 historic samples were re-assayed at Acme Analytical Laboratories Ltd. (AcmeLabs) in Vancouver, BC.

As discussed in Caron et al. (2012), main results of the program were as follows;

- *A strong sodic feldspathization overprint is present at Schaft Creek, resulting in widespread albite to oligoclase replacement of pre-existing feldspars, ranging from rims of sodic feldspar to complete replacement. The sodic alteration has two significant impacts at Schaft Creek. Firstly, primary and secondary potassium feldspars have been almost completely altered to sodic feldspar, so relatively little potassium feldspar remains to respond to sodium cobaltinitrite staining. Light pink colouration in feldspars that has been routinely logged as potassium feldspar in previous work appears to be almost exclusively sodic feldspar, with minor red hematite providing the pink colouration. Secondly, most of the gently dipping porphyritic units that previous workers considered to be intrusives are found to be volcanic or sub-volcanic porphyritic feldspar phyric flows with sodic feldspar overprints. Sodic feldspar overprints in these units range from rimming of the plagioclase phenocrysts to complete phenocrysts replacement and concomitant replacement of much of the generally aphanitic volcanic groundmass with holocrystalline sodic feldspars. Where sodic feldspathization is more advanced, these units are often texturally very similar to certain intrusives. However, it is generally possible to determine that these units are altered volcanics rather than intrusives since the degree of alteration is often quite variable and original volcanic textures can be discerned when moving away from the most highly altered zones. Additionally, these units do not contain visible quartz as either quartz eyes or as crystalline quartz in the groundmass.*

- *A strong potassic alteration overprint is seen in the breccias of the Paramount Zone. This alteration is part of an early alteration event and consists of fine-grained biotite hornfels developed in andesitic volcanics where they are proximal to intrusive bodies such as dikes. These hornfels often show evidence of subsequent hydrothermal fracturing and incorporation into polylithic breccias. Subsequent near universal propylitic alteration of biotite to chlorite makes the primary biotite hornfels somewhat difficult to recognize, but the hornfels texture is quite distinctive and generally survives later hydrothermal and structural activity.*
- *Some structural observations were made while re-logging historic core. These observations were incorporated into the structural analysis that is discussed briefly in the Structure section above, as well as in more detail in Appendix A. The primary conclusions of this analysis are that the main structural controls at Schaft Creek are three fault sets and the structurally controlled hydrothermal breccia. One fault set trends northwest and dips steeply toward the east; another set is sub-horizontal, dipping gently to the north; and a third set trends to the northeast and dips at ~45° to the northwest. The northwest-trending fault set and the sub-horizontal fault set are cut by the northeast-trending fault set. The northeast-trending fault set also cuts the mineralized hydrothermal breccia, which trends north-south and dips steeply to the east. Faulting appears to play a significant role in controlling mineralization, as many mineralized structures follow the major trends defined by the fault structures.*

9.7 LITHOGEOCHEMICAL STUDY, CAMBRIA 2011

In 2011, Cambria completed a preliminary geochemical study with the intention to refine the stratigraphy and to investigate the chemical variability within the deposit. The study utilized 185 samples collected specifically for whole rock geochemical analysis and approximately 12,000 assay samples. Samples had been analyzed by lead (Pb)-fire assay, inductively coupled plasma-mass spectrometry (ICP-MS), and inductively coupled plasma-emission spectroscopy (ICP-ES) methods with an open vessel four-acid digestion. Using whole rock geochemical data, a Pearce diagram was generated and ten geochemical units were created (Table 9.2).

Table 9.2 Lithological Grouping from Geochemical Analysis

Geochemical Group	Description	Included Lithologies
1	Intermediate intrusives	PPFQ, QZMZ, GRDR, (BRPL, FQP2, INBX, ANXX, ANLP, BRGD, GDXX, GRHI, BRIG, TOBR, ANBX, PPPL, ANDS, FAUL, HVBX, TOIG, ANPF, ANAP, BRIV, ANTF, ANAU, BRVL, ANVC, BRXX, OVER, FQP1, SHER, SDUN, VNBX, CCBX, VEIN)
2	General volcanics	ANLP, ANPF, ANAP, ANDS, ANBX, ANXX, (INBX, ANTF, BRVL, ANAU, ANVC, FAUL, PPFQ, BRPL, OVER, PPAU, HVBX, QZMZ, FQP2, GRDR, PPPL, GDXX, PVPF, BRIG, SHER, BRIV, MYLN, BRXX, GRHI, CCBX, FQP1, ANPL, TOIG, VNBX, BRGD, SDUN, TOVL)
3	High Cr, Fe, Mg, Mn, Ca volcanics	PPAU, ANLP, ANBX, ANAP, ANDS, (BRPL, SHER, ANXX, ANTF, ANAU, ANPF, INBX, TOBR, BRGD, QZMZ, GRDR, GDXX)
4	Low Nb volcanics	ANLP, ANDS, (BRPL, ANXX, ANTF, ANBX, INBX, ANAU, ANAP, ANPF, HVBX, SHER, BRGD, TOBR, FAUL, PPFQ, GRHI)
5	FQP1 – Quartz feldspar porphyry	FQP1, (GDXX, PPFQ, FQP2)
6	Mafic dikes	BSDI, DYKE, DIKE, GABB, (ANDS)
7	Mafic volcanics, dikes	PERD, GABB, ANTF, ANLP, (BSDI)
8	Mafic volcanics, dikes	GABB, BSDI, (ANTF, ANAP)
9	Diorite	DIOR
10	Sediments	LMST, SDSS, few miscellaneous

Notes: Cr = chromium; Fe = iron; Mg = magnesium; Ca = calcium; Nb = niobium.
The lithologic codes used in this study were the ones used by geologists prior to 2010, and have subsequently been revised.

The Pearce diagram illustrated that the majority of the volcanic units were of sub-alkaline basaltic composition and that some of the volcanics gradually evolved toward a basaltic andesite composition. The majority of the felsic intrusives were likely derived from an intermediate rather than an evolved felsic magma. Mafic intrusives plotted in the more basic part of the diagram. Group 3 volcanics and G7 volcanics appeared to share the same trend and are thought to be possibly coeval. The quartz-bearing plagioclase porphyry dikes (magenta) cluster well in various diagrams, slightly off from all other intermediate dikes. The latter have the same general composition as most of the intermediate intrusives (G1). The breccias do not appear to follow a specific trend, but rather reflect the composition of the brecciated units. In general, the majority of samples from the Paramount Zone breccia fall into the intermediate intrusive category. The common inconsistencies between geochemical grouping classifications and the lithologies from field logging were found

to be a reflection of the difficulty in logging units that have been intensely overprinted by alteration (Caron et al. (2012).

9.8 3D GEOLOGICAL MODEL, CAMBRIA 2011

Copper Fox retained Cambria to continue their work from 2010, and to assist in the geological interpretation of the Project. All available information was used to construct a 3D geological model for the Project. Wireframes were constructed in Surpac™ software, and were generated for various geological domains including base of overburden, breccia zones, fragmental zones, alteration zones, intrusive units, and fault zones. The model assisted Copper Fox in identifying future targets for definition drilling. It additionally suggested that the coarse fragmental rocks in the Main Zone may be a steeply dipping breccia pipe (Caron et al. 2012).

9.9 OTHER STUDIES

Petrography, mineralogical and paragenetic studies in support of mineralogical and geological interpretations as well as geotechnical and hydrological studies have been completed on the Project. The following is an excerpt from Kulla et al. (2011), describing some of the geotechnical and hydrological work that was completed for prefeasibility and feasibility-level studies.

> *During earlier mining studies on the project, Knight Piésold calculated pit slope design parameters. Information in this subsection on pit slopes is taken from Bender et al. (2008) which is based on the Knight Piésold work. Intact rock strengths were generally found to be strong and the rock mass quality was typically fair to poor. Large-scale structural features across the deposit area were noted to occur as sets of steeply dipping north-south and east-west trending faults. Discontinuities measured on outcrops across the deposit area reflected the major structural trends shown in the fault system.*
>
> *For the 2008 pre-feasibility study pit design, an inter-ramp slope angle of 45º was recommended for the Southwest and Northwest Sectors where adverse structural features were considered to be less significant. An inter-ramp slope angle of 43º was recommended for the Northeast and Southeast Sectors to reduce the potential for wedge failure in the Northeast wall and toppling failure in the Southeast wall. The resulting overall slope angle for the Northeast and Southeast Walls will be approximately 40º after allowing for cleanout benches. A 44º overall pit slope is appropriate for the remaining walls where the maximum slope height is less significant. The proposed Northeast Wall will reach a maximum slope height of 1,200 m. Baseline hydrological studies have been undertaken and hydrological studies are ongoing. A preliminary water balance model has been completed. Water management structures will be required for water diversion around major infrastructure, such as any tailings storage facility.*

10.0 DRILLING

To date, a total of 410 drillholes, totalling 98,445.82 m, have been drilled into the Property. Of these, 179 holes and 38,879.14 m have been completed by Copper Fox. Drilling conducted by Copper Fox is discussed below, and drilling conducted by other operators is summarized in Section 6.0.

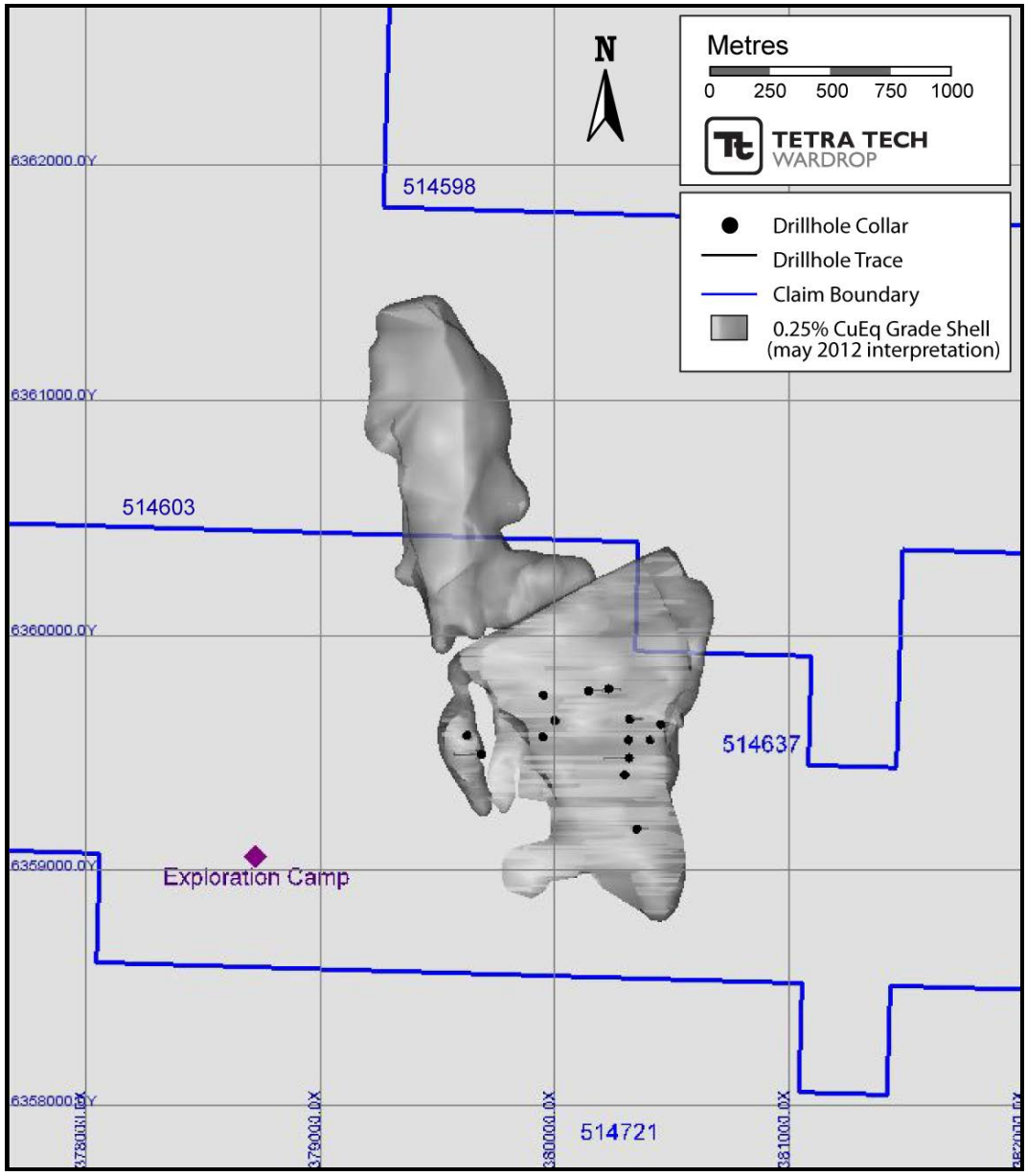
10.1 2005 DRILLING PROGRAM

Copper Fox drilled 15 holes, totalling 3,158.92 m in 2005 (Table 10.1). Thirteen of the drillholes targeted the Liard Zone and the other two drillholes (05CF234 and 05CF235) targeted the Breccia Zone (Figure 10.1). Drilling was conducted by Hy-Tech Drilling Ltd. (Hy-Tech) during the months of August and September, and all core was of PQ core diameter size.

Table 10.1 Summary of 2005 Drillholes

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose
	Easting (m)	Northing (m)	Elevation (masl)							
05CF234	379688.29	6359494.87	899.55	168.00	8/11/2005	8/13/2005	270.0	-45.0	PQ	Breccia Zone
05CF235	379626.42	6359573.44	889.37	159.50	8/14/2005	8/16/2005	0.0	-90.0	PQ	Breccia Zone
05CF236	379948.80	6359567.07	945.40	171.30	8/17/2005	8/19/2005	0.0	-90.0	PQ	Main Zone
05CF237	379999.61	6359638.85	957.55	49.10	8/20/2005	8/21/2005	92.6	-59.7	PQ	Main Zone
05CF238	379952.31	6359746.23	956.57	78.50	8/21/2005	8/22/2005	0.0	-90.0	PQ	Main Zone
05CF239	380297.51	6359406.39	1038.20	214.00	8/23/2005	8/25/2005	0.0	-90.0	PQ	Main Zone
05CF240	380349.43	6359176.81	1041.19	146.30	8/26/2005	8/28/2005	82.0	-70.0	PQ	Main Zone
05CF241	380315.91	6359478.59	1041.89	244.10	8/28/2005	8/31/2005	0.0	-90.0	PQ	Main Zone
05CF242	380315.91	6359478.59	1041.89	305.00	8/31/2005	9/3/2005	270.0	-70.0	PQ	Main Zone
05CF243	380314.29	6359554.02	1055.36	274.50	9/12/2005	9/15/2005	0.0	-90.0	PQ	Main Zone
05CF244	380320.04	6359644.36	1061.69	304.50	9/9/2005	9/12/2005	90.0	-80.0	PQ	Main Zone
05CF245	380406.28	6359554.20	1092.09	107.00	9/8/2005	9/9/2005	0.0	-90.0	PQ	Main Zone
05CF246	380452.01	6359621.61	1122.19	305.10	9/4/2005	9/7/2005	90.0	-80.0	PQ	Main Zone
05CF247	380229.69	6359772.82	1028.62	290.02	9/16/2005	9/18/2005	90.0	-80.0	PQ	Main Zone
05CF248	380143.87	6359764.96	1002.53	342.00	9/19/2005	9/24/2005	90.0	-80.0	PQ	Main Zone

Figure 10.1 Plan View Map of 2005 Drillhole Locations



10.2 2006 DRILLING PROGRAM

Copper Fox drilled 42 holes, totalling 9,016.00 m in 2006 (Table 10.2). Thirty-five of the drillholes targeted the Liard Zone and the other seven drillholes (06CF253, 06CF283, 06CF286, 06CF287, 06CF288, 06CF289, and 06CF290) targeted the Breccia Zone (Figure 10.2). Drilling was conducted by Hy-Tech between July and October, and core was either of PQ or HQ core diameter size.

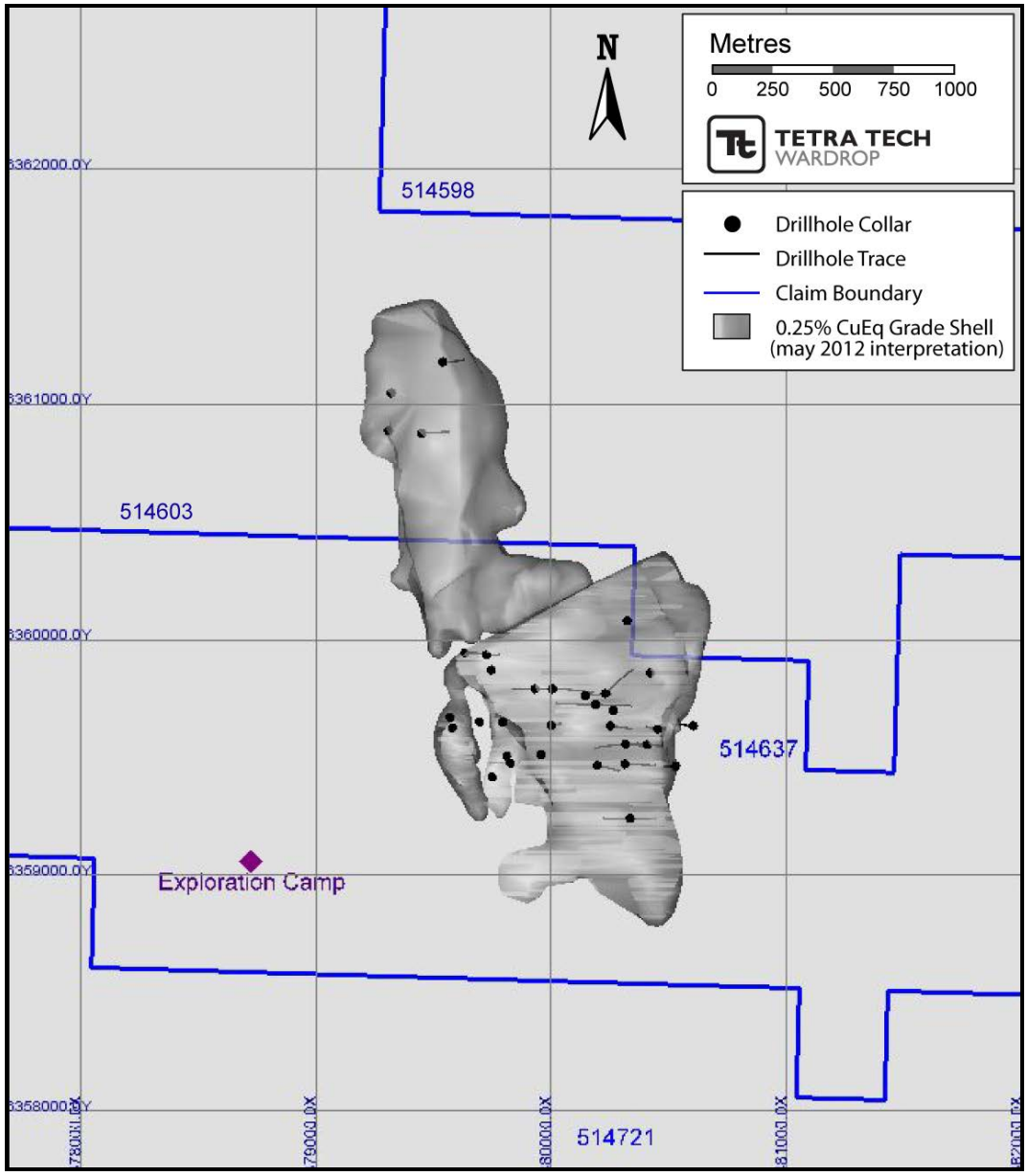
Table 10.2 Summary of 2006 Drillholes

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose
	Easting (m)	Northing (m)	Elevation (masl)							
06CF249	379632.94	6359945.49	900.97	153.00	7/11/2006	7/13/2006	90	-55	PQ	Main Zone
06CF250	379724.14	6359936.37	908.57	86.00	7/14/2006	7/15/2006	90	-55	PQ	Main Zone
06CF251	379930.41	6359792.04	951.56	102.00	7/22/2006	7/25/2006	0	-90	PQ	Main Zone
06CF252	379745.04	6359872.73	907.53	78.00	7/15/2006	7/16/2006	0	-90	PQ	Main Zone
06CF253	379579.67	6359627.48	883.01	116.00	7/10/2006	7/11/2006	0	-90	PQ	Breccia Zone
06CF254	379793.38	6359648.84	916.41	107.00	7/16/2006	7/17/2006	0	-90	PQ	Main Zone
06CF255	380143.87	6359764.96	1,002.53	303.00	7/26/2006	8/1/2006	90	-69	PQ	Main Zone
06CF256	380263.66	6359700.02	1,037.35	303.00	8/11/2006	8/14/2006	0	-90	PQ	Main Zone
06CF257	380249.86	6359634.89	1,028.61	276.00	8/5/2006	8/8/2006	0	-90	PQ	Main Zone
06CF258	380194.37	6359466.91	1,001.53	243.00	8/1/2006	8/4/2006	100	-65	PQ	Main Zone
06CF259	380420.12	6359860.20	1,128.19	312.00	9/14/2006	9/19/2006	0	-90	PQ	Main Zone
06CF260	380322.45	6360081.38	1,137.42	168.00	9/19/2006	9/21/2006	0	-90	PQ	Main Zone
06CF261	380603.60	6359635.29	1,162.44	210.00	9/21/2006	9/25/2006	270	-65	PQ	Main Zone
06CF262	380528.39	6359464.64	1,124.31	225.00	9/26/2006	9/30/2006	270	-75	PQ	Main Zone
06CF263	380315.67	6359557.31	1,051.78	213.00	10/14/2006	10/16/2006	90	-45	HQ	Main Zone
06CF264	380315.67	6359557.31	1,051.78	270.00	10/10/2006	10/14/2006	90	-65	PQ	Main Zone
06CF265	380315.67	6359557.31	1,051.78	255.00	10/16/2006	10/20/2006	270	-60	PQ	Main Zone
06CF266	380406.28	6359554.20	1,092.09	123.00	9/22/2006	9/24/2006	90	-60	HQ	Main Zone
06CF267	380406.28	6359554.20	1,092.09	90.00	9/24/2006	9/25/2006	270	-60	HQ	Main Zone
06CF268	380452.01	6359621.61	1,122.19	213.00	9/30/2006	10/4/2006	270	-75	PQ	Main Zone
06CF269	380312.46	6359472.67	1,036.75	201.00	10/4/2006	10/9/2006	90	-50	PQ	Main Zone
06CF270	380334.43	6359242.08	1,038.15	228.00	10/14/2006	10/18/2006	270	-60	HQ	Main Zone
06CF271	380334.43	6359242.08	1,038.15	216.70	10/19/2006	10/23/2006	90	-60	HQ	Main Zone

table continues…

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose
	Easting (m)	Northing (m)	Elevation (masl)							
06CF272	380229.69	6359772.82	1,028.62	303.00	9/29/2006	10/1/2006	45	-60	HQ	Main Zone
06CF273	380229.69	6359772.82	1,028.62	303.00	9/25/2006	9/28/2006	45	-80	HQ	Main Zone
06CF274	380186.94	6359725.13	1,007.65	303.00	10/2/2006	10/5/2006	90	-60	HQ	Main Zone
06CF275	380186.94	6359725.13	1,007.65	336.00	10/5/2006	10/11/2006	270	-60	HQ	Main Zone
06CF276	380003.98	6359791.89	971.55	351.00	10/11/2006	10/14/2006	90	-60	HQ	Main Zone
06CF277	380003.98	6359791.89	971.55	336.00	10/14/2006	10/17/2006	270	-60	HQ	Main Zone
06CF278	379957.00	6359514.52	946.76	153.10	10/10/2006	10/13/2006	0	-90	HQ	Main Zone
06CF279	379826.66	6359476.35	921.85	168.20	10/6/2006	10/10/2006	270	-60	HQ	Main Zone
06CF280	379811.16	6359508.23	918.87	184.50	10/4/2006	10/6/2006	0	-90	HQ	Main Zone
06CF281	379748.02	6359417.10	910.22	168.00	10/1/2006	10/4/2006	0	-90	HQ	Main Zone
06CF282	379694.87	6359652.26	899.62	120.00	9/29/2006	9/30/2006	0	-90	HQ	Main Zone
06CF283	379570.13	6359670.95	881.72	120.00	9/26/2006	9/28/2006	0	-90	HQ	Breccia Zone
06CF284	379999.61	6359638.85	957.55	274.50	7/17/2006	7/21/2006	90	-80	PQ	Main Zone
06CF285	380249.86	6359634.89	1,028.61	291.00	8/8/2006	8/11/2006	90	-70	PQ	Main Zone
06CF286	379450.09	6360878.47	960.34	213.00	9/2/2006	9/6/2006	0	-90	PQ	Breccia Zone
06CF287	379450.09	6360878.47	960.34	243.00	9/6/2006	9/10/2006	90	-60	PQ	Breccia Zone
06CF288	379308.40	6360888.42	929.64	183.00	8/29/2006	9/1/2006	0	-90	PQ/HQ	Breccia Zone
06CF289	379320.18	6361049.30	958.40	183.00	9/11/2006	9/14/2006	0	-90	PQ	Breccia Zone
06CF290	379538.90	6361180.77	1,052.35	291.00	8/14/2006	8/29/2006	90	-70	PQ	Breccia Zone

Figure 10.2 Plan View Map of 2006 Drillhole Locations



Drilling highlights for various drillholes are as follows (press release December 19, 2006):

- 06CF260: twinned historic drillhole T81CH194, 27.5 m grading 0.64% copper and 0.29 g/t gold starting at 24.4 m
- 06CF261: twinned historic drillhole H68CH032, 183.0 m grading 0.30% copper and 0.17 g/t gold over 9.2 m

- 06CF264: drilled from same platform as 06CF243 but at a steeper angle, 9.2 m grading 0.54% copper and 0.51% copper at 137.3 m and 219.6 m, respectively
- 06CF268: twinned historic drillhole DDHSS-02, 12.2 m grading 0.77% copper and 0.26 g/t gold starting at 149.5 m
- 06CF269: twinned historic drillhole H71CH086, confirmed and improved slightly on the historic assays, 9.2 m grading 0.55% copper and 0.53 g/t gold at 18.3 m
- 06CF274: 18.3 m grading 0.43% copper and 1.05 g/t gold at 125.1 m
- 06CF275: drilled at the same site as historic drillhole T81CH155 but angled to the west, copper results were comparable with the previous hole but gold values were higher (0.34 g/t versus 0.19 g/t) over the length of the hole.

10.3 2007 DRILLING PROGRAM

Copper Fox drilled 42 holes, totalling 6,303.55 m in 2007 (Table 10.3). Thirty-two of the holes were completed to condemn the sites selected as potential waste disposal areas near the deposit. One of the drillholes indicated that mineralization extended for approximately 400 m further south of the West Breccia, and three drillholes, with narrow copper, molybdenum and gold intercepts were noted away from the deposit toward a swampy area in the south. Six holes (07CF301, 07CF303, 07CF309, 07CF312, 07CF313, 07CF319) of the 42 holes drilled in 2007 targeted the Liard Zone and the other four targeted the Breccia Zone (07CF304, 07CF315, 07CF320A, 07CD320B) (Figure 10.3). Drilling was conducted by Lyncorp Drilling Services (Lyncorp Drilling) between July and October, and core was generally HQ in diameter, and reduced to NQ diameter wherever necessary. Additionally, holes 07AND01, 07AND02, 07AND03, 07ANWD01, 07ASD01, 07ASD02, 07ASD03, 07BD01, 07BD02, 07BD03, 07CD01, 07CF306, 07CF308, 07CF309, 07CF312, 07CF313, 07CF314, 07CF315, and 07CF316 were completed for either open pit oriented core drilling or tailings damn hydrological studies. Select assay highlights are shown in Table 10.4.

Table 10.3 Summary of 2007 Drillholes

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose
	Easting (m)	Northing (m)	Elevation (masl)							
07AND01	382113.23	6374504.54	817.65	138.73	8/9/2007	8/22/2007	0.0	-90.0	NQ	Condemnation
07AND02	381879.96	6374520.40	795.61	125.00	9/8/2007	9/18/2007	0.0	-90.0	NQ	Condemnation
07AND03	381510.33	6374504.18	814.49	101.80	8/24/2007	8/31/2007	0.0	-90.0	NQ	Condemnation
07ANWD01	380427.64	6373157.72	857.89	113.80	8/27/2007	9/16/2007	0.0	-90.0	NQ	Condemnation
07ASD01	382864.39	6367242.74	878.03	120.45	7/23/2007	8/8/2007	0.0	-90.0	NQ	Condemnation
07ASD02	382607.00	6367256.00	896.00	101.30	7/27/2007	8/2/2007	0.0	-90.0	NQ	Condemnation
07ASD03	382334.00	6367269.00	891.00	92.70	8/3/2007	8/24/2007	0.0	-90.0	NQ	Condemnation
07BD01	378851.95	6355604.62	948.57	107.62	9/19/2007	9/21/2007	0.0	-90.0	NQ	Condemnation
07BD02	378591.14	6355627.15	975.23	105.50	10/5/2007	10/8/2007	0.0	-90.0	HQ	Condemnation
07BD03	378300.00	6355600.00	960.00	117.70	10/9/2007	10/14/2007	0.0	-90.0	HQ	Condemnation
07CD01	374591.38	6368214.02	847.23	135.03	9/27/2007	10/10/2007	0.0	-90.0	HQ/NQ	Condemnation
07CF291	378878.79	6358999.90	856.13	122.50	6/5/2007	6/12/2007	0.0	-90.0	HQ	Condemnation
07CF292	378721.63	6359893.30	845.06	136.90	6/10/2007	6/15/2007	0.0	-90.0	HQ/NQ	Condemnation
07CF293	378561.22	6360407.36	840.08	125.00	6/12/2007	6/23/2007	0.0	-90.0	HQ	Condemnation
07CF294	378761.77	6359387.58	850.66	151.35	6/14/2007	6/29/2007	0.0	-90.0	NQ	Condemnation
07CF295	379100.24	6359994.87	857.80	120.00	-	-	0.0	-90.0	HQ	Condemnation
07CF296	379391.18	6360055.60	879.13	183.40	6/28/2007	7/3/2007	0.0	-90.0	HQ	Condemnation
07CF297	378749.64	6359597.91	847.22	156.20	6/30/2007	7/9/2007	0.0	-90.0	HQ/NQ	Condemnation
07CF298	378938.44	6360724.48	845.83	153.40	7/5/2007	7/24/2007	0.0	-90.0	HQ	Condemnation
07CF299	378835.43	6358849.68	858.48	110.34	7/7/2007	7/12/2007	0.0	-90.0	HQ	Condemnation
07CF300	378814.08	6359195.01	853.12	119.20	7/11/2007	7/16/2007	0.0	-90.0	HQ	Condemnation
07CF301	380023.04	6358952.45	956.72	192.72	7/12/2007	7/17/2007	0.0	-90.0	HQ	Main Zone
07CF302	378682.22	6359789.41	846.20	149.10	7/16/2007	7/24/2007	0.0	-90.0	NQ	Condemnation

table continues…

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose
	Easting (m)	Northing (m)	Elevation (masl)							
07CF303	379626.03	6358832.13	929.19	138.00	7/17/2007	7/19/2007	0.0	-90.0	HQ	Main Zone
07CF304	379651.50	6359397.54	898.15	139.90	7/19/2007	7/22/2007	0.0	-90.0	HQ	Breccia Zone
07CF305	378654.98	6360214.98	841.94	129.60	7/24/2007	7/30/2007	0.0	-90.0	NQ	Condemnation
07CF306	379090.12	6358930.91	882.12	128.04	7/24/2007	7/31/2007	197.0	-60.0	HQ	Condemnation
07CF307	378634.34	6360603.47	838.15	136.60	7/31/2007	8/4/2007	0.0	-90.0	HQ/NQ	Condemnation
07CF308	379629.51	6358831.08	929.29	104.90	7/31/2007	8/3/2007	144.5	-60.0	HQ	Condemnation
07CF309	380026.67	6358954.04	957.20	111.80	8/3/2007	8/6/2007	168.3	-60.0	HQ	Main Zone
07CF310	378853.30	6359919.06	844.01	150.30	8/4/2007	8/6/2007	150.3	-90.0	HQ	Condemnation
07CF311	379106.73	6360880.56	884.42	200.61	8/6/2007	8/10/2007	0.0	-90.0	HQ	Condemnation
07CF312	380609.79	6359782.56	1,171.38	157.00	8/6/2007	8/11/2007	67.0	-60.0	HQ	Main Zone
07CF313	380276.72	6360182.03	1,156.85	421.84	8/11/2007	8/27/2007	90.0	-60.0	HQ/NQ	Main Zone
07CF314	379993.38	6360579.81	1,089.50	256.70	8/30/2007	9/26/2007	53.9	-60.0	HQ/NQ	Condemnation
07CF315	379700.70	6361031.39	1,084.57	149.90	-	-	62.0	-56.5	HQ/NQ	Breccia Zone
07CF316	380451.00	6360568.00	1,373.00	636.12	8/31/2007	10/14/2007	0.0	-90.0	HQ/NQ	Condemnation
07CF317	378641.43	6358304.43	869.25	122.00	9/21/2007	10/2/2007	0.0	-90.0	HQ	Condemnation
07CF318	382388.00	6360067.00	1,085.00	107.00	10/7/2007	10/10/2007	0.0	-90.0	HQ	Condemnation
07CF319	379704.74	6360509.76	962.98	167.10	10/11/2007	10/16/2007	255.5	-88.5	HQ	Main Zone
07CF320A	379805.45	6360399.81	978.31	36.30	10/17/2007	10/22/2007	0.0	-90.0	HQ	Breccia Zone
07CF320B	379805.45	6360399.81	978.31	30.10	10/17/2007	10/22/2007	0.0	-90.0	HQ	Breccia Zone

Figure 10.3 Plan View Map of 2007 Drillhole Locations

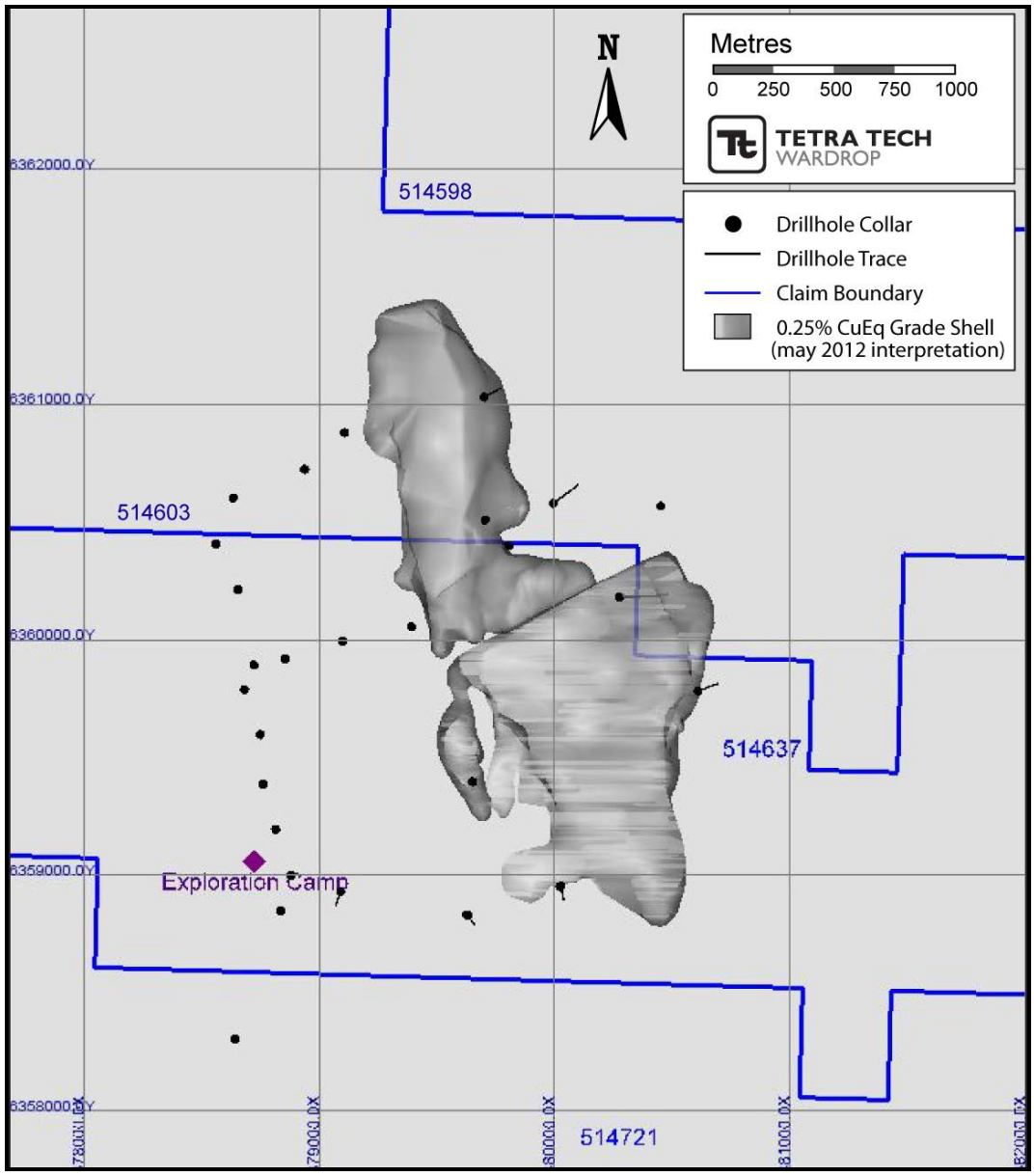


Table 10.4 Highlights of 2007 Assay Results

Drillhole	From (m)	To (m)	Length (m)	Cu (%)	Au (g/t)	Mo (g/t)	Ag (g/t)	Source
07CF313	62.80	110.00	47.20	0.506	0.241	0.016	0.30	Press release June 26, 2008

Note: Drill intercepts do not represent true widths. True widths are shorter intervals that are dependent upon the dip of the drillhole.

10.4 2008 DRILLING PROGRAM

Copper Fox drilled 47 holes, totalling 6,816.05 m in 2008 (Table 10.5). Thirty of the holes were for the purpose of condemnation drilling in the proposed open pit, plant site, waste dump and north and south dam areas. Ten holes target the Liard Zone and the other seven targeted the Breccia Zone (Figure 10.4). Drilling was conducted by Lyncorp Drilling and Geotech Drilling Services Ltd. (Geotech Drilling) between June and September. Core was generally HQ in diameter, and reduced to NQ diameter wherever necessary. Additionally, holes 08CF328, 08CF329, 08CF333, 08CF335, 08CF338, and 08CF339 were drilled for geotechnical purposes, and holes 08CF330A, 08CF332A, and 08CF337A were drilled for hydrogeological studies (press release October 23, 2008). Select assay highlights are provided in Table 10.6.

Table 10.5 Summary of 2008 Drillholes

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose	Drilling Contractor
	Easting (m)	Northing (m)	Elevation (masl)								
08CF321	379805.45	6360399.81	978.31	335.90	-	-	0	-90	HQ	Main Zone	Lyncorp Drilling
08CF322	379359.74	6359101.95	888.45	136.25	6/2/2008	6/16/2008	0	-90	HQ	Condemnation	Lyncorp Drilling
08CF323	379619.14	6358974.91	921.32	139.30	6/18/2008	6/22/2008	0	-90	HQ	Condemnation	Lyncorp Drilling
08CF324	379460.94	6359284.14	884.32	154.53	6/16/2008	6/18/2008	0	-90	HQ	Condemnation	Lyncorp Drilling
08CF325	379576.15	6359331.37	892.93	145.40	6/18/2008	6/19/2008	0	-90	HQ	Main Zone	Lyncorp Drilling
08CF326	379671.56	6359516.64	896.16	182.90	6/19/2008	6/21/2008	0	-90	HQ	Breccia Zone	Lyncorp Drilling
08CF327	379820.00	6359000.00	941.00	136.24	6/23/2008	7/9/2008	0	-90	HQ	Main Zone	Lyncorp Drilling
08CF328	379823.24	6360466.91	991.98	285.90	7/2/2008	7/14/2008	65	-60	HQ	Breccia Zone	Lyncorp Drilling
08CF329	380329.00	6359252.00	1,048.00	271.73	7/9/2008	7/16/2008	120	-65	HQ	Main Zone	Lyncorp Drilling
08CF330A	378644.65	6360095.46	842.99	117.40	7/2/2008	7/6/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF332A	378682.50	6358508.59	864.56	99.40	6/16/2008	6/21/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF333	379460.06	6358188.91	946.83	150.60	7/7/2008	7/11/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF335	379936.35	6357930.04	997.96	72.24	7/11/2008	7/14/2008	125	-70	HQ	Condemnation	Geotech Drilling
08CF337A	380200.35	6358424.32	1,028.07	60.10	7/17/2008	7/21/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF338	379574.07	6360367.49	920.48	245.40	7/14/2008	7/23/2008	240	-60	HQ	Breccia Zone	Lyncorp Drilling
08CF339	379900.10	6359590.01	938.34	199.34	-	-	221	-62	HQ	Main Zone	Lyncorp Drilling
08CF340A	379718.29	6359939.96	908.10	50.30	7/30/2008	7/31/2008	0	-90	HQ	Main Zone	Geotech Drilling
08CF341	380282.30	6360244.35	1,178.29	542.40	7/22/2008	8/16/2008	63	-65	HQ	Main Zone	Lyncorp Drilling
08CF342	379479.88	6360998.31	994.16	223.72	-	-	327	-61	HQ	Breccia Zone	Lyncorp Drilling
08CF344	379773.15	6361268.48	1,196.19	250.20	8/1/2008	8/19/2008	35	-65	HQ	Condemnation	Lyncorp Drilling
08CF345	379853.51	6361019.84	1,157.20	101.20	8/21/2008	8/27/2008	65	-70	HQ	Condemnation	Lyncorp Drilling
08CF346	380353.20	6359646.90	1,075.50	299.20	8/21/2008	8/28/2008	90	-65	HQ	Main Zone	Lyncorp Drilling
08CF347	380000.00	6359808.00	980.00	463.60	8/28/2008	9/8/2008	65	-65	HQ	Main Zone	Lyncorp Drilling

table continues…

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose	Drilling Contractor
	Easting (m)	Northing (m)	Elevation (masl)								
08CF348	379329.00	6361257.00	1,025.00	160.93	8/4/2008	9/1/2008	0	-90	HQ	Main Zone	Lyncorp Drilling
08CF351	379530.00	6360941.00	1,005.00	316.70	9/9/2008	9/13/2008	0	-90	HQ	Breccia Zone	Lyncorp Drilling
08CF363	379445.35	6359903.48	876.19	62.48	8/1/2008	8/3/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF364	379040.65	6360802.73	865.37	55.50	8/3/2008	8/5/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF366	379358.30	6360939.80	951.10	273.71	9/9/2008	9/13/2008	0	-90	HQ	Breccia Zone	Lyncorp Drilling
08CF369	379446.00	6360941.00	978.00	334.70	9/1/2008	9/9/2008	0	-90	HQ	Breccia Zone	Lyncorp Drilling
08CF373	382166.72	6366806.35	881.63	59.74	8/6/2008	8/9/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF374A	382038.89	6367156.89	892.43	54.60	8/14/2008	8/14/2008	0	-90	HQ/NQ	Condemnation	Geotech Drilling
08CF374B	382038.99	6367154.20	892.66	67.40	8/12/2008	8/13/2008	0	-90	NQ	Condemnation	Geotech Drilling
08CF375	382203.63	6367183.58	907.60	92.70	8/29/2008	8/30/2008	270	-70	HQ	Condemnation	Geotech Drilling
08CF376	382670.12	6367191.02	891.23	30.50	8/14/2008	8/25/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF377	382819.26	6366777.59	886.34	39.93	8/25/2008	8/27/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF378	382866.56	6367177.53	884.71	29.00	8/28/2008	8/29/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF379	382266.00	6367822.30	893.30	70.41	9/1/2008	9/2/2008	270	-65	HQ	Condemnation	Geotech Drilling
08CF380	382130.00	6374065.00	827.00	59.74	9/18/2008	9/20/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF381	381687.00	6374151.00	790.00	44.20	9/13/2008	9/15/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF382	381401.00	6374189.00	825.00	47.03	9/3/2008	9/4/2008	0	-90	NQ	Condemnation	Geotech Drilling
08CF383A	381703.00	6374922.00	790.00	63.10	9/16/2008	9/17/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF384	380399.00	6373199.00	870.00	48.20	9/6/2008	9/10/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF385	380338.00	6372971.00	880.00	67.10	9/5/2008	9/6/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF386A	379996.00	6373323.00	834.00	59.89	9/11/2008	9/13/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF387	381404.00	6360056.00	1,148.00	25.91	9/23/2008	9/24/2008	0	-90	NQ	Condemnation	Geotech Drilling
08CF388	381546.00	6360640.00	1,137.00	27.43	9/24/2008	9/26/2008	0	-90	HQ	Condemnation	Geotech Drilling
08CF389	381771.00	6359940.00	1,142.00	61.90	9/20/2008	9/23/2008	0	-90	NQ	Condemnation	Geotech Drilling

Figure 10.4 Plan View Map of 2008 Drillhole Locations

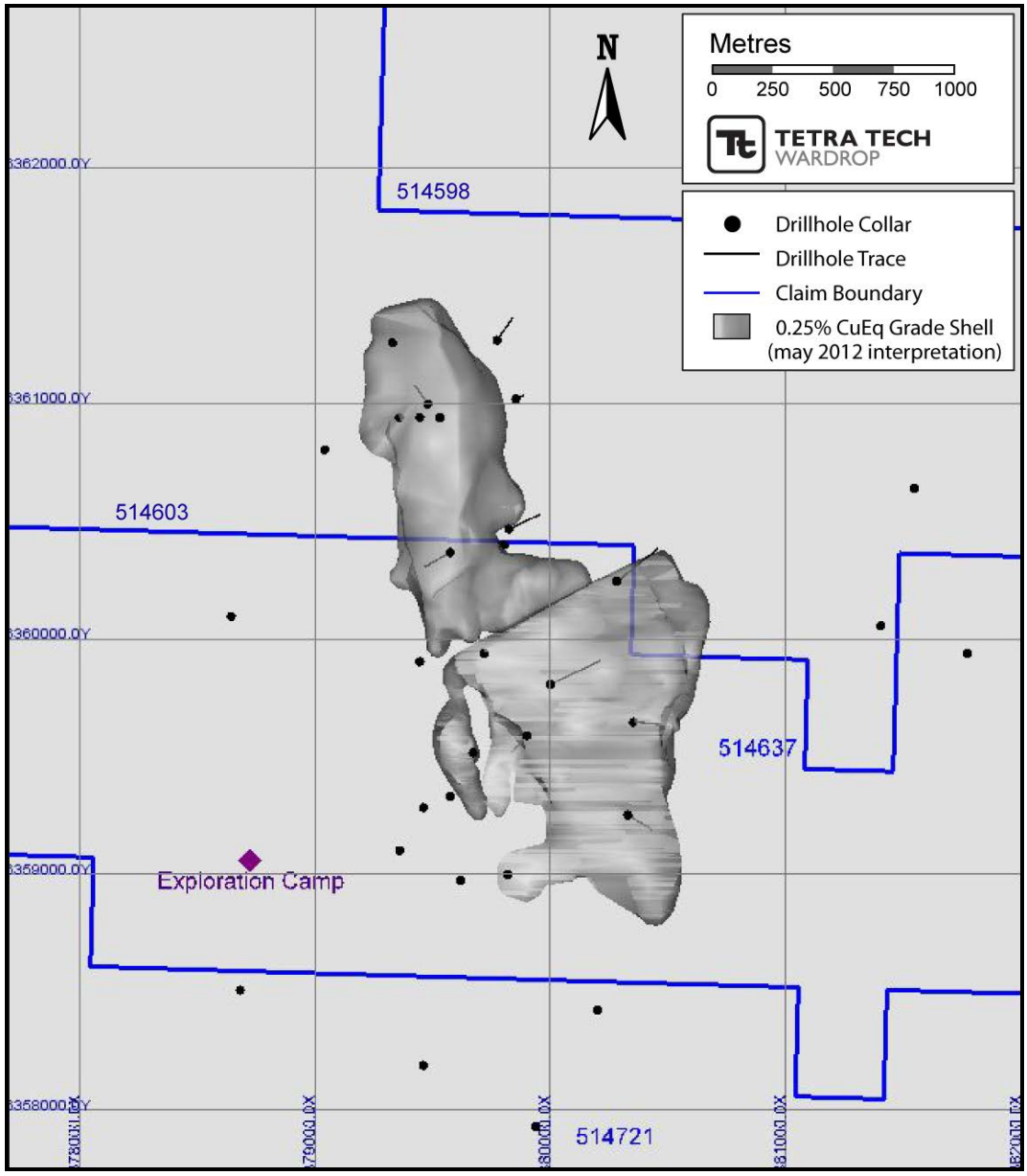


Table 10.6 Highlights of 2008 Assay Results

Drillhole	From (m)	To (m)	Length (m)	Cu (%)	Au (g/t)	Mo (g/t)	Ag (g/t)	Source
08CF321	280.60	292.80	12.20	1.149	0.003	0.0030	5.925	Press release October 23, 2008
08CF326	24.40	39.65	15.25	0.609	0.684	0.0042	5.900	Press release October 23, 2008
08CF326	94.55	158.60	64.05	0.286	0.080	0.0180	3.414	Press release October 23, 2008
08CF326	30.50	33.55	3.05	1.301	2.820	0.0360	9.500	Press release October 23, 2008
08CF329	12.20	106.75	94.55	0.439	0.165	0.0240	0.848	Press release October 23, 2008
08CF339	10.60	73.20	62.60	0.423	0.215	0.0150	n/a	Press release October 23, 2008

Note: Drill intercepts do not represent true widths. True widths are shorter intervals that are dependent upon the dip of the drillhole.

10.5 2010 DRILLING PROGRAM

Copper Fox drilled 11 holes, totalling 3,935.95 m in 2010 (Table 10.7). Nine holes targeted the Breccia Zone and the other two (2011CF403 and 2011CF404) targeted the Liard Zone (Figure 10.5). Drilling was conducted by Geotech Drilling of Prince George, BC, and Cabo Drilling Corp. (Cabo Drilling) of Vancouver, BC, between August and December. Core was either HQ or NQ in core size diameter. Select assay results are provided in Table 10.8.

Table 10.7 Summary of 2010 Drillholes

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose	Drilling Contractor
	Easting (m)	Northing (m)	Elevation (masl)								
2010CF397	379750.00	6361012.00	1,097.00	91.40	8/6/2010	8/20/2010	65	-80	HQ	Breccia Zone	Cabo Drilling
2010CF398	379297.00	6360904.00	936.00	539.19	8/21/2010	9/9/2010	90	-55	HQ	Breccia Zone	Cabo Drilling
2010CF399	379413.00	6360654.00	921.00	517.30	9/10/2010	9/25/2010	90	-67	HQ	Breccia Zone	Cabo Drilling
2010CF400	379860.00	6361011.00	1,172.00	243.54	10/11/2010	10/25/2010	0	-90	HQ	Breccia Zone	Geotech Drilling
2010CF401	379414.10	6360801.24	934.96	495.90	10/4/2010	10/24/2010	90	-55	HQ/NQ	Breccia Zone	Cabo Drilling
2010CF402	379316.82	6361050.26	958.31	581.25	10/25/2010	11/20/2010	90	-60	NQ	Breccia Zone	Cabo Drilling
2010CF403	379345.78	6360502.11	895.48	212.45	10/27/2010	10/30/2010	90	-55	NQ	Main Zone	Geotech Drilling
2010CF404	380026.26	6358544.76	974.50	255.12	11/2/2010	11/9/2010	270	-80	NQ	Main Zone	Geotech Drilling
2010CF405	379421.42	6360909.76	960.40	151.49	11/9/2010	11/14/2010	90	-58	NQ	Breccia Zone	Geotech Drilling
2010CF405B	379421.42	6360909.76	960.40	648.31	11/14/2010	12/7/2010	90	-58	NQ	Breccia Zone	Geotech Drilling
2010CF406	379550.63	6360648.40	943.89	200.00	12/8/2010	12/14/2010	90	-60	HQ/NQ	Breccia Zone	Geotech Drilling

Figure 10.5 Plan View Map of 2010 Drillhole Locations

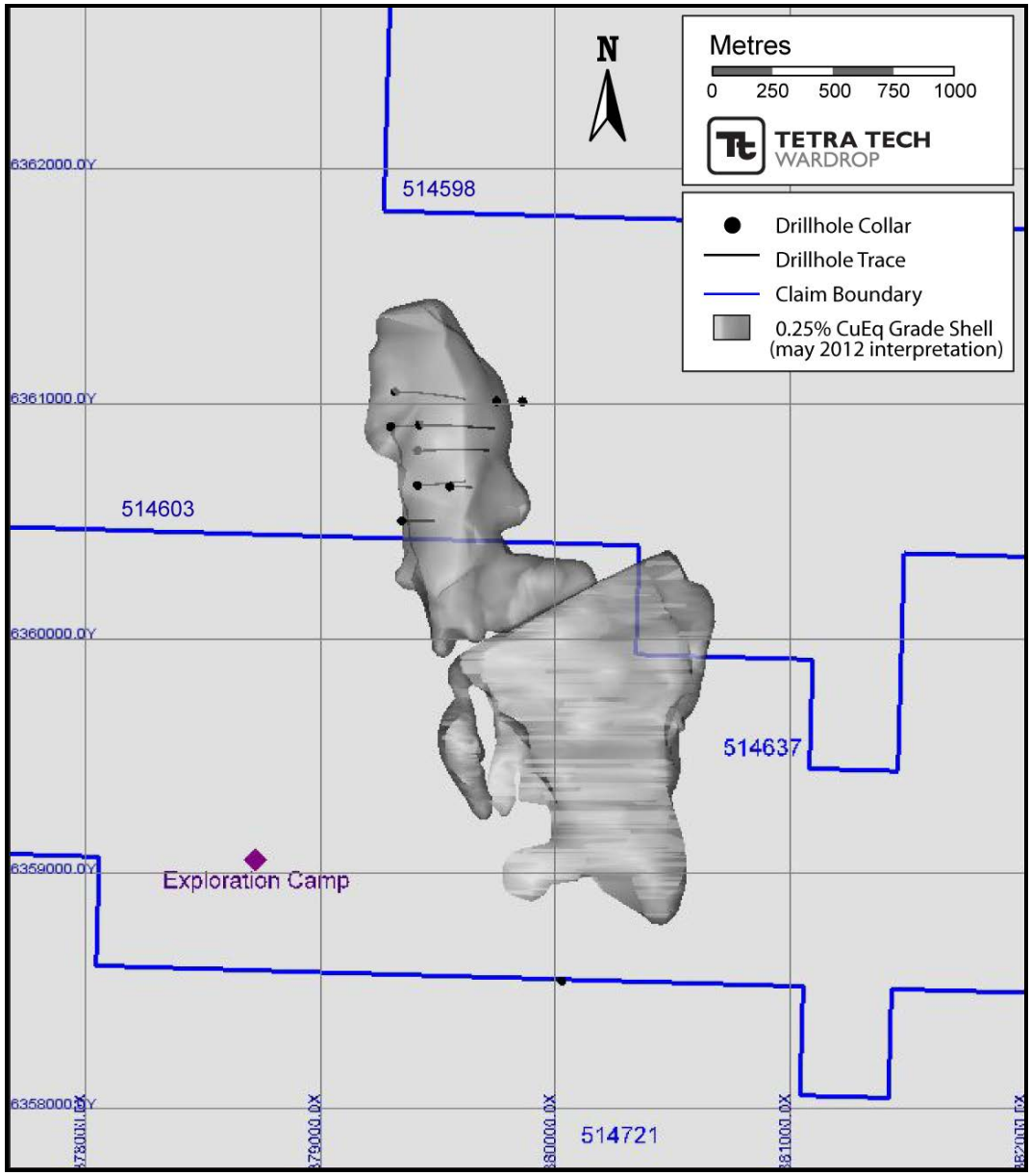


Table 10.8 Highlights of 2010 Assay Results

Drillhole	From (m)	To (m)	Length (m)	Cu (%)	Au (g/t)	Mo (g/t)	Ag (g/t)	Source
2010CF398	7.10	539.20	532.10	0.42	0.27	0.020	2.00	Press release December 14, 2010
including	7.10	61.40	54.30	0.70	0.42	0.040	2.80	Press release December 14, 2010
including	325.50	539.20	213.70	0.47	0.37	0.020	3.00	Press release December 14, 2010
2010CF399	9.14	517.24	508.10	0.39	0.10	0.050	2.09	Press release December 14, 2010
including	9.14	159.70	150.56	0.53	0.05	0.040	2.87	Press release December 14, 2010
including	462.74	517.24	54.50	0.45	0.33	0.060	3.01	Press release December 14, 2010
2010CF401	5.66	495.90	490.24	0.43	0.25	0.028	2.40	Press release December 14, 2010
including	158.00	442.49	284.49	0.55	0.38	0.034	3.15	Press release December 14, 2010
including	345.40	429.20	83.80	0.66	0.50	0.036	3.10	Press release December 14, 2010

Note: Drill intercepts do not represent true widths. True widths are shorter intervals that are dependent upon the dip of the drillhole.

The holes completed in 2010 intersected higher grade copper-gold-molybdenum-silver mineralization to the east and below the pre-2010 drillholes. The upper portions of the 2010 holes drilled through an area that was previously tested by diamond drilling. Due to the lack of depth, the majority of the pre-2010 holes intersected lower grade mineralization, comparable to the upper portions of the 2010 holes. The average grade of the deeper parts of the 2010 drillholes that extended the mineralization to the east toward Mount LaCasse and at depth into a previously untested area past the pre-2010 drillholes is 0.447% Cu, 0.327 g/t Au, 0.029% Mo and 2.51 g/t Ag. The area included in the extension of the mineralization to the east and at depth is at least 600 m long and varies, from 80 to 200 m in width and from 50 to 330 m in depth (press release February 23, 2011). Drillhole 2010CF398 confirmed the mineralized nature of the chargeability anomaly identified in July 2010. This anomaly and the mineralization remains open at depth.

Furthermore, an additional seven holes, totalling 178 m, and three holes totalling 74 m were drilled for hydrological and geotechnical studies, respectively.

10.6 2011 DRILLING PROGRAM

During the 2011 program, 22 diamond drillholes, amounting to 9,648.67 m were completed (Table 10.9). Thirteen holes targeted the Breccia Zone, four holes targeted the Liard Zone, and five holes were completed for the purpose of condemnation drilling (Figure 10.6). The program was supervised and executed by Cambria, with primary guidance regarding approval of drillhole locations and orientations provided by Copper Fox. Drilling activities occurred between May and November and were conducted by two diamond drilling contractors (Caron et al. 2012):

- Tahltan Drilling Services Corporation (TDSC) formed a joint venture with Black Hawk Diamond Drilling Ltd. of Smithers, BC to aid in the drilling supply chain and to provide additional technical expertise. TDSC provided one

helicopter-portable, skid mounted Zinex A5 drill rig and one modified A5 hybrid drill, in addition to all drilling equipment, consumables, supplies, and operators.

- Geotech Drilling of Prince George, BC conducted exploration diamond drilling and geotechnical-related drilling with standard core recovery, as well as oriented core recovery on select drillholes. Geotech Drilling provided a heli-portable, skid-mounted Zinex A5 drill and a Hydracore 2000 drill rig, all necessary supplies, and personnel.

Core was generally HQ in diameter and reduced to NQ and BQ, when necessary. When oriented core was required, HQ3 diameter core was utilized. The main objectives of the 2011 drill program were as follows:

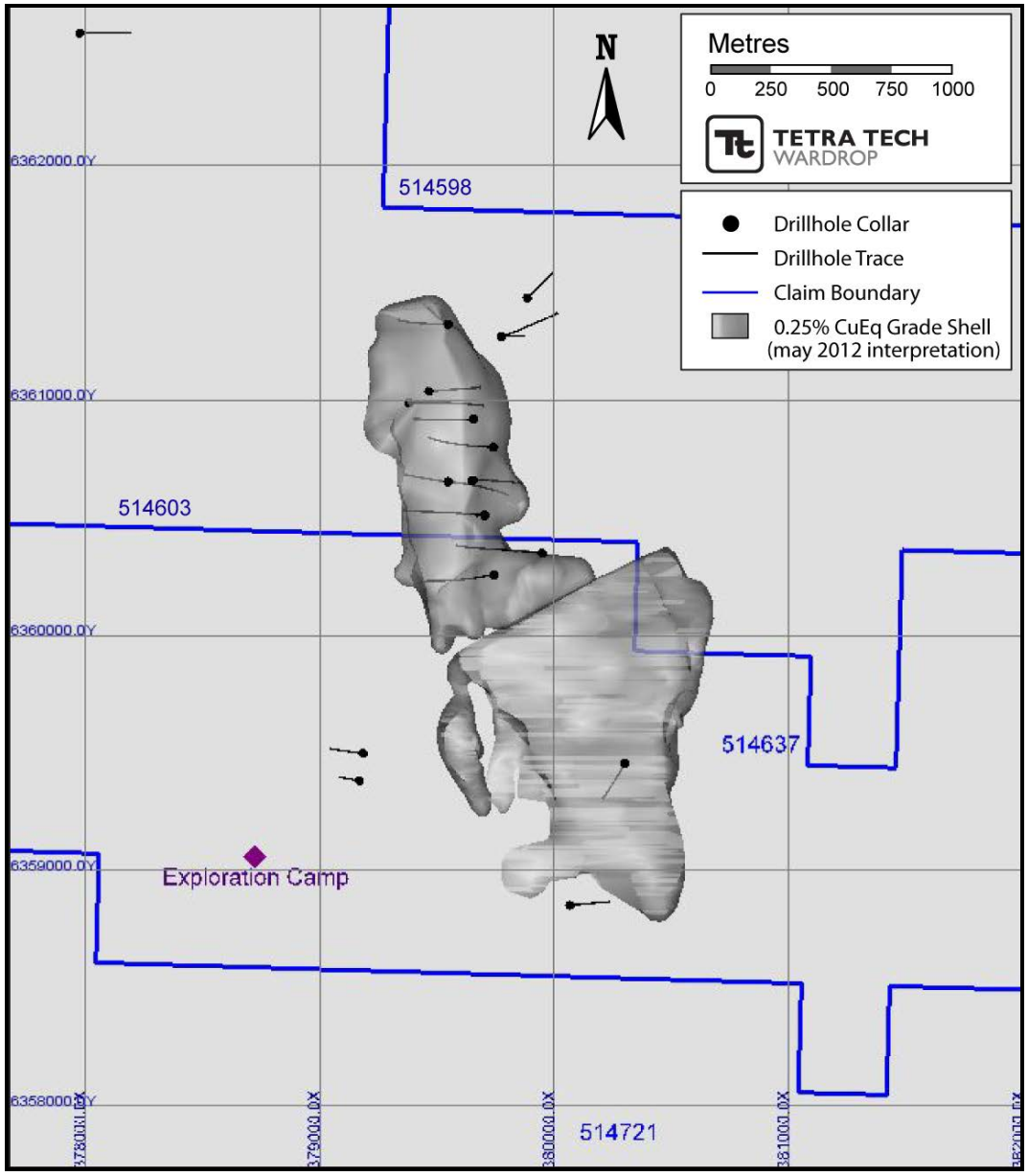
- define deposit geometry in the Paramount Zone to increase confidence to the mineral resource estimate
- increase drillhole density spacing on specific drill sections to test the continuity of grade shells, lithologies, and alteration in the Paramount Zone
- collect geotechnical and hydrological information
- drill select holes using an oriented core recovery system to collect structural data to aid in the understanding of the complex structures and the relationships between mineralized veins
- test geophysical anomalies to the east and to the north of the known deposit area.

The majority of this drilling was in the Paramount Zone area and along the eastern and western margins of this zone (Figure 10.6). The program included logging all drill core (recording lithology, alteration, mineralogy, and structure) and sampling drill core for geochemical assay, lithogeochemistry, specific gravity, and petrography. The 2011 program also included a comprehensive geological review and interpretation of select historical drill core from drillholes dating as far back as the late 1960s. This drill core review recorded observations of lithology, alteration, sulphide content, and structure to fill gaps in the evolving database and geological model. The program initially used two diamond drills; however, challenging ground conditions hampered drilling rates, and in October the program was expanded to include four drill rigs (Caron et al. 2012).

Table 10.9 Summary of 2011 Drillholes

Drillhole	UTM Coordinates (NAD83, Zone 9)			Length (m)	Start Date	End Date	Azimuth (°)	Dip (°)	Core Size	Target/ Purpose	Drilling Contractor
	Easting (m)	Northing (m)	Elevation (masl)								
2011CF407	379548.82	6360654.33	944.02	735.80	5/26/2011	6/14/2011	95.1	-69.7	HQ/NQ	Breccia Zone	TDSC
2011CF408	379547.04	6360654.31	944.00	377.04	6/16/2011	6/25/2011	274.1	-59.1	HQ	Breccia Zone	TDSC
2011CF409	379465.56	6361039.30	995.44	473.66	6/14/2011	7/3/2011	87.1	-62.6	HQ/NQ	Breccia Zone	Geotech Drilling
2011CF410	379651.00	6360658.00	975.00	41.76	6/26/2011	6/29/2011	90.0	-70.0	HQ	Breccia Zone	TDSC
2011CF410B	379653.84	6360659.53	975.22	678.79	6/29/2011	7/15/2011	90.8	-69.5	HQ	Breccia Zone	TDSC
2011CF411	379740.57	6360801.14	1,035.46	745.54	7/4/2011	8/3/2011	272.1	-70.4	HQ/NQ/BQ	Breccia Zone	Geotech Drilling
2011CF412	379378.00	6360990.00	962.00	63.70	7/16/2011	7/22/2011	90.0	-61.0	HQ	Breccia Zone	TDSC
2011CF412B	379380.68	6360989.79	962.13	636.12	7/22/2011	8/12/2011	88.9	-59.1	HQ	Breccia Zone	TDSC
2011CF413	379654.28	6360920.59	1,032.98	576.68	8/13/2011	8/30/2011	269.5	-64.1	HQ	Breccia Zone	TDSC
2011CF414	379775.49	6361273.36	1,197.93	192.00	8/6/2011	9/1/2011	90.0	-60.6	HQ	Condemnation	Geotech Drilling
2011CF415	379547.17	6361323.72	1,100.13	626.00	9/1/2011	9/25/2011	272.7	-68.8	HQ/NQ	Breccia Zone	TDSC
2011CF416	379884.57	6361435.79	1,341.46	331.32	9/3/2011	9/30/2011	46.0	-60.1	HQ/HQ3	Condemnation	Geotech Drilling
2011CF417	379774.53	6361273.17	1,198.09	699.50	9/2/2011	10/12/2011	72.8	-68.6	HQ	Condemnation	Geotech Drilling
2011CF418	379705.00	6360510.00	963.00	69.20	9/27/2011	10/3/2011	270.0	-60.0	HQ	Breccia Zone	TDSC
2011CF418B	379703.05	6360512.69	962.76	693.12	10/3/2011	10/31/2011	273.4	-59.0	HQ/HQ3	Breccia Zone	TDSC
2011CF419	380302.08	6359455.81	1,036.62	398.68	10/3/2011	10/14/2011	210.5	-62.6	HQ3	Main Zone	Geotech Drilling
2011CF420	379949.31	6360350.01	1,025.29	672.93	10/10/2011	11/19/2011	277.2	-54.8	HQ/HQ3	Breccia Zone	TDSC
2011CF421	380066.39	6358852.59	966.11	327.00	10/15/2011	10/24/2011	84.6	-58.6	HQ	Main Zone	Geotech Drilling
2011CF422	377976.60	6362561.82	863.31	318.00	10/25/2011	11/2/2011	90.0	-49.3	HQ	Condemnation	Geotech Drilling
2011CF423	379184.89	6359498.44	874.45	253.30	10/17/2011	10/20/2011	278.0	-55.4	HQ	Main Zone	Geotech Drilling
2011CF424	379169.49	6359383.05	880.62	154.23	10/23/2011	10/25/2011	278.8	-56.2	HQ	Condemnation	Geotech Drilling
2011CF425	379743.66	6360258.02	942.70	584.30	11/3/2011	11/17/2011	260.0	-58.8	HQ/HQ3	Main Zone	TDSC

Figure 10.6 Plan View Map of 2011 Drillhole Locations



Seventeen of the holes were drilled into, and peripherally to, the northern area of the Paramount/Breccia Zone. These holes tested the zone over a strike length of 1,065 m. Due to difficulties with drilling and equipment lost down-hole, three of the holes (2011CF410, 2011CF412, and 2011CF418) were terminated prematurely. In each case, the drill rig was repositioned on the same drill pad in close proximity to the original hole, realigned according to original parameters and completed to depth, with the suffix of “B” added to the drillhole name (Caron et al. 2012). Also worthy of note, hole 2011CF415 was drilled at the north end of the proposed open pit for the purpose of condemnation. However, the mineralized intervals intersected demonstrate that mineralization could extend a considerable distance to the north

past this hole location. In drillhole 2011CF405, the intersection of higher grade mineralization at 164 m, and the intersection of lower grade at shallower depths, correspond with the chargeability anomaly defined by the 14 MV contour, and the weaker chargeability response, respectively (press release February 23, 2011). Another three holes (2011CF414, 2011CF416, and 2011CF417) were drilled at the request of geotechnical consultants, Knight Piésold Ltd. (Knight Piésold), for the purpose of testing the upper levels of the proposed steep high pit wall. As illustrated in Figure 10.6, these were located to the northeast of the Paramount Zone. Two other holes (2011CF423 and 2011CF424) were drilled to the west of the Main Zone, near the purported margin of the Hickman batholiths, and further tested mineralization encountered in a short historic hole. Hole 2011CF423 returned an intercept of 0.387% copper over 41 m (Caron et al. 2012). Drillhole 2011CF419 was drilled in the Main Zone for hydrologic purposes, and 2011CF421 was drilled south of the West Breccia Zone to test a geophysical anomaly. Hole 2011CF422 was drilled approximately 1,500 m northwest of the Paramount Zone, and tested a geophysical anomaly from the Quantec 2011 Titan 24 IP and MT survey. Although this hole was not completed to the target depth due to avalanching, it did return an intercept of 0.146% copper, 0.06 g/t gold, 0.01% molybdenum and 1.0 g/t silver over a core interval of 235 m from 83 to 318 m. This hole represents the discovery of a new zone of mineralization at Schaft Creek and lends support to the interpretation that the other untested chargeability anomalies could represent additional zones of mineralization (press release April 20, 2012).

Some of the more significant drill intercepts from the 2011 campaign are listed in Table 10.10.

Table 10.10 Highlights of 2011 Assay Results

Drillhole	From (m)	To (m)	Length (m)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)
2011CF407	16.97	545.99	529.02	0.389	0.025	0.237	1.936
2011CF408	11.05	368.35	357.30	0.352	0.025	0.069	1.842
2011CF409	116.00	412.75	296.75	0.334	0.032	0.262	1.835
2011CF409	424.52	473.66	49.14	0.555	0.04	0.316	2.137
2011CF410B	263.45	567.28	303.83	0.296	0.019	0.095	1.136
2011CF411	155.10	745.54	590.44	0.39	0.031	0.242	1.913
2011CF412B	14.58	252.10	237.52	0.356	0.028	0.232	2.694
2011CF412B	259.35	636.12	376.77	0.349	0.017	0.283	1.832
2011CF413	42.71	373.08	330.37	0.251	0.015	0.103	1.331
2011CF413	482.08	556.50	74.42	0.256	0.011	0.116	1.374
2011CF415	17.00	170.53	153.53	0.341	0.025	0.268	3.835
2011CF415	317.00	376.77	59.77	0.262	0.018	0.287	1.602
2011CF418B	55.60	580.40	524.80	0.262	0.028	0.055	1.308
2011CF419	17.68	256.00	238.32	0.519	0.027	0.294	2.021
2011CF420	302.00	654.00	352.00	0.305	0.015	0.103	1.339

table continues…

Drillhole	From (m)	To (m)	Length (m)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)
2011CF422	121.00	157.40	36.40	0.274	0.006	0.094	2.09
2011CF423	133.00	174.00	41.00	0.387	0.006	0.01	0.976
2011CF425	252.00	450.60	198.60	0.267	0.008	0.062	0.898
2011CF425	502.35	557.00	54.65	0.412	0.024	0.13	2.469

Note: Drill intercepts do not represent true widths. True widths are shorter intervals that are dependent upon the dip of the drillhole.

Source: Caron et al. 2012

Upon hole completion, down-hole surveys were conducted by the onsite geologist using a Reflex Gyro down-hole surveying instrument. Drill casing was left in each drillhole and plugged with a wooden marker indicating the dip and orientation of the hole. A representative from McElhanney (land surveying), based in Prince George, BC, periodically came to the site and surveyed drill collars, as well as fore-sights and back-sights to determine the azimuth of the hole (Caron et al. 2012).

10.7 OTHER COMMENTS

10.7.1 GROUND CONDITIONS AND CORE RECOVERY

The following is taken from Caron et al. (2012):

> *Ground conditions at Schaft Creek have at times presented challenges to diamond drilling contractors, resulting in lost and abandoned drill holes, lost equipment, slow drilling, and lost time (rig down-time). Drill holes collared along the east margin of this zone have presented the greatest challenges to drilling and completing holes, and these challenges are related to a variety of factors.*
>
> *Overburden and near-surface bedrock characteristics and conditions are key factors to be considered when drilling at Schaft Creek. Overburden is generally thicker to the east of the breccia zone (upslope). Overburden to the east of the northern portion of the breccia zone consists of mixed glacial till and bedrock colluvium that forms a series of vegetation-covered talus/debris fans, which coalesce at mid- to lower slopes. Overburden depths range from 5 to 30 m or more and consist of a wide range of poorly sorted material, ranging in size from fine clay and silt to angular or rounded cobbles and boulders, ranging up to 8 m or more in diameter. Beneath the overburden in this part of the Property, the bedrock surface is typically strongly fractured and broken, altered, glacially scoured, and weathered. From a drilling perspective, both overburden and bedrock appear similar in terms of ground conditions and behave similarly in response to bit-cutting ability and cuttings removal. In many cases, strongly broken and rubbly bedrock is encountered to depths of 100 m or greater. Experience at Schaft Creek has shown that difficulties encountered at shallow depths of the drill hole can and most often do lead to more significant drilling issues at greater depths. Deflection of the drill stem in shallow, very coarse*

overburden or poorly consolidated bedrock increases down-hole torque, leading to excessive abrasion and wear on drill rods. Continued wear on the rods compromises their strength and integrity, thus increasing the potential for breaks in the drill string and potential loss of equipment.

The following is taken from Kulla et al. (2011):

Drill core recovery data from portions of the legacy drill campaigns are available. For the Hecla and Teck drill campaigns staff measured core lengths and calculated RQD at site. For the Copper Fox drill campaigns, Copper Fox staff have recorded core lengths and calculated core recoveries and RQD at the sites of the drill holes. Core recoveries have generally averaged more than 90%.

AMEC reviewed the core recovery data and found a trend of decreasing grade with decreasing core recovery. A similar trend is present when separating the core recovery data out by program by previous project operators.

There is a risk of approximately 25% of the assays having negatively-biased copper, gold and molybdenum grades due to low core recoveries.

These observations made by Kulla et al. (2011) are displayed in Table 10.11.

Table 10.11 Core Recovery Statistics

Element	90-100% Recovery		<90% Recovery		Difference (%)
	Count	Mean	Count	Mean	
Cu (%)	17,148	0.223	5,718	0.190	-14.5
Au (g/t)	11,145	0.181	3,407	0.150	-17.2
Mo (%)	17,088	0.013	5,750	0.011	-17.7

10.7.2 COLLAR LOCATION SURVEY

Copper Fox drill collar locations were acquired by a licensed surveyor from McElhanney using GPS Static and RTK surveys and published in the DAF83CSRS/CGVD 28 Datum. All historic drill collar coordinates were acquired by qualified surveyors, and tied into the Project grid.

10.7.3 DOWNHOLE DIRECTIONAL SURVEY

The Copper Fox drill programs used various downhole survey instruments: a Reflex EZ shot tool, a Reflex Flexit tool, a Reflex Gyro, and a COLOG downhole ABI40 Acoustic Televiewer Probe. The acoustic televiewer probe collects a downhole survey by using deflection of light down the hole, similar to a Maxibor survey tool.

10.7.4 METALLURGICAL TEST WORK

Three major sampling programs conducted by Copper Fox were used for metallurgical test work; core from 51 drillholes completed between 2004 and 2008, core from 22 drillholes completed between 2006 and 2008, and core from 11 drillholes from the Paramount Zone completed between 2010 and 2011.

10.7.5 TETRA TECH COMMENTS

It is Tetra Tech's opinion that the core logging, geotechnical logging, collar surveying, and downhole surveying procedures of Copper Fox meet industry standards. The orientations of drillholes are generally appropriate for the location of mineralization.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

The majority of the following discussions have been extracted from Kulla et al. (2011), unless otherwise stated.

11.1 SAMPLING METHODS

11.1.1 GEOCHEMICAL SAMPLES

There is no information available on the sampling methods for the geochemical sampling programs over the Schaft Creek deposit.

Soil and rock chip geochemical sampling programs have been completed over the newly acquired Greig/Kreft claims to the north of the Schaft Creek deposit.

Where possible, during the 2008 Greig/Kreft program, soil samples were collected from the B horizon, at an average depth of approximately 10 to 15 cm. A mattock was used to dig the holes, and the soil was placed by hand into standard Kraft paper soil sample bags that were labelled with sample numbers.

Control on locations was provided by hand-held GPS, and sample sites were marked with flagging tape labelled with sample numbers. The soil samples were analyzed at ALS Chemex Laboratories in Vancouver, BC. To evaluate reproducibility, 12 blank samples were collected from a common location, inserted in the sample sequence, and sent to ALS Chemex together with the samples collected from the property.

Rock geochemical samples collected in the field on the Greig/Kreft claims were placed in strong, well-labelled plastic bags, which were sealed with flagging tape. As with the soil samples, sample sites were marked with flagging tape that was labelled with sample numbers. Because of the limited number of samples, no blanks were submitted with the rock samples, which were analyzed at ALS Chemex Laboratories in North Vancouver, BC.

11.1.2 PIT AND TRENCH SAMPLING

There is no information available on the sampling methods for the geochemical sampling program completed by the BIK syndicate in 1957. Trenching has been completed on the newly-acquired Greig/Kreft claims to the north of the Schaft Creek deposit, but limited information is available on the methodologies used.

11.1.3 CORE SAMPLING

No information is available describing the core sampling protocols from the Silver Standard and Asarco drilling campaigns. Drill core generated by Hecla and Teck was split using a mechanical anvil and chisel splitter; typically the sample intervals were 10 ft (3.05 m) in length. The first sample interval was taken to the nearest ten foot interval of hole depth. All other sample intervals were then measured in ten-foot-of-hole-depth increments. The geologist designated core intervals for sampling purposes and recorded the sample intervals relative to a sample number. The core was split longitudinally and one half was bagged and sent for analysis. The other half was stored for archiving.

Copper Fox drill core was sampled differently depending on the core size:

- *PQ core was quartered for assay sections, with the other half being for metallurgical testwork. Banner et al. (2008) noted that all PQ core, for the purpose of twinning and verifying archival results and obtaining material for metallurgical testing, was sawed in half and one-half quartered. As the core was broken, the rubble was scooped out and divided according to samples. Pieces larger than 10 cm were sawed. Continuous sampling for assay samples was done in fixed 3.05 m intervals for the purpose of matching samples of previous archival sampling.*
- *HQ core was halved with half sent for assay analysis and the other was retained for archiving. Samples are 3.05 m in length.*

Assay samples were placed in numbered five gallon plastic pails and metallurgical samples in numbered 10 gallon pails; both were equipped with security lids. The sample tag for each pail was inserted into a small zip lock plastic bag and affixed to the inside of the pail's rim. Each sample pail carried a shipping tag fixed to the outside of the pail with the relevant laboratory's address. Both sample groups were air lifted to a strip at the road and stored in a locked Seacan container. At weekly intervals, a bonded trucking firm retrieved both sample groups and delivered the samples directly to the laboratories.

From Caron et al. (2012):

Recovered drill core was placed in appropriately labelled core boxes and secured with lids at the drill site, then transported from each drill site to camp using four-wheel drive Kubota tractors (RTV utility vehicles) at the end of each shift. At camp, the core boxes were laid out in descending order on the south side of the core logging building, where geological technicians converted drill footage markers to metres, labelled boxes (with box number and measured core interval in each box), and recorded geotechnical parameters. Prior to logging, drill core was moved to an inclined rack and photographed in groups of three core boxes. Close-up photos were taken of particularly interesting features, including notable habit or concentration of mineralization, lithology, alteration, textures, or structures. The entire run of recovered core from each hole was photographed.

Geologists logged lithology, mineralization, alteration, and structure according to the Schaft Creek Lithology and Alteration Guide produced by Cambria. This guide was revised periodically during the season with input from various geologists as the understanding of the deposit evolved. Core logging was performed in a systematic manner according to the genetic relationship of geological events. Lithologies were described and determined as best as possible, although primary textures and compositions were often obscured by variably intense alteration. The alteration was described in terms of mineralogy, mode of occurrence, intensity, and style or alteration facies where discernible. Mineralization was described according to the presence of significant minerals, with particular attention to identifying metallic and sulphide minerals, style or habit of mineralization, mode of occurrence, and percent abundance. Key structures were described according to size, mineralogy (where appropriate), orientation, and texture. Data gathered from geological logging were entered directly into a master database in the core logging building using an acQuire database system (acQuire Technology Solutions Pty Ltd.) with pre-formatted data-entry fields. Assay sample information (sample ID, from/to in metres, interval length, etc.) was also entered into the database. Detailed core inspection was performed with a binocular zoom stereo microscope. A dedicated field laboratory was constructed adjacent the core logging building where acid etching using hydrofluoric acid (HF) and staining using sodium-cobaltinitrite were performed to aid in determining the alteration minerals (primarily to determine the absence or presence of potassium feldspar).

After core logging was completed, core samples were laid out and marked for sampling by (or under the direction of) the geologist that had logged that particular hole. Samples were laid out in 2 m core lengths where possible; however, lithologic contacts, significant changes in alteration or major structural features were honoured, which could result in a pair of samples being shorter or longer than 2 m (up to 1.5 m shorter and up to 1 m longer). The samples were laid out by the geologist according to a set format of batches for inserting blanks, certified reference standards, field duplicates, and laboratory duplicates.

Pre-numbered sample tag books from Acme Analytical Laboratories Ltd. (Acme) were used to generate sample numbers. Each sample number in the book had two perforated tags. For each sample, a unique sample number was assigned from the tag book, and that number was written onto a 12 in. by 20 in. clear poly (plastic) bag with a black permanent marker. One pre-numbered sample tag was placed in the numbered bag and second pre-numbered tag was stapled in the core box at the beginning of each sample run. The same sample number was written on the drill core at the beginning of each sample run of core. The geologist drew a "cut line" with a grease pencil on the drill core to indicate to the cutter where the core should be cut; this was done to help ensure that both halves of the sampled core were similar in mineral content. Core boxes were then placed on a roller rack for transfer to the sample cutting area.

Core samples were cut with one of three high-powered electric saws with 12 in. diameter diamond-impregnated blades and a moveable carriage to securely hold

the core. The core cutters were instructed to clean the holding table and sliding carriage with a paint brush and water prior to cutting each sample.

Only one sample bag was open at a time at each cutting saw. Core cutters were instructed to cut the core in half and to place the same half of core in a sample run into the appropriate sample bag, while the other half consistently went back into the core box in the same position as it was prior to sampling. Core cutters regularly cleared sample reject debris from the containment reservoir throughout the day as necessary and at the end of each. The sampled core boxes were then stored in a holding rack, and the split core was subsequently taken to the racks in the core storage area.

After cutting with a diamond saw, one-half of the core is collected for sample preparation and analysis and the other half is retained for future reference. Sample intervals were selected based on lithology changes/alteration intensity/estimated mineral content (press release December 14, 2010; press release December 12, 2011).

11.2 Analytical and Test Laboratories

11.2.1 Assay Laboratories

From Kulla et al (2011):

Several primary assay laboratories have been used for routine analyses over the Project history. No information is available from the Silver Standard and Asarco exploration campaigns.

The primary laboratory for the Hecla exploration campaigns was Chemex Ltd (Chemex), in North Vancouver, BC. Hecla completed check assays at Chemex, Coast Eldridge Laboratories (Coast Eldridge), and Bondar-Clegg & Co. Ltd. (Bondar Clegg), in Vancouver. Laboratory accreditations at the time samples were analysed are not known.

For the Teck program, Giroux and Ostensoe (2004) note:

> *The assay laboratory attached to the Afton mine and smelter complex at Kamloops, BC was employed for metal determinations. That operation was a not-at-arms-length affiliate of Teck but was an industry standard facility staffed by registered assayers. Teck also carried out programs of check assaying to maintain confidence in the results.*

At the time of analysis, the Afton mine was a Teck operation. In addition, Giroux and Ostensoe (2004) note:

> *...samples were delivered to both a not-at-arms-length and a commercial analytical laboratory.*

Teck gold analyses were performed by the University of British Columbia. Check assays for gold and silver were performed at General Testing Laboratories. Additional single-sample checks were performed at Chemex, Bondar-Clegg, and Southwestern Assayers & Chemists Inc. (Southwestern) in Tucson, Arizona. Laboratory accreditations at the time samples were analysed are not known.

Copper Fox has used a number of analytical laboratories as the primary laboratory over the Project history, including:

- *2005: Loring Laboratories Ltd. (Loring) in Calgary, Alberta. Loring was not an accredited laboratory at the time the analyses were performed, but did take part in proficiency testing. Loring Laboratories achieved registration with ISO90000:2001 in 2009 and is working towards ISO 17025 in certain analysis methods.*
- *2006-2008: Inspectorate-IPL Laboratories Ltd. (Inspectorate) in Vancouver, BC. Inspectorate currently holds ISO 9001:2000 and undergoes regular proficiency testing*
- *2008-2011: Acme Laboratories (Acme) in Vancouver, BC. Acme achieved ISO9001 accreditation in 1996."*
- *October 2011: the Vancouver laboratory received formal approval of its ISO/IEC 17025:2005 accreditation from Standards Council of Canada for the certain tests.*

Check assays for the Copper Fox programs taken by AMEC were also analysed by Acme.

Check assays taken by Tetra Tech were analyzed at Accurassay Laboratories (Accurassay) of Thunder Bay, Ontario, which is accredited under International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) Guideline 17025 from the Standards Council of Canada (SCC).

11.3 SAMPLE PREPARATION AND ANALYSIS

11.3.1 LEGACY PROGRAMS

For a review of the sample preparation and analysis methods employed during the Hecla and Teck programs, refer to Giroux and Ostensoe (2004).

11.3.2 COPPER FOX PROGRAMS

From Giroux and Ostensoe (2004):

SAMPLE PREPARATION

Sample preparation at Inspectorate-IPL and ACME consisted of drying up to 24 hours, crushing to > 80% less than 10 mesh, riffle splitting to 250 g and pulverization to > 85% passing less than 200 mesh.

"The analytical method utilized at Loring was a copper assay using inductively coupled plasma atomic emission spectrometry (ICP-ES) following an aqua regia digest. Molybdenum analyses were performed with ICP-ES following a three-acid digest. The analytical method utilized at Inspectorate-IPL and ACME laboratories was a 30-element inductively-coupled plasma atomic emission spectrometry (ICP-AES or ICPES) method following a four-acid digest.

- *0.25 to 1.0 g of sample is weighed and transferred into a 150 ml beaker. HCl, HNO3, HCIO4, and HF acid solutions are added and digested on a hot plate until dry. The sample is boiled again with 80 ml of 25% HCl for 10 minutes, cooled, bulked up to a fixed volume with distilled H2O and thoroughly mixed*
- *Cu, Mo, and Ag are determined using an inductively coupled plasma emission spectrometer. All elements are corrected for inter-element interference and all data are stored onto a computer disk*
- *Quality control: the spectrophotometer is first calibrated using three known standards and a blank. The samples to be analyzed are then run in batches of 38 or fewer samples. Two tubes with an in-house standard and an acid blank are digested with the samples. A known standard with characteristics best matching the samples is chosen and inserted after every 15th sample. Every 20th sample is re-weighed and analyzed at the end of the batch. The blank used at the beginning of the run is analyzed again. The readings of the control samples are compared with the 'pre-rack known' to detect any calibration drift.*

At Inspectorate-IPL a number of samples were also analysed using atomic absorption (AA) following a four-acid digest."

At Loring, Inspectorate-IPL and ACME, the gold analyses were performed by fire assay with an atomic absorption finish. Below is a description of the generic procedures used in lead fire assaying for gold:

- *Duplicates of 50 g (2 assay tons) are weighed into fusion pots together with various flux materials, including lead oxide. After thorough mixing of silver inquart, a thin borax layer is added.*

- *The sample is placed into a fire assay furnace at 2000ºF for 1 hr. Elemental lead, from lead oxide, collects the Au and Ag.*
- *After 1 hr fusion, the sample is poured into a conical cast iron mold. The Au and Ag-bearing lead button/bead at the bottom is separated from the slag.*
- *The lead button is placed in a preheated cupel into the furnace for a second separation at 1650ºF. Lead is absorbed by the cupel, whereas gold and silver remain on the surface of the cupel.*
- *After 45 min of cupellation, the cupel is removed from the furnace and cooled. The dore bead containing the precious metals is transferred to a test tube (sample duplicates are combined) and dissolved in hot aqua regia.*
- *The Au in solution is determined with an atomic absorption spectrophotometer. The Au value in ppb or g/t is calculated by comparing the reading with that of a standard.*
- *Fire assay quality control: every group of 24 fusion pots contains 22 samples, one internal standard or blank, and a re-assay of every 20th sample. Samples with Au >1,000 ppb are automatically checked by fire assay/AA. Samples with Au >10,000 ppb are automatically checked by fire assay/gravimetric methods.*

At Loring, the silver assays were performed by fire assay. At Inspectorate-IPL and ACME the silver assays were performed as a component in the ICP multi-element packages.

Additional information regarding the 2011 drill program is as follows (Caron et al. 2012):

Core samples from the 2011 exploration drilling program were sent to the Acme Smithers branch for sample preparation. Samples were crushed to 90% passing through a 10-mesh sieve according to Acme prep code R200-250. A 1 kg sample was taken for analysis, and the remainder of the sample was returned to the sample bag. The 1 kg sample was further split by riffle splitter to 250 g for analysis and rejects were returned to sample bag. A second reject (~750 g) was placed in a new labelled plastic bag for further client instruction. Acme retained the 750 g rejects in wood pallet bins separate from the large rejects/original bags; these and all other sample rejects were stored at Acme facilities into early 2012. The 250 g sample was dried at 60°C and pulverized to 85% passing 200-mesh sieve for analysis (Acme code P200). A second 250 g pulp was generated for every batch (35 samples) as a duplicate.

Analysis on all the samples was conducted at Acme's main Vancouver laboratory facility. All samples were processed and analyzed for multi-element assay with a hot 4-acid digestion and inductively coupled plasma (ICP)

emission spectroscopy (ICP-ES) (Acme code 7TD2). This method involved sample digestion with an acid solution of H2O-HF-HClO4-HNO3 with 50% HCl. Samples were also analyzed by inductively coupled plasma mass spectrometry (ICP-MS) (Acme code 1EX). This method was used for the determination of Ag due to the lower detection limit of the procedure compared to that of the 7TD2 assay procedure.

All samples were analyzed by fire assay for Au with ICP-ES from a 50 g sample and a detection limit of 0.005 g/t (ACME code G601 + G610). The fire assay method involved blending the sample with fire-assay fluxes and firing at 1,050°C to liberate Ag ± Au ± PGEs (in molten Pb-metal phase). The resulting Pb button was fired at 950°C to produce an Ag ± Au ± PGEs dore bead. The bead was then analyzed using ICP. Samples with Au results >10 g/t were fire assayed with the same method as above but with a gravimetric finish (ACME code G601 + G612). Samples were also analyzed for total sulphur by Leco combustion analysis with a detection limit of 0.02% sulphur (ACME code 2A13).

Base metals were assayed using the AcmeLabs' 7TD package which includes four-acid digestion and ICP-ES finish. Lower detection limits are as follows: copper more than 0.001%, molybdenum more than 0.001%, and silver more than 2 g/t. Gold is assayed by the G6 fire assay package – fusion of 30 g followed by ICP-ES finish; with a lower detection limit of 0.005 g/t. In 2010, Copper Fox completed the initial silver assay using a 2.0 g/t detection limit. Any samples less than 2 g/t were re-analyzed using the 1EX code from AcmeLabs that had a 0.1 g/t detection limit. This method uses hot four-acid digestion with an ICP-MS finish. AcmeLabs has an ISO 9001:2008 rating.

11.4 Quality Assurance and Quality Control

11.4.1 Legacy Programs

For a review of the Quality Assurance and Quality Control measures used during the legacy programs, the reader is referred to Giroux and Ostensoe (2004) and Kulla et al. (2011).

11.4.2 Copper Fox QA/QC Programs

From Kulla et al. (2011)

During the period 2005 to 2008, the QA/QC program included a blank sample, a standard sample and a duplicate sample that were submitted in each batch of 40 samples. In total, 77 blanks, 77 duplicates and 78 standards were analyzed.

A total of six standard samples were used during the 2006 program. Two of these were from Canadian laboratories, and four were prepared by International Plasma

laboratories (IPL) for Copper Fox from samples from the property. Duplicate samples were submitted by further splitting the half core in half (quartered).

Due to the QA/QC deficiencies noted in the 2005 to 2008 drill campaigns (refer to Section 12), Copper Fox undertook a comprehensive program of check assaying. Batches of samples were sent to ACME laboratories for analysis. The samples were sent with blanks, standards, coarse duplicates and quarter-core twin samples inserted into the batches.

During 2010 and 2011 programs, Copper Fox submitted samples from the on-going drilling campaigns together with pulp rejects from the 2005 to 2008 drilling campaigns and quarter-core samples collected from legacy drill holes.

DUPLICATES

Copper Fox included 62 field and 124 coarse duplicate rejects to test the data-set for preparation precision. These represent 1.3% and 2.6 % of the assays. Copper Fox did not include pulp duplicates and analytical precision was not assessed. There was insufficient sample for the analyses of Mo and Cu.

*The results of the field duplicates are shown in [*Table 11.1*]. The samples that were used are a combination of re-sampling as well as new samples. A relatively high failure rate of 16.4 % for Cu is not considered to be material, and results needs to be separated into the new and re-sampled results for future analyses. A relatively high failure rate for Mo (16%) is not considered to be material as a large portion of failed samples are close to the detection limit. Of these, 10 samples were re-assayed for Au and 76 for Ag. The results of the coarse duplicate analyses are shown in [*Table 11.2*].*

Table 11.1 Summary of the Performance of Field Duplicates for the Copper Fox Drillholes

Element	Number of Pairs	Number of Failures	Failure Rate (%)
Cu	61	10	16.4
Mo	61	10	16.4
Au (G6-50)	52	6	11.5
Au (G6)	10	1	10.0
Ag (7TDES)	62	0	0.0
Ag (1EX)	39	1	2.6

Table 11.2 Summary of the Performance of Coarse Duplicates for the Copper Fox Drillholes

Element	Number of Pairs	Number of Failures	Failure Rate (%)
Cu	*125*	*12*	*9.6*
Mo	*125*	*6*	*4.8*
Au (G6-50)	*125*	*16*	*12.8*
Au (G6)	*10*	*1*	*10.0*
Ag (7TDES)	*125*	*0*	*0.0*
Ag (1EX)	*76*	*7*	*9.2*

BLANKS

Copper Fox included 140 blank samples, representing 3% of the original samples. Two different blanks were used, but both were assessed simultaneously. The results for Cu, Au, Mo and Ag for both blanks are at detection limit and indicate that there is no carry over contamination for these elements. One hundred and a thirty eight of the 140 Cu assay results for blanks are less than 10 times the detection limit, with the results of SC-2010-BLANK indicating slightly higher levels of Cu for this material than for SC-2010-BLANK2, where the results are between the detection limit and five times the detection limit. AMEC considers these levels of Cu to represent background levels for Cu.

Though no carry over is indicated, blanks should usually be submitted after samples with elevated levels of mineralization to give a better assessment of the levels of contamination.

STANDARD REFERENCE MATERIALS

Copper Fox have inserted three commercially-supplied CRMs, with 211 CRM samples representing 4.5 % of the total data-set. SRMs were obtained from CDN Resource Laboratories Ltd. Two of the standards, CDN-CM-4 and CDN-CM-7 were certified for Au, Cu and Mo, and CDN-GS-P2 was certified for Au only.

*The results of the assessment of SRM performance are shown in [*Table 11.3]. *The results of the SRMs indicate that there is no measurable bias for all three elements and that the analytical procedure that is used is adequate for the style of mineralization. AMEC notes that the CDN-GS-P2 SRM is not certified for Cu or Mo and none of the SRMs are certified for Ag.*

Table 11.3 Summary of the Performance of CRMs

Standard	Element	Certified Values			AMEC Calculated Values		
		Certified Valued	2 Standard Deviations	Number of Results	Mean of Results	Calculated Bias (%)	Calculated Standard Deviation
CDN-CM-4	Au (g/t)	1.180	0.012	20	1.1543	-2.2	0.062
	Cu (%)	0.508	0.025	30	0.5040	-0.8	0.011
	Mo (%)	0.032	0.004	30	0.0311	-2.8	0.001
CDN-CM-7	Au (g/t)	0.427	0.042	100	0.4193	-1.8	0.033
	Cu (%)	0.445	0.027	100	0.4450	0.0	0.008
	Mo (%)	0.027	0.002	100	0.0266	-1.4	0.001
CCDN-GS-P2	Au (g/t)	0.214	0.020	81	0.2036	-4.9	0.012

Further information regarding the 2011 drill program is provided below (Caron et al. 2012).

Drill core samples from the 2011 program were shipped in unique numbered batches of 35 samples each to correspond with AcmeLabs' own internal QA/QC procedures. Each batch was designed to include the following samples:

- Primary drill core samples: From drilling carried out in 2011, consisting of half cut HQ, NQ, and lesser BQ drill cores.
- Blanks: One blank sample was inserted per batch, generally as the first sample of each batch.
- Standards: Purchased certified reference materials CDN-CM-4, CDN CM 7, CDN CM 8, CDN-CM-10, CDN-GS-P2, OREAS-50c, OREAS-152a, OREAS153a, GBG303 5, GBM910-5, and GMO-05 were inserted in each batch at a rate of up to five per batch.
- Field duplicates: One field duplicate of core was included in each batch. To produce the field duplicate, the 2011 drilled core was cut in half, with one-half remaining in the box as reference core. The other half was then cut in half to produce two lengths of quartered core; one length of quarter core was collected as a primary sample, and the second quarter was sampled as the field duplicate under identical analytical methods.
- Reject (laboratory) duplicates: One was included per batch. These were prepared at the laboratory; a 250 g riffle split was taken from the 1 kg 10 mesh first split and pulverized then analyzed.

The following conclusions of the quality assurance/quality control (QA/QC) report are extracted from Caron et al. (2012):

> *On the whole, the QA/QC results were acceptable, particularly for Cu and Mo. No problematic laboratory bias was identified. There was an apparent slight negative*

bias on Au values at lower concentrations (as indicated by the Au data for standard CDN GS P2). This should be monitored closely in the future given that a large portion of the Au data for Schaft Creek is near these lower values.

A greater amount of precision was shown with the reject duplicates than the core field duplicates. Pulp duplicates showed very good correlation. Thus, it appears that the lack of precision in the field duplicates is due to geological factors and/or sampling error and is likely not due to imprecision at the laboratory. Precision was much lower for Au, and even more so for Ag. However, much of this may be attributed to the overall low concentrations, with many analyses close to the detection limits, or by nugget effects in the case of Au.

Additional sample verification is planned to check for variability (bias) in the analyses from AcmeLabs. Five percent of pulps from samples collected from the 2011 diamond drilling and historic core re-logging are to be sent under different and unique sample identification numbers to AcmeLabs (5%) and ALS Chemex Laboratories (ALS Chemex) (5%) in North Vancouver, BC. The samples selected are from a range of grades for copper, molybdenum, gold, and silver, and from evenly distributed time periods over the course of the 2011 program. Reference standards at various grades, including low grades found in the deposit area for copper, molybdenum, gold, and silver, are to be inserted regularly into this sample stream. The pulps will then be processed by the same or equivalent analytical techniques as were used in the 2011 program.

Flow charts outlining the sample processing procedures and corresponding splits for data verification and quality control applied in the 2011 program are provided in Appendix F of this report (Caron et al. 2012).

11.5 DATABASES

The following text is from Kulla et al. (2011).

All data in the field is recorded in written form in field books, log books, sample sheets, logging forms or shipping forms. Various phases of record keeping are repeated in the subsequent step to confirm recorded values or numbers.

All field data is entered into Excel tables. Errors in data entry picked up during the verification stage can be confirmed and corrected from filed data. Data from third parties such as laboratories or survey contractors are generally supplied in digital and printed form. These records are printed out and kept in binders for reference during data verification.

In 2010, Copper Fox contracted Cambria Geosciences Ltd. to compile a complete Acquire© database of all geological information collected at the project. Cambria completed the following activities during compilation of the project database:

- *Assembly of the historical data files and paper records available to Copper Fox.*
- *Analytical information was obtained from the original certificates from the labs, loaded in the Mark 1 acQuire database and verified against the log records and certificates.*
- *The Copper Fox data (2005 and later) was loaded directly from the geologists Excel-file drill core logs (geology, RQD, core recovery, and assay intervals and sample numbers).*
- *Assembly of a Mark 1 acQuire database for storage of the assembled information.*
- *Cambria created a database structure in acQuire, and a script was written to extract a "best assay" result for each interval in the drillhole database. The "best assay" result is selected based upon a qualitative judgment of the available assay data with the latest Acme laboratory results taking priority over all other assays from previous assay laboratories.*

Since all assay values are included in the database, there were more than one set of assay results for all samples re-assayed at secondary lab. For the data used in the resource estimate, only one value could be used for each sample, and a consistent hierarchy in result selection was chosen based upon which lab was used. All results from AcmeLabs were used, and values from Loring Laboratories Ltd. (Loring) were only used if there were no results from AcmeLabs. Additionally results from Inspectorate-IPL Laboratories Ltd. (Inspectorate-IPL) were only used if there were no results from either AcmeLabs or Loring. If no other results were available, data in the "Unknown" columns were used. This order of precedence was set based upon conclusions made by Cambria upon examination of assay results.

11.6 SAMPLE SECURITY AND STORAGE

The following text is from Kulla et al. (2011).

Sample security at the Schaft Creek Project during the Copper Fox drilling programs relied upon the remote nature of the site. Sample collection and transportation have always been undertaken by company or laboratory personnel using company vehicles.

Assay samples were placed in numbered 5 gal plastic pails and MET samples in numbered 10 gal pails, both with security lids. The sample tag for each pail is inserted into a small zip lock plastic bag and affixed to the inside of the pail's rim. Each sample pail carries a shipping tag fixed to the outside of the pail with the laboratory's address.

Assay samples were shipped to International Plasma Labs Ltd. (IPL) in Richmond, BC, and MET samples were sent to Process Research Assoc. Ltd (PRA) in Richmond, BC. For this purpose both sample groups were air lifted to a strip at

the road and stored in a locked Seacan container. At weekly intervals, a bonded trucking firm retrieves both sample groups and delivers them directly to the laboratories.

Chain of custody procedures consisted of filling out sample submittal forms that were sent to the laboratory with sample shipments to make certain that all samples were received by the laboratory.

All core is stored on racks within secure storage facilities at the field camp.

Samples for assay and geochemical analysis were collected in clear poly 12" by 20" bags with unique sample ID numbers and were securely fastened with zip-ties. Samples were stored in the core logging facility until 35 samples were ready to be processed into batches (referred to as a "Dispatch" in acQuire) (Caron et al. 2012).

Sample dispatch processing included laying out all 35 samples and cross-checking the samples IDs against the sample logs. Samples were weighed and placed in white, woven poly rice bags, with each rice bag limited to approximately 15 to 23 kg, and the weight of each rice bag was clearly written on the bag. The rice bags were doubly secured with zip-ties, and a unique numbered security tag was affixed to the neck of each rice bag. Each rice bag was labelled with its dispatch number, and the dispatch numbers were recorded and sent via e-mail to AcmeLabs in Smithers, BC for their confirmation upon receipt at the laboratory. The sample requisition forms were inserted into rice bag number 1 of each dispatch. Chain-of-custody paperwork describing addresses of the sender and recipient, total dispatch weight, and chain-of-custody details was attached to the first bag of each dispatch (Caron et al. 2012).

All samples were flown out of camp by Tsayta Aviation. Samples were shipped to the Dease Lake airport where they were unloaded by Tsayta Aviation personnel and loaded into a locked metal trailer for storage until they were picked up by Canadian Freightways. Once or twice weekly, Canadian Freightways trucked the samples directly to the AcmeLabs prep laboratory in Smithers. Acme Labs personnel regularly reported to camp geologists by e mail regarding the samples and security tags that had been received at the laboratory in Smithers (Caron et al. 2012).

11.7 DENSITY MEASUREMENTS

From Caron et al. (2012):

Ninety-six samples of full diameter drill core were selected from drill holes 2011CF407 through to 2011CF425 for specific gravity determination, averaging about five samples per drill hole. Samples were ~13 to 20 cm long and were selected by the geologist responsible as being representative of lithology, alteration, or mineralization. Samples were collected roughly every 100 m throughout each drill hole, or as dictated by changes in lithology/alteration/mineralization. A labelled wooden reference block was inserted in the core box from where the sample was collected. Samples were

assigned a unique sample ID number and sent to the Acme laboratory for specific gravity measurement according to criteria specified by Copper Fox.

The specific gravity samples were processed according to Acme laboratory code G813-WAX as follows: The core was first dried and weighed, then covered in wax to seal any fractures and to eliminate the porous nature of the core. The waxed core was then re-weighed to note the amount of wax, and then weighed in water. The specific gravity was then calculated as a ratio of the sample weight in air and the sample weight in water.

11.8 GEOTECHNICAL DRILLING

From Caron et al. (2012):

Geotechnical core logging was conducted prior to core splitting and sampling by Tahltan Nation Exploration Services (TNES) workers under supervision of Cambria geologists or by Cambria geologists. The core attributes recorded in the geotechnical logging included core recovery, rock quality designation (RQD), and magnetic susceptibility. At the request of Copper Fox, specific gravity measurements were not performed onsite. A brief description of the geotechnical logging procedures is provided below. Core recovery was calculated by measuring the length of core recovered between the drilling footage markers in the core boxes and dividing by length of the drilled run as indicated on the footage blocks. The RQD was also determined for each run of core between the drillers' footage blocks, typically 3.05 m per run of drill rod. The RQD was calculated as the cumulative length of core of all pieces in a core run ≥10 cm (measured at the centre line down the core axis), divided by the length of the specific core run. Magnetic susceptibility was measured using a hand-held Exploranium Kappameter KT-9 magnetic susceptibility meter. Measurements were taken on full-diameter core where possible and as close to drillers' footage block locations as possible. Drill core was broken and blocky to rubbly in many areas. If no suitable whole core was available in a run of core, a reading was taken from the broken core and may not reflect the true nature of the magnetic susceptibility of the rock. Analysis of these data should be reviewed in conjunction with the RQD data.

11.9 COMMENTS

It is Tetra Tech's opinion that the quality of the gold, copper, molybdenum and silver data are sufficiently reliable to support the accompanying mineral resource estimate. It is Tetra Tech's opinion that sample preparation, analysis, and security have been generally carried out in accordance with exploration best practice guidelines and industry standards.

12.0 DATA VERIFICATION

12.1 DATABASE VERIFICATION

Tetra Tech performed an internal verification process on the Project database against the original logs, original downhole directional survey files, and laboratory-issued assay certificates. The validation of the data was completed on 26 of the total 410 drillholes in the database, accounting for an overall 6.3% of all drillholes.

The data verification process examined the collars (easting, northing, elevation, length, collar azimuth, and collar dip), survey (depth, azimuth, and dip), and assays (sample number, and grades of copper, gold, molybdenum, and silver). Drillholes included in the general verification process are as follows: 05CF235, 05CF240, 06CF254, 06CF260, 06CF263, 06CF288, 07CF294, 07CF298, 07CF303, 07CF313, 08CF322, 08CF327, 08CF363, 08CF371, 08CF386, 08CF387, 10CF398, 10CF402, 10CF405, 11CF408, 11CF413, 11CF416, 11CF419, 11CF421, 11CF424, and 11CF425.

Additionally, the survey data validation was performed on the following drillholes: 05CF237, 07CF314, 08CF344, 2010CF398, 2010CF399, 2010CF401, 2010CF402, 2010CF404, 2010CF405, 2010CF405B, 2011CF407, 2011CF408, 2011CF409, 2011CF4010, 2011CF4010B, 2011CF411, 2011CF412, 2011CF412B, 2011CF413, 2011CF414, 2011CF415, 2011CF416, 2011CF417, 2011CF418, 2011CF418B, 2011CF419, 2011CF420, 2011CF421, 2011CF422, 2011CF423, 2011CF424, and 2011CF425.

The Schaft Creek database is maintained in acQuire, by Cambria. At the request of Copper Fox, Cambria provided Tetra Tech with the database, in the form of an export to MS Access 2007. It is comprised of tables containing data on lithology, assay, best assay table, alteration, veining, structure, specific gravity, acquire codes and descriptions. A five-page .doc file accompanied the database and provided a thorough description of the database tables. Cambria also provided Tetra Tech with all laboratory-issued assay certificates, original drill logs, and original downhole directional survey files. A spreadsheet listing all samples from the 2005 to 2008 drilling programs that were re-assayed at AcmeLabs was also provided. The assay results for such samples were listed under their original ID in the database. Core logs of holes drilled between 2005 and 2008 were initially recorded in excel spreadsheets, and were later imported into the acQuire database. For holes drilled in 2010 and 2011, logs were either hand-written and re-entered into acQuire, or were directly entered in the acQuire database.

COLLARS

For the collar validation of the 26 drillholes, the eastings, northings, elevations, final depths, azimuths, and dips of the database entries were compared to the values in the original logs. For the location coordinates, minor discrepancies were found for five of the drillholes. These were attributed to the collars having been later surveyed by a more accurate instrument (differential GPS), and such occurrences were therefore not counted as errors. Similarly, discrepancies were found for the azimuths and dips of four of the verified drillholes. These were attributed to the logs containing the planned orientations, and the database containing the actual orientations. As such, nor were these were not counted as errors. Eight of the verified drillholes contained discrepancies in final depth values. As outlined in Table 12.1, these were attributed to either rounding to one decimal place, or to minor database entry errors. All corrections were made to the database.

Table 12.1 Corrections Made to End of Hole Records in Database

Hole ID	Database Depth (m)	Original Logs Depth (m)	Difference (m)	Comment
07CF294	151.40	151.35	-0.05	Database rounded to one decimal place, correct end of hole depth 151.35 m
07CF298	153.40	153.30	-0.10	Minor database entry error
07CF313	421.84	421.80	-0.04	Minor database entry error
08CF322	136.30	136.25	-0.05	Database rounded to one decimal place, correct end of hole depth 136.25 m
08CF363	62.50	62.48	-0.02	Database rounded to one decimal place, correct end of hole depth 62.48 m
08CF386A	59.90	59.89	-0.01	Database rounded to one decimal place, correct end of hole depth 59.89 m
08CF387	25.90	25.91	0.01	Database rounded to one decimal place, correct end of hole depth 25.91 m
2010CF398	539.50	539.19	-0.31	Minor database error, end of hole depth 539.19 m

SURVEYS

For the survey validation, the depth, azimuth, and dip were examined. Out of a total of 5,562 entries, 1,728 entries were verified, accounting for 31.1% of the survey dataset. Original survey records were provided in the form of .xls files for the Reflex Gyro surveys, and scanned copies of FlexIT and EZ Shot hand-written papers from the drilling contractors.

No errors in dip were observed, and only two errors in azimuth, accounting for 0.12% of the survey dataset, were found. Similarly, only four errors in depth were observed, summing to 0.23% of the survey dataset. Corrections were made to the database, and are summarized in Table 12.2.

Table 12.2 Corrections Made to Survey Table of Database

Hole ID	Database			Original Survey Files			Comments
	Depth (m)	Azimuth (°)	Dip (°)	Depth (m)	Azimuth (°)	Dip (°)	
05CF237	0.00	71.40	-59.70	n/a	n/a	n/a	Azimuth did not consider magnetic declination of 21.2°, correct azimuth 92.6°, *also corrected in header table*
05CF237	46.94	71.40	-59.70	49.00	71.4	-59.7	Incorrect depth, azimuth did not consider magnetic declination of 21.2°, correct azimuth 92.6°
08CF344	229.00	35.00	-60.50	204.50	13.9	-60.5	Depth entry error, azimuth correct (mag declination)
2010CF398	447.80	89.73	-45.00	448.06	68.5	-45.0	Depth error when converting from feet to metres, azimuth correct (mag declination)
2010CF398	539.50	91.13	-45.20	539.15	69.9	-45.2	Depth error when converting from feet to metres, azimuth correct (mag declination)
2011CF421	84.57	90.00	-58.56	n/a	n/a	n/a	Data entry error, value not in original records, removed from database

Additionally, there were double entries for zero depths for six drillholes. The entries with the rounded values were removed from the database (Table 12.3), and these were not counted as errors.

Table 12.3 Duplicate Collar Survey Readings – One Entry from Each Drillhole Removed from Database

Hole ID	Depth (m)	Azimuth (°)	Dip (°)
2011CF412B	0	88.9	-59.1
2011CF412B	0	88.9	-59.1
2011CF413	0	269.5	-64.1
2011CF413	0	269.5	-64.1
2011CF415	0	272.7	-68.8
2011CF415	0	272.7	-68.8
2011CF418B	0	273.4	-59.0
2011CF418B	0	273.4	-59.0
2011CF420	0	277.2	-54.8
2011CF420	0	277.2	-54.8
2011CF424	0	278.8	-56.2
2011CF424	0	278.8	-56.2

When comparing, the survey files to the database, it was noted that 88 survey records from holes drilled in 2011 were not entered into the database. Cambria explained that even though the values appeared to be valid, they should not be used since they failed a “drift check” on the gyro instrument, and were likely collected while the instrument was in motion.

For holes drilled in 2010, various values for magnetic declination (21.0°, 21.1°, 21.2°, and 21.23°) have been used. It is recommended that only one value be used for each drilling year. It was also observed that for a few holes (such as 07CF314), the pull-back depth was occasionally subtracted from the reading depth and sometimes it was not. When station reading depths were converted from feet to metres, it is recommended that a decimal place value (such as the second) be chosen and used consistently throughout. Sometimes the planned orientation is entered as the hole orientation at zero depth, and sometimes the orientation is calculated from extrapolating upwards from the first station reading. It is recommended that a consistent approach be adopted and maintained. It was also observed that sometimes the pullback depth was subtracted from the station reading depth (such as for 07CF314), and it is recommended that this not be done. Commonly for holes drilled in 2011, the azimuth and dip values are rounded to 2 or 3 decimal places, but then sometimes the same hole have values from the same survey type rounded to 1 or 0 decimal places. It is recommended that one method be adopted and used consistently.

For holes drilled prior to 2010, corresponding to when Cambria first began managing the exploration data, there is little record of what was done. Cambria has done an excellent job in maintaining the database and has done their best to correct all questionable entries.

ASSAYS

The database entries for sample numbers and assay grades for copper, gold, molybdenum, and silver of 3,612 of the total 33,163 entries (excluding QA/QC measures) were verified against the laboratory-issued assay certificates, accounting for 10.9% of the assay dataset. Only one discrepancy was observed, representing only 0.003% of the data, and is summarized in Table 12.4. The sample “to” value was deeper than the end of hole length, and was corrected in the database.

Table 12.4 Correction Made to Sample Interval

Hole ID	Sample ID	From (m)	To (m)	Comment
07CF313	128863	419.1	421.84	End of hole at 421.8 0m, correct "to" value for sample 128863

There was also one sample (Table 12.5) that yielded a value above the upper detection limit of the initially used analytical method, and the actual value from re-analyzing with another method was not imported into the assay table of the

database. This represents only 0.003% of the entire assay dataset. However, the correct value of 20.2 g/t had been included in another table in the master database called “Best Assay”.

Table 12.5 Value Not Imported into Assay Table of Master Database

Hole ID	Sample ID	Lab Certificate ID	Au_G6-50_gpt	Column G6Gr-50 Not Imported
2011CF413	1053547	ACME SMI11000473	>10	20.2

Over the years, various assaying laboratories, which each have different detection limits, have been used for analyzing Project samples. When assay results yield values below the detection limit, the relevant detection limit is entered into the master database. For all such occurrences, the values used in the resource estimate calculation were changed to half of the detection limit of the assaying laboratory. These values are summarized in Table 12.6.

Table 12.6 Assaying Laboratory Detection Limits and Conversion Factors Used for Database and the Resource Estimate

	Original Data					Database				
Lab	Element	Units	Type	Lower DL	Upper DL	Element	Units	Conversion	Lower DL	Upper DL
AcmeLabs	Cu	%	7TDES	0.001	-	Cu	%	None	0.0005	-
	Mo	%	7TDES	0.001	-	Mo	%	None	0.0005	-
	Au	g/t	G6	0.005	10	Au	g/t	None	0.0025	10
	Ag	g/t	7TDES	2	300	Ag	g/t	None	1	300
	Ag	ppm	1EX	0.1	200	Ag	g/t	None	0.05	200
Loring	Cu	%	FA	-	-	Cu	%	None	-	-
	MoS_2	%	FA	0.001	-	Mo	%	MoS_2*0.5994, rounded to 4 decimals	0.0002997	-
	Au	g/t	FA	0.01	-	Au	g/t	None	-	-
	Ag	g/t	FA	0.1 or 0.5	-	Ag	g/t	None	0.05 or 0.25	-
Inspectorate-IPL	Cu	ppm	ICPM	1	-	Cu	%	Cu(ppm)/10,000	0.00005	-
	Cu	%	IPLASY	0.01	-	Cu	%	None	0.005	-
	Mo	ppm	ICPM	1	-	Mo	%	Mo(ppm)/10,000	0.00005	-
	Mo	%	ICPASY	0.0006	-	Mo	%	None	0.0003	-
	Au	g/t	FAAAS	0.01	-	Au	g/t	None	0.005	-
	Ag	g/t	ICPM	0.5	-	Ag	g/t	None	0.25	-

table continues…

Lab	Original Data					Database				
	Element	Units	Type	Lower DL	Upper DL	Element	Units	Conversion	Lower DL	Upper DL
Unknown	Cu	%	-	Tr	-	Cu	%	None	-	-
	Cu	%	-	0.001	-	Cu	%	None	-	-
	Cu	%	-	0.002	-	Cu	%	None	-	-
	Cu	%	-	0.01	-	Cu	%	None	-	-
	Mo	%	-	Tr	-	Mo	%	None	-	-
	Mo	%	-	0.0006	-	Mo	%	None	-	-
	Mo	%	-	0.0012	-	Mo	%	None	-	-
	Mo	%	-	0.006	-	Mo	%	None	-	-
	Au	oz/ton	-	0.0001	-	Au	g/t	Au(oz/ton)*31.1035/0.90718474	0.00342857	-
	Au	oz/ton	-	0.0002	-	Au	g/t	Au(oz/ton)*31.1035/0.90718474	0.00685715	-
	Au	oz/ton	-	0.003	-	Au	g/t	Au(oz/ton)*31.1035/0.90718474	0.10285722	-
	Ag	oz/ton	-	0.01	-	Ag	g/t	Ag(oz/ton)*31.1035/0.90718474	0.3428574	-

Note: DL = detection limit; Tr = trace; MoS_2 = molybdenum disulphide

When IPL reported an assay in parts per million units, a factor of 0.0001 was used to convert the units to percentages (Table 12.6). When samples were analyzed at Loring, molybdenum was reported as molybdenum disulphide percent and was converted to molybdenum percent. All QA/QC samples were also removed from the database prior to the resource estimation calculation. Copper Fox and Cambria corrected all aforementioned discrepancies to Copper Fox's database.

Since all assay values are included in the database, there were more than one set of assay results for all samples re-assayed at secondary lab. For the data used in the resource estimate, only one value could be used for each sample, and a consistent hierarchy in result selection was chosen based upon which lab was used. All results from AcmeLabs were used, and values from Loring were only used if there were no results from AcmeLabs. Additionally, results from Inspectorate-IPL were only used if there were no results from either AcmeLabs or Loring and original results from Teck and Paramount drilling were used if no other data was available ("UNKNOWN" column in database). This order of precedence was set based upon conclusions made by Cambria upon their examination of assay results. Due to overlapping intervals from a re-sampling program, 1865 samples were removed from the database. These samples were from the following drillholes; DDHAS-04, DDHAS-05, DDHAS-06, DDHAS-07, DDHAS-11, DDHAS-12, DDHAS-13, DDHAS-14, DDHAS-15, DDHAS-18, DDHAS-19, DDHAS-20, DDHAS-23, DDHSS-02, DDHSS-03, H68CH036, H68CH037, H68CH038, H68CH039, H68CH040, H68CH042, P69CHP05, P70CHP07, P70CHP08, P70CHP09, P70CHP6A, P71CHP10, and P72CHP11.

The dataset was imported into Gemcom GEMS™ and Datamine™ software, which have routines that check for duplicate intervals, overlapping intervals, and intervals beyond the length of the holes. No erroneous errors were identified within the routine.

12.2 TETRA TECH SITE VISIT

A site visit was conducted by Laura Karrei, P.Geo., a Tetra Tech Geologist, on February 5 and 6, 2012. The Property was visited during the afternoon of February 5, and the morning of February 6 with Cam Grundstrom, VP Operations of Copper Fox, and Anoush Ebrahimi, P.Eng., of Tetra Tech. Drilling was not occurring at the time, and the camp was temporarily re-opened for the duration of the site visit.

The Property (Figure 12.1 and Figure 12.2) and exploration camp (Figure 12.3) were visited, and approximately 600 m of core was examined by Ms. Karrei. Due to approximately 6 ft of snow covering the region, the deposit area was observed from the air via helicopter, and it was possible to only observe the collar casing of one drillhole.

Using a hand-held Garmin GPSmap 60CSx unit, a location reading was taken from the helicopter over the observed casing for drillhole 11CF-417. Considering that the waypoint was taken from a helicopter during high winds, and within the acceptable margin of GPS accuracy, the checked collar location was found to be consistent with the database and was within the Project area. The casing was capped and marked with a red flag (Figure 12.4).

Figure 12.1 Photo of Schaft Creek Deposit in Background



Note: Photo taken from exploration camp

Figure 12.2 Photo of Schaft Creek Deposit in Background



Note: Taken from exploration camp, GPS confirming exploration camp location

Figure 12.3 Aerial Photo of Exploration Camp



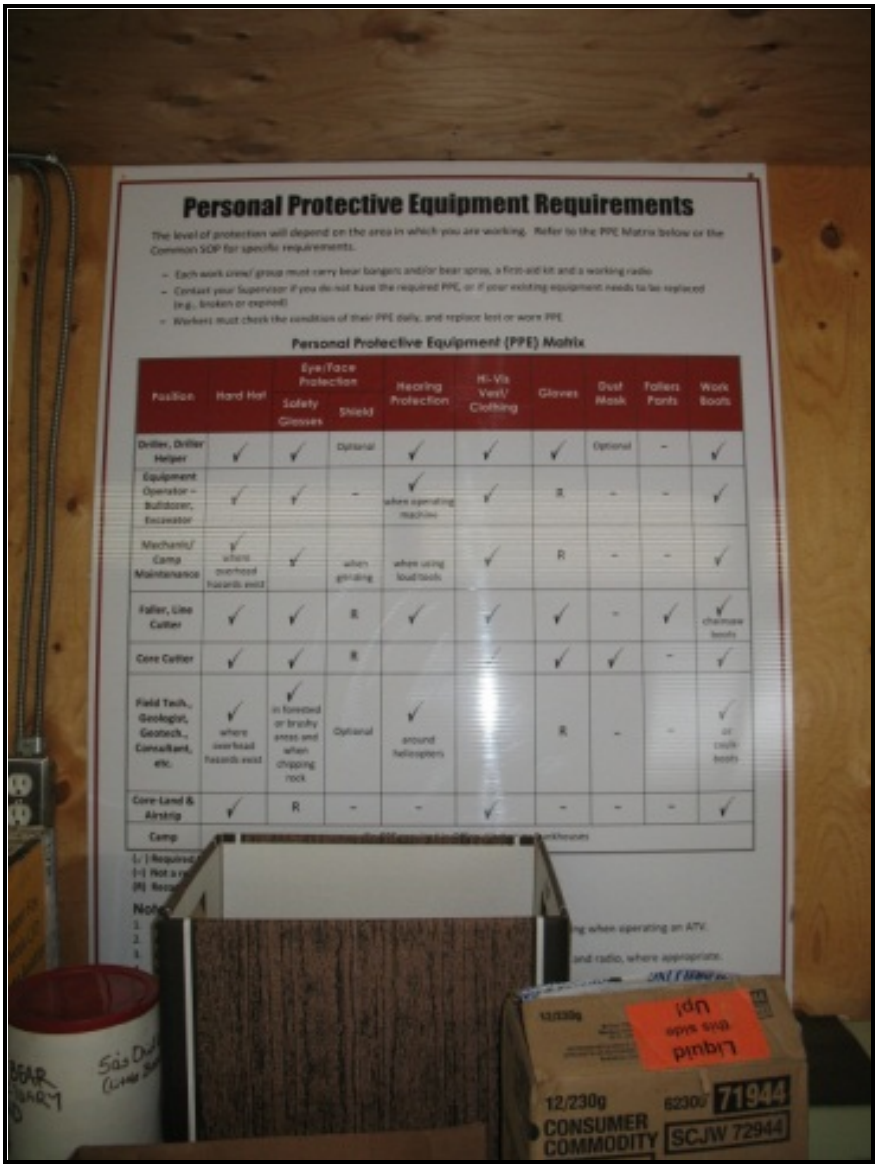
Figure 12.4 Photo of Collar Casing and Cap for Drillhole 11CF-417



Note: Photo taken from helicopter

A first aid station, kitchen, laundry, showers, dry, cabins, recreation room, and core logging and cutting facilities, are on site at the exploration camp. Electricity is produced from generators. Upon arrival in the camp, personnel receive a general orientation including an introduction to safety procedures and rules. Specific personal protective equipment (PPE) must be worn while performing certain tasks, and the requirements are summarized on a sign in the camp office (Figure 12.5).

Figure 12.5 PPE Requirements in Camp



Core is stored outdoors in core racks at the exploration camp, situated roughly 2 km from the deposit (Figure 12.6). At the time of the visit, there was one fully operational core shack (Figure 12.7) and the wooden frame of secondary core shack. The latter is used as a secondary logging facility during the drilling season when there is an overflow of core (Figure 12.8). Attached to one end of the primary core shack, there are three stations for core cutting saws (Figure 12.9).

Figure 12.6 Core Racks



Note: Photo taken from helicopter

Figure 12.7 Inside Primary Core Shack



Note: Shack is well-illuminated and stocked with core logging supplies

Figure 12.8 Secondary Core Shack



Note: Shack is covered with tarp during summer months and used when there is an overflow of core

Figure 12.9 Three Core Cutting Stations Adjacent to Primary Core Shack



All core from drillhole 11CF-408 and select intervals containing mineralization representative of the deposit were examined. Checked intervals, which are listed in Table 12.7, were verified against the original logs and were generally found to be accurate. Core was either of NQ or HQ diameter. Since core-cutting facilities were not available at the time of the visit, and upon the request of Copper Fox to not take the remaining half core for check assaying, no rocks were collected for analysis. However, Tetra Tech obtained pulps/rejects of observed samples from AcmeLabs of Vancouver, and these were sent to Accurassay in Thunder Bay for check analysis. Accurassay is accredited under ISO/IEC Guideline 17025 from the SCC. Results are shown in Table 12.8.

Table 12.7 Intervals of Core Examined

Diamond Drillhole	From (m)	To (m)	Interval (m)	Comments
05CF-248	300	320.00	20.00	-
07CF-313	63	88.00	25.00	-
08CF-327	20	43.00	23.00	-
10CF-398	35	50.00	15.00	-
11CF-408	0	377.04	377.04	Entire hole
11CF-409	134	152.00	18.00	-
11-CF-419	183	200.00	17.00	Geotech hole in Liard Zone
11CF-425	377	400.00	23.00	-
T81CH160	12	54.00	42.00	Drilled by Teck
T81CH223	35	70.00	35.00	Drilled by Teck
Total			**595.04**	**-**

Table 12.8 Tetra Tech Check Samples (Pulps/Rejects)

Diamond Drillhole	From (m)	To (m)	Interval (m)	Sample Number		Copper Fox				Tetra Tech				Absolute Difference				Percent Difference (%)			
				Copper Fox	Tetra Tech	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	Cu (%)	Mo (%)	Au (%)	Ag (%)
07CF-313	87.20	90.20	3.00	128745 (re-assayed as 171405)	1085079	0.562	0.022	0.229	<2.0	0.4927	0.0439	0.244	1.69	-0.069	0.022	0.015	-0.31	-14.07	49.89	6.15	-18.34
08CF-327	24.40	27.45	3.05	147197 (re-assayed as 171008)	1085080	0.360	0.001	0.026	<2.0	0.3384	0.0136	0.019	1.52	-0.022	0.013	-0.007	-0.48	-6.38	96.32	-36.84	-31.58
08CF-327	30.50	33.55	3.05	147199 (re-assayed as 171010)	1085081	0.512	0.001	0.018	<2.0	0.4678	0.0098	0.014	1.19	-0.044	0.009	-0.004	-0.81	-9.45	94.90	-28.57	-68.07
11CF-408	53.56	55.56	2.00	586405	1085082	0.252	0.040	0.038	0.6	0.2326	0.0734	0.036	<1.00	-0.019	0.033	-0.002	0.40	-8.34	45.50	-5.56	40.00
11CF-408	55.56	57.56	2.00	586406	1085083	0.525	0.093	0.046	1.8	0.4437	0.1597	0.054	1.43	-0.081	0.067	0.008	-0.37	-18.32	41.77	14.81	-25.87
11CF-408	75.56	77.56	2.00	586419	1085084	0.266	0.023	0.065	1.8	0.2730	0.0507	0.118	1.64	0.007	0.028	0.053	-0.16	2.56	54.64	44.92	-9.76
11CF-408	120.78	122.78	2.00	586448	1085085	0.410	0.037	0.314	10.0	0.3911	0.0681	0.357	6.48	-0.019	0.031	0.043	-3.52	-4.83	45.67	12.04	-54.32
11CF-408	126.78	128.78	2.00	586452	1085086	0.192	0.001	0.012	1.1	0.1809	0.0070	0.015	<1.00	-0.011	0.006	0.003	-0.10	-6.14	85.71	20.00	-10.00
11CF-408	171.48	173.48	2.00	586481	1085087	0.680	0.061	0.091	2.6	0.6756	0.1220	0.085	2.18	-0.004	0.061	-0.006	-0.42	-0.65	50.00	-7.06	-19.27
11CF-408	173.48	175.48	2.00	586482	1085088	0.586	0.092	0.067	2.6	0.6733	0.1831	0.127	2.43	0.087	0.091	0.060	-0.17	12.97	49.75	47.24	-7.00
11CF-409	138.00	140.00	2.00	1054565	1085089	0.492	0.022	0.765	5.7	0.5610	0.0578	0.958	5.62	0.069	0.036	0.193	-0.08	12.30	61.94	20.15	-1.42
11CF-409	140.00	142.00	2.00	1054566	1085090	0.688	0.011	1.647	7.7	0.7383	0.0292	1.878	6.40	0.050	0.018	0.231	-1.30	6.81	62.33	12.30	-20.31
11CF-419	198.00	200.00	2.00	1056204	1085091	0.783	0.011	0.198	<2.0	0.7753	0.0242	0.166	1.01	-0.008	0.013	-0.032	-0.99	-0.99	54.55	-19.28	-98.02

The purpose of the check sample assays is to confirm indications of mineralization and are not intended as duplicate or QA/QC samples. Tetra Tech check sample analysis correlates well with Copper Fox's assay results for the same sample intervals. That is, where elevated assay results were expected in the Copper Fox samples, the Tetra Tech samples returned similarly elevated assays results. It is Tetra Tech's opinion that the analytical results have been confirmed and are adequate for the purposes of this technical report.

Core boxes are labeled with either a white tape or an aluminum tag, identifying the drillhole name, contained interval, and usually the box number (Figure 12.10). Corresponding to sampled intervals, sample tags are stapled in the box. Occasionally, such as for drillhole 05CF-248, the original sample tags are not present, but an aluminum tag marking the sample number is stapled to the box in at the corresponding location. Core recovery was observed to be variable but was generally poor to moderate. Core loss was not specifically noted in the logs, but the information is captured in the form of rock quality designation (RQD) data. Rock descriptions of individual samples are not recorded in the core logs. Some holes, such as 11CF-408 were noted to have been drilled using imperial measurements. One side of the wooden core blocks in the boxes stated the hole depth in feet, and the reverse side of the block showed the hole depth in metres. For this, a conversion factor of 0.3048 was used.

Figure 12.10 Labelled Core Boxes From Various Years of Drilling



Note: Poor core recovery also shown (broken ground)

Mineralization (chalcopyrite, bornite, molybdenite, and malachite) was observed in the form of disseminations, blebs, patches, within fractures and as stringers. Select samples illustrating this mineralization are provided in Figure 12.11 to Figure 12.17.

Figure 12.11 T81CH223 at 53 m – Bornite + Chalcopyrite, Core of NQ Diameter

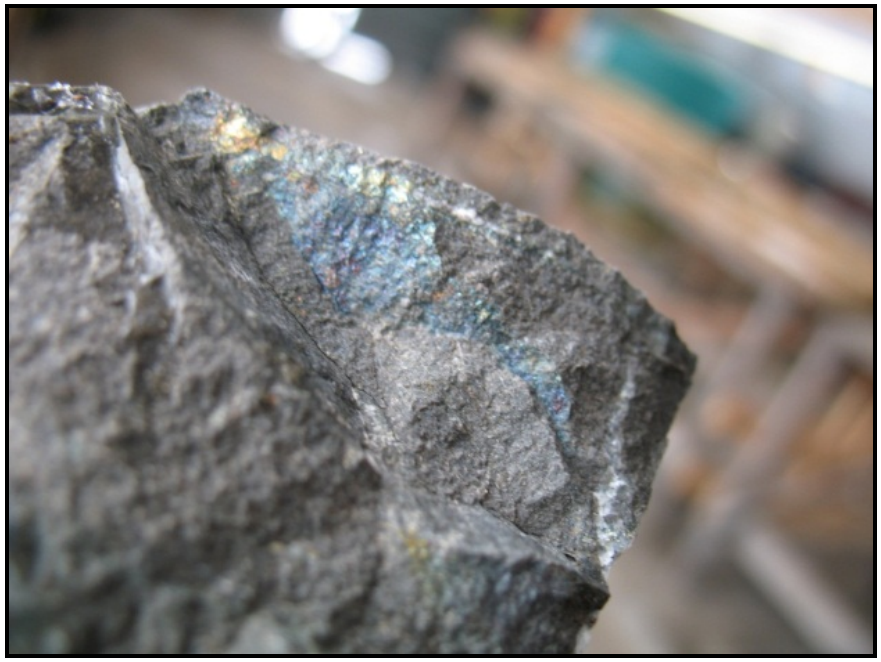
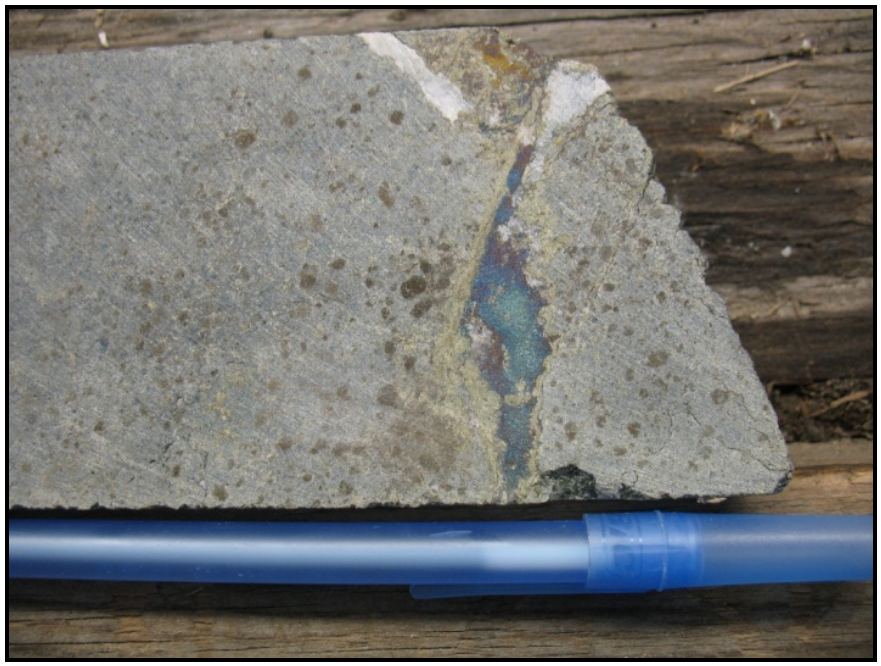
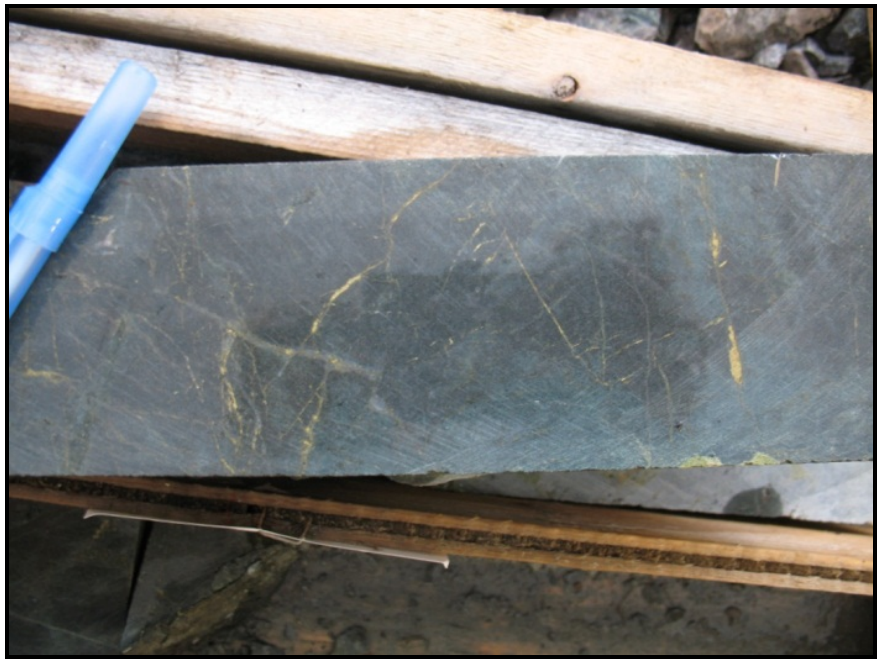


Figure 12.12 08CF-327 Sample 147197 – Bornite, Pen for Scale



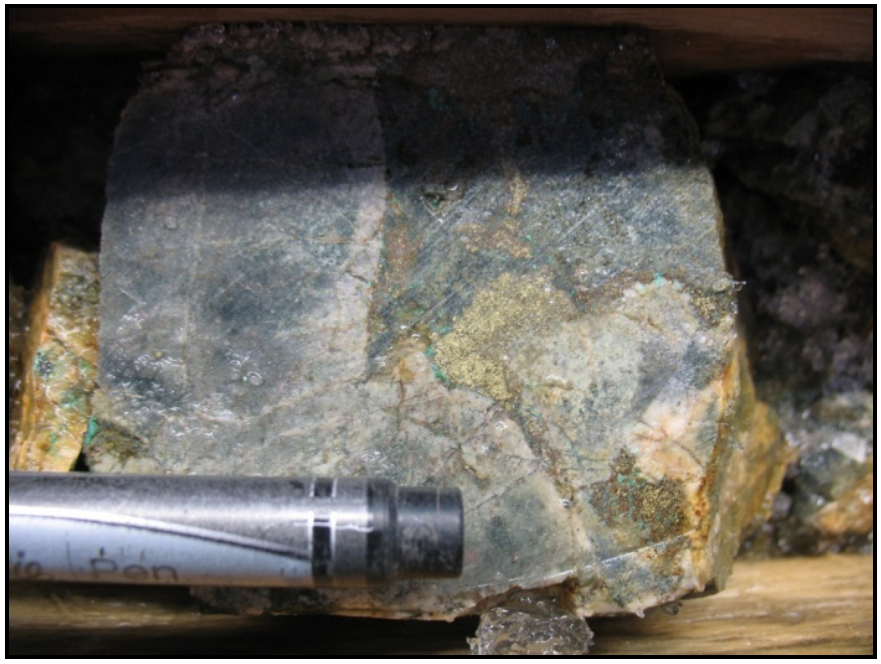
Note: Pen for scale

Figure 12.13 11CF-408 Sample 586481 – Stringers of Chalcopyrite



Note: Pen for scale

Figure 12.14 10CF-398 Sample 611051 – Malachite + Sulphides



Note: Pen for scale

Figure 12.15 11CF-409 Sample 1054565 – Disseminated and Blebby Sulphides (Pyrite > Chalcopyrite)

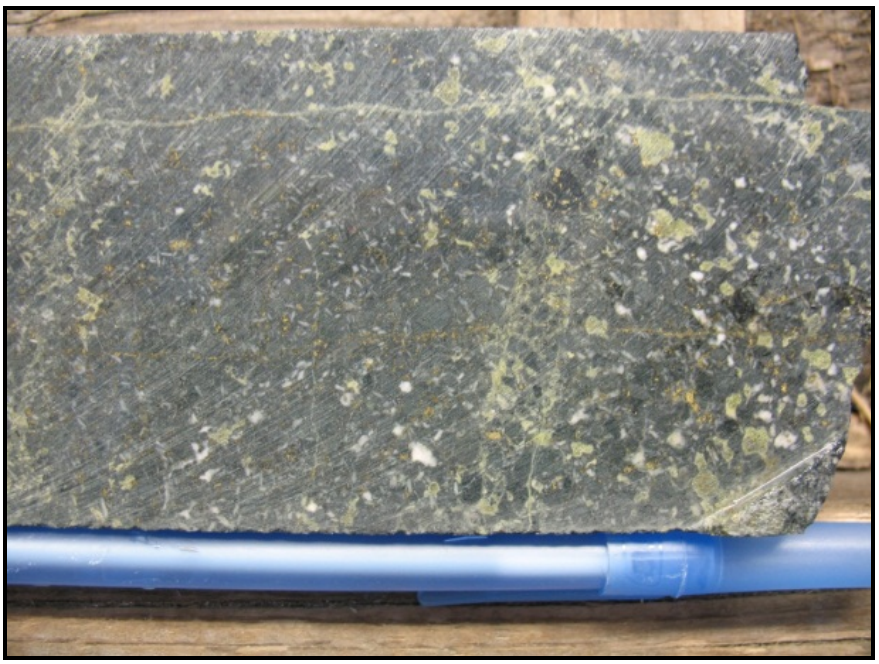


Note: Pen for scale

Figure 12.16 07CF-313 at 69 m – Disseminated and Blebby Sulphides (Chalcopyrite + Pyrite)



Figure 12.17 8CF-327 Sample 147199 – Disseminated Sulphides (Chalcopyrite + Pyrite)



Note: Pen for scale

Abundant molybdenum was also observed on a fracture surface in drillhole 11CF-408.

All pulps/rejects were delivered from the AcmeLabs, either in Vancouver or Smithers, to the Tetra Tech office in Toronto via Purolator. Samples were then examined in the Toronto office, and sent to Accurassay via Purolator. Samples were analyzed via list methods for each elements here. A copy of the Accurassay assay certificate for these check samples is provided in Appendix A.

No geologists were on site during the visit, and procedures were provided by the camp manager, who commenced working in the camp in 2010. During the drilling campaign, core was transported directly from the drill site to the camp on a daily basis via a Kubota. Core was logged by geologists from Cambria, and core boxes were custom made to be 1 m long in order to fit in the back of the buggy (Figure 12.1). In the core shack, there is a logging manual containing photos and descriptions of the various rock types, structures, and mineralization styles of the Property. The locations of drill core storage are recorded on a plan view map of the outdoor core racks, and all drilling activity records and maps are kept in the geology office. The camp manager office and the geology office are in the same building, and can be separated by a door with a lock.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

The majority of the following discussions have been extracted from Kulla et al. (2011), unless otherwise stated.

13.1 METALLURGICAL TEST WORK

*The information for the metallurgy was derived from the same information utilized for previous preliminary assessment (Bender et al. 2007) and preliminary feasibility study reports (Bender et al. 2008, as amended). This test work is summarized in [*Table 13.1*].*

Table 13.1 Summary of Test Work

Year	Laboratory	Test Work Performed
1970-1971	Lakefield Research, Lakefield, Ontario	Very preliminary test work for Hecla
1981-1982	Lakefield Research, Lakefield, Ontario	Flowsheet development work for Teck Mining Group
2004	PRA, Richmond, BC	PRA0402903 – Flotation development work from historical core and sample validation work
2005	PRA, Richmond, BC	PRA0502002 – Flotation and grinding development work including locked cycle test work
2006	PRA, Richmond, BC	PRA0603303 – Process development on 2005 core (four zones)
2006	Hazen Research, Golden, Colorado, USA	Preliminary comminution test work
2007	PRA, Richmond, BC	PRA0701301 – Process development on 2006 core (three zones)
2007	Lehne & Associates, Germany	Mineralogical examination of drill core composites and metallurgical test products
2007	Hazen Research, Golden, Colorado, USA	Hazen 101515 – Drop weight comminution test work
2007	CESL, Richmond, BC	Hydrometallurgical bench scale test work
2008	Polysius AG, Neubeckum, Germany	Preliminary HPGR test work
2008	G&T, Kamloops, BC	KM2050 – Flotation response work from three different ore zones
2008	G&T, Kamloops, BC	KM2136 – Advanced flowsheet development studies

table continues…

Year	Laboratory	Test Work Performed
2009	G&T, Kamloops, BC	KM2292 – Pilot plant work to produce bulk concentrate for engineering test purposes
2011-2012	G&T, Kamloops, BC	KM3149 – rougher flotation, locked cycle testing by closed circuit flotation and concentrate quality (Paramount Zone)

Note: Information contained in Table 13.1 was derived from Kulla et al. (2011) and Johnson and Shouldice (2012)

The testwork performed in 1970–71 and 1981–82 was not reviewed but the level of work is minor relative to the later work performed from 2004 onwards. All of the test work from 2005 onwards was conducted on drill core from the Schaft Creek 2005 and 2006 drilling programs. Copper Fox sent the samples from this drilling to PRA who originally performed much of the test work. Material was subsequently transferred to G&T who prepared it for further testing and for transfer to other test facilities. The emphasis of the test work was the Liard (Main) Zone which contains approximately 85% of the Mineral Resource with less work being performed on the Paramount Zone (approximately 14%) and the West Breccia Zone (1%).

Three types of metallurgical tests were implemented in these programs; Optimization Testing, Variability Testing, Comminution Testing (SAG and HPGR). The testwork is detailed in Bender et al. (2007) and Bender et al, (2008). It is briefly summarized in the sections below to provide support for the selection of the process criteria inputs used to assess reasonable prospects of economic extraction.

13.1.1 2005 PRA Test Work on Legacy Core

PRA conducted test work on historical core in 2005. This work was to determine the general responses of the material to typical copper processing methods and to see if reasonable results could be attained from historical core. Encouraging results were achieved indicating metallurgical recoveries that were typical of copper porphyry deposits could be achieved.

13.1.2 2005-2006 PRA Test Work on 2005 Drill Core

Five composite samples were tested in this program which was created from core sourced from the 2005 drilling work. These composite samples were the Main Liard Zone (MLZ), West Liard Zone (WLZ), North Liard Zone (NLZ), West Breccia Zone (WBZ), Pit Composite (composed of equal portions of the four zones)

*Preliminary work concentrated on establishing a basic flowsheet at a chosen grind of 160 µm. From this work, locked cycle test work was performed on all five samples. Results are included in [*Table 13.2*].*

In addition, a pilot plant run was performed on 1,600 kg to generate sample for molybdenum separation work. This work went poorly and in subsequent analysis by Copper Fox's consulting metallurgists it was noted that carbon contamination probably caused problems in the attaining molybdenite concentrate grade.

Table 13.2 Locked Cycle Results, PRA2005 Work

	Bulk Concentrate				Recovery				Feed Grade			
Sample	Cu (%)	Au (g/t)	Ag (g/t)	Mo (%)	Cu (%)	Au (g/t)	Ag (g/t)	Mo (%)	Cu (%)	Au (g/t)	Ag (g/t)	Mo (%)
MLZ	25.38	15.56	81.4	0.95	84.2	84.5	66.3	79.6	0.435	0.27	1.8	0.017
WLZ	34.21	33.44	129.6	1.24	71.8	75.9	62.5	61.1	0.355	0.33	1.5	0.015
NLZ	32.08	27.43	149.0	1.91	76.2	76.1	76.2	71.8	0.344	0.29	1.9	0.022
WBZ	24.60	10.30	122.1	1.24	82.7	78.0	74.8	79.8	0.421	0.19	2.3	0.027
Pit	25.54	15.93	112.1	1.36	84.8	78.4	60.6	78.4	0.457	0.30	2.8	0.026

Grade variability testing was also performed in 2005 by PRA. Twenty five open circuit tests were performed at grades varying from 0.146 to 1.253% cu. Recoveries typically were, 80%+ for copper, 60 to 90% for gold, 14 to 78% for silver, over 50% for molybdenum into the bulk concentrate. Recoveries typically were good when feed grade was high and recoveries suffered with a decrease in feed grade.

13.1.3 2006 Hazen Testwork on 2005 Drill Core (Material)

Comminution testwork was also performed at Hazen Research and this work is summarized in Table 13.3. These results suggest a moderately abrasive material which is hard.

Table 13.3 Comminution Testing, Hazen 2006 Work

Zone	Ai	Rwi	Bwi
MLZ	0.25	24	22.4
WLZ	0.27	23.7	24.5
NLZ	0.18	24.1	24.1
WBZ	0.3	21.2	20.7
Average	0.25	23.3	22.9

Note: Abrasion index (Ai), Bond rod mill work index tests (Rwi), Bond ball mill work index tests (BWi)

13.1.4 CESL Testwork on 2005 Drill Core Derived Material

Approximately 3.5 kg of bulk concentrate from the 2005 work was tested by Cominco Engineering Services Ltd. (CESL) for amenability to processing by that method to cathode copper. Preliminary testing indicated that the concentrate would be amenable to the CESL process with yields from 96.0 to 98.8% Cu

extraction. Gold extraction varied from 50 to 90% depending on oxidation time with the recovery decreasing with pressure oxidation time. Silver extraction varied from 80% to over 90% with recovery increasing with pressure oxidation time.

13.1.5 2007 PRA TESTWORK ON 2006 DRILL CORE MATERIAL

Approximately 50 t of material was sent to PRA in February, 2007 and this was composed of 2006 core material. PRA tested 725 kg of this material and prepared another 6,000 kg for pilot plant testing. In addition, 90 kg of material from three zones were prepared for comminution testwork to be performed at Hazen Research.

From the 6,000 kg, PRA prepared a composite for each of the three resource areas. A fourth composite (Master) - was prepared with equal portions of the three zones. A primary grind of P_{80} = 100 µm was selected for all rougher and scavenger flotation locked cycle tests. Concentrates were reground to P_{80} = 20 to 25 µm. The results of the four locked cycle tests subsequently indicated a need to regrind the feed to the cleaner circuit to 15 µm in order to achieve both high concentrate grades and recoveries. Higher concentrate grades had been achieved for the 2005 drill core tests using a P_{80} of 15 to 20 µm. It was further indicated that a higher level of secondary material in the 2005 core may also have contributed to better performance with that material.

13.1.6 2007 HAZEN TESTWORK ON 2006 DRILL CORE MATERIAL

A series of tests were conducted to complete the design of the comminution circuit. Nine (45 total) 3 m intervals were selected from each of the five HQ drill holes to represent the upper, middle and lower sections of each hole. Samples from each individual hole were composited into composites each weighing approximately 90 kg representing the Liard, West Breccia and Paramount zones. These composites were tested by Hazen Research to determine the JKTech comminution parameters. The following tests were performed on each material; JKTech Drop Weight tests, JKTech SMC tests, JKTech Abrasion tests, Bond Crushing Index tests (CWi), Bond Rod Mill Work Index tests (RWi), Bond Ball Mill Work Index tests (BWi), Bond Abrasion tests. The mineralization from both a Bond and a JKSimMet viewpoint can be viewed as being "hard".

13.1.7 2008-2009 G&T TESTWORK ON 2006 DRILL CORE MATERIAL

In 2008, it was decided to optimize the flow sheet and design parameters for the largest mineral resource zone, the Liard. For the optimization testing at G&T, it was decided to concentrate on the first 5 years of production at approximately 0.35% Cu. Therefore samples from a total of 42 three-m intervals were selected from 12 PQ drill holes from the 2006 drill program for these tests. The selected drill holes were distributed over the Liard Zone with the hole intervals being selected to represent the upper, middle and lower sections of the hole. The assays of the individual intervals ranged from less than 0.2% Cu to over 0.5%

copper for each hole with an average grade for samples from each hole of approximately 0.35% Cu. G&T then combined these samples into one 300 kg sample which assayed approximately 0.36% Cu.

The optimization work indicated an optimum grind of approximately 150 microns from the locked cycle testwork.

A second series of samples was selected based on grade and spatial variability. These were used to test the metallurgical variability of the Schaft Creek resource using the standard test conditions and flow sheet that was determined by the optimization tests. Samples from a total of 11 drill holes were selected for these tests. Ten of the drillholes were in the Liard Zone and one drill hole was selected from the Paramount Zone. A total of 34 three-metre drill-hole intervals were selected ranging in grade from less than 0.2% Cu to over 1.0% Cu.

These samples used for the grade variability testing were tested by open cycle tests. These tests indicated that it should be possible to make the final concentrate grade regardless of copper grade in the feed. Recoveries were found to be typically between 80 to 90%. Hardness was also evaluated and as in previous testwork was classified as hard to very hard. It was also seen that typically that gold recoveries followed copper recovery while there did not appear to be a copper silver relationship. These results are provided in detail in Bender et al. (2008).

A pilot plant was run on approximately 6.0 t of crushed drill core in a flotation pilot plant to produce a sufficient quantity of bulk concentrate to conduct bench-scale molybdenum separation testing. Approximately 35 kg of bulk concentrate was produced. Standard molybdenum separation conditions were employed. The bulk concentrates were processed in rougher flotation cells and, then, four stages of cleaner flotation were run in locked-cycle tests. The average grade of the final concentrate was approximately 47% molybdenum with a recovery of approximately 75% from the bulk concentrate. Since the major diluents in the molybdenum concentrate are liberated materials, it is anticipated that molybdenum concentrates containing a grade of at least 50% molybdenum can be realized.

13.1.8 2008-2009 POLYSIUS HPGR TESTWORK ON 2006 DRILL CORE MATERIAL

As part of the comminution testing, a total of 35 drill-hole intervals were selected from seven drill holes in the Liard Zone for the HPGR tests. Each interval was crushed to approximately 25 mm and all the material was composited into one sample weighing approximately 250 kg. The Schaft Creek resource is a potential candidate for high pressure grinding roll (HPGR) technology as the material is hard and only moderately abrasive. This report was not available at the Report compilation date. AMEC notes that HPGR technology is not used within the base option of the process design.

13.1.9 2011-2012 Rougher Flotation Test Work

Metallurgical test work including rougher flotation, locked cycle testing by closed circuit flotation and concentrate quality was completed on six samples of mineralization from the Paramount zone in December 2011. A report released in January 2012 by Johnson and Shouldice (2012) summarizes the results. The test work on metallurgical performance was completed by G&T on six samples, totalling 810 kg. These samples were prepared using 80% passing 150 µm grind size, tested individually and then composited for similar test work. Results of the test work on the two master composite samples (with average copper grades of 0.42%) yielded average recoveries of 89% copper, 64% molybdenum, 73% gold and 58% silver. The concentrate produced averaged 31% copper, 1.30% molybdenum, 16 g/t gold and 131 g/t silver. The concentrate was low in other base metals and other common penalty elements (Johnson and Shouldice 2012). The results of this study will be combined with previous metallurgical test work to determine the estimated average metal recoveries to be used in the feasibility study that is expected to be completed in 2012.

13.2 Process Design Assumptions

From Kulla et al. (2011):

> *The process design suggested in the 2008 pre-feasibility study was for a concentrator with a nominal processing capacity of 100,000 t/d. The concentrator design recommended in the study incorporated crushing, grinding, rougher flotation, rougher concentrate regrinding, and three stage cleaner stages to produce a bulk concentrate. A molybdenite separation circuit with roughers and five stages of cleaning was proposed to produce a molybdenite product. The gold and silver would report to the copper concentrate produced after the molybdenite concentrate. Copper, gold and silver would be sold to a smelter whereas the molybdenite concentrate would be tollroasted and sold. The rougher tails and the cleaner scavenger tails would be discharged to a tailings containment facility. The cleaner concentrate would be dewatered and shipped offshore to a smelter for refining.*

13.3 Recovery Estimates

From Kulla et al. (2011):

> *For the purposes of deriving parameters to inform reasonable prospects of economic extraction for the Mineral Resource estimate in Section 14, indicative recoveries of 86.5% copper were recommended, together with 73.3% for gold and 60.9% for molybdenum. A copper concentrate grade of 29% Cu and a molybdenite concentrate grade of 50% were proposed. For the model, operating costs of $5.12/t were advised.*

13.4 METALLURGICAL VARIABILITY

From Kulla et al. (2011):

Metallurgical response to variation across the mineralized zone was fairly consistent with typically acceptable results achieved for a wide range of feed grades and for locations across the main zone of mineralization (Laird). The following characteristics which would require close attention are:

- *The mineralization being hard, the operating costs will be sensitive to the cost of power and grinding media and this characteristic of the deposit will have to be considered closely.*
- *With the requirement for a fairly fine regrind, this will be another factor which may contribute to a variation in recovery and concentrate grade across the mineralization.*

13.5 DELETERIOUS ELEMENTS

From Kulla et al. (2011):

No significant penalties have been indicated as being present in the concentrate and copper and molybdenum concentrates should be saleable.

14.0 MINERAL RESOURCE ESTIMATES

Previous resource estimates completed on the Property are discussed in Section 14.1. The current NI 43-101 resource estimate for the Property, with an effective date of May 23, 2012, supersedes all previous resource estimates, and is discussed in Sections 14.2 to 14.12.

14.1 PREVIOUS RESOURCE ESTIMATES

The most recent significance resource estimates are from a prefeasibility study completed by Samuel Engineering in 2008 (Bender et al. 2008b), and an updated mineral resource estimate completed by AMEC in 2011 (Kulla et al. 2011).

Mineral resources were estimated for the prefeasibility study, and mineral reserves are summarized in Table 14.1. The prefeasibility study assumed a conventional truck-and-shovel open pit mining operation producing 100,000 t/d feeding a conventional flotation and concentrator plant to produce copper and molybdenum concentrates. Under the assumptions in the prefeasibility study, the Project was shown to have positive economics.

Table 14.1 Mineral Resource and Reserve Estimates

Mineral Resource Estimate Summary >=0.20 CuEq% Cut-off						
Resource Category	**Tonnes**	**Cu (%)**	**Mo (%)**	**Au (g/t)**	**Ag (g/t)**	**CuEq Grade (%)**
Measured	463,526,579	0.30	0.019	0.23	1.55	0.46
Indicated	929,755,592	0.23	0.019	0.15	1.56	0.36
Measured + Indicated	1,393,282,171	0.25	0.019	0.18	1.55	0.39
Inferred	186,838,848	0.14	0.018	0.09	1.61	0.25
Total	**1,580,121,019**	**0.22**	**0.019**	**0.16**	**1.57**	**0.36**

Proven and Probable Reserves						
Reserve Category	**ROM Ore (Mt)**	**ROM Diluted Grades**				
		NSR ($/t)	**Cu (%)**	**Au (g/t)**	**Ag (g/t)**	**Mo (%)**
Proven	411.1	16.6	0.316	0.236	1.722	0.019
Probable	409.9	15.2	0.283	0.186	1.798	0.020
Total	**821.1**	**15.9**	**0.299**	**0.211**	**1.760**	**0.020**

Source: Bender et al. (2008b)

Notes: ROM = run-of-mine
Mining parameters used are as follows:
[1]10% mining dilution applied at the contact between ore and waste.
[2]Dilution grades are estimated at $4.63/t NSR, 0.076% copper, 0.088 g/t gold, 1.76 g/t silver and 0.005% molybdenum representing the average grade of material below the

incremental waste/ore cut-off grade.
[3]5% mining loss.
[4]Waste/Ore Cut-off grade of $5.05/t NSR.

In 2011, AMEC completed a NI 43-101 compliant updated resource estimate (Table 14.2). The effective dates of the resource estimate and accompanying technical report were May 1, 2011, and July 26, 2011, respectively.

Table 14.2 Mineral Resource Estimate, Effective Date May 1, 2011

Mineral Resource Estimate Summary – 0.12% CuEq Cut-off Grade								
						Contained Metal		
Category	Tonnage (Mt)	Cu (%)	Mo (%)	Au g/t	CuEq (%)	Cu (Mlb)	Mo (Mlb)	Au (Moz)
Measured	40.4	0.36	0.023	0.24	0.61	319.9	20.5	0.32
Indicated	994.9	0.27	0.017	0.17	0.44	5,854.5	365.7	5.55
Total Measured + Indicated	1,035.3	0.27	0.017	0.18	0.45	6,174.4	386.2	5.87
Inferred	301.3	0.24	0.011	0.14	0.37	1,562.1	70.3	1.38

Source: Kulla et al. (2011)

Notes: [1]Mineral Resources base case is reported at a 0.12% copper equivalent cut-off grade; this cost incorporates considerations of process cost, recoveries, commodity price and selling cost.
[2]Mineral Resources are reported as undiluted.
[3]A Lerchs-Grossman pit shell was used to constrain the Mineral Resources to assess reasonable prospects of eventual economic extraction using pit slopes of between 40 to 44°, and total mining costs of US$5.12/t milled, and variable recoveries, averaging 86.5% copper, 73.3% gold, and 60.9% molybdenum.
[4]Mineral Resources are reported using a long-term copper price of US$2.90/lb, a gold price of US$1,200/oz and a molybdenum price of US$15.95/lb.
[5]Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.
[6]Tonnage and grade measurements are in metric units. Contained gold ounces are reported as troy ounces, contained copper pounds are imperial pounds.

During 2010, Copper Fox commissioned Tetra Tech to manage a feasibility study, which is expected to be completed in 2012. The accompanying resource estimate will be used for this study, and as a consequence, Copper Fox is treating the prefeasibility study and previous resource estimates as historic.

14.2 INTRODUCTION

The following sections describe and discuss the Schaft Creek deposit resource estimate. The resource estimate includes:

- review of geological and assay data provided by Copper Fox
- geological interpretation and domaining of the mineralization
- application of the interpretation in the form of designed domain wireframes
- assessment of the data with respect to the different geological domains

- construction and configuration of a suitable block model
- interpolations of attributes (grade, density, etc.) into cells of the block model
- verification and validation of the interpolations
- reporting the mineral resource.

14.2.1 GEOLOGICAL INTERPRETATION

The Schaft Creek Mine mineralization represents a porphyry copper deposit with associated molybdenum, gold and silver mineralization. The Schaft Creek deposit has been modelled into two zones; the Liard Zone and the Paramount Zone

For the purposes of this work, Datamine™ resource software (v. 3.20.6420.0) was employed to analyze data, create associated wireframes of mineralization, subsequent block modeling and grade interpolation. A Datamine™ macro program was written to create a desurveyed drillhole file and geological block model, assign cell attributes and interpolate of grade into cells. This macro is presented in its entirety as Appendix C.

14.3 DATA

Data was provided by Copper Fox as a series of comma separated (.csv) text files to replicate diamond drillhole collar, survey, geology and assay data. After separate verification and validation, all data were imported into Datamine™ software and desurveyed to create an appropriate drillhole files for geological interpretation and grade estimation.

Copper Fox also provided critical wireframes to assist in modeling the deposit. As required, these wireframes were imported and verified in Datamine™ software prior to implementation into the block model. These wireframes include, but are not limited to:

- surface topography, digital terrain models (DTMs)
- geological solid wireframes.

Additional wireframes provided by Copper Fox included geological interpretations of the position and extent of individual units. These were also imported into Datamine™ software, and were used as a guide in developing an independent interpretation by Tetra Tech of the main zones of mineralization for the resource estimate. The final mineralization model employed in the Schaft Creek resource model was designed, developed and verified by Tetra Tech.

14.4 DOMAINS

The Schaft Creek deposit is separated into two broad domains; the Liard Zone to the southwest and the Paramount Zone to the northeast. These two domains are separated by a northeast-southwest trending sub-vertical fault.

The mineralization within these two domains was captured by means of a 0.25% copper equivalent wireframe configured using Leapfrog™ software (v. 2.4.5.17). This wireframe was subsequently imported as a .dxf file and simplified as a Datamine™ solid wireframe.

In general, the Paramount Zone displays mineralization oriented north northwest-south southwest while the Liard Zone shows mineralization in a number of different orientations.

14.4.1 WIREFRAMES

The wireframes used in the Schaft Creek resource modelling and estimation are tabulated in Table 14.3.

Table 14.3 Wireframes used in the Resource Model

Name	Type	Orientation	Approximate Size	Purpose	Source
topotr/pt	DTM	Planar	4 km x 3 km	Topographic surface	Cambria
base_ovbtr/pt	DTM	Planar	4 km x 3 km	Base of Overburden	Cambria
Liard_cueq025tr/pt	Solid	Circular?	500 ft x 310 ft	Liard Zone	Tetra Tech
para_cueq025tr/pt	Solid	Strike 59°, dip -70° SE	165 ft x 250 ft	Paramount Zone	Tetra Tech
hfld1tr/pt	Solid	Strike 18°, dip -73° SE	350 ft x 380 ft	Alteration Zone 1	Cambria
hfld2tr/pt	Solid	Strike 38°, dip -54° SE	350 ft x 510 ft	Alteration Zone 2	Cambria

The topographic DTM and the base of overburden DTM were supplied by Cambria of Vancouver, BC. These wireframes were used to define the overburden and the topographic surface of the resource model.

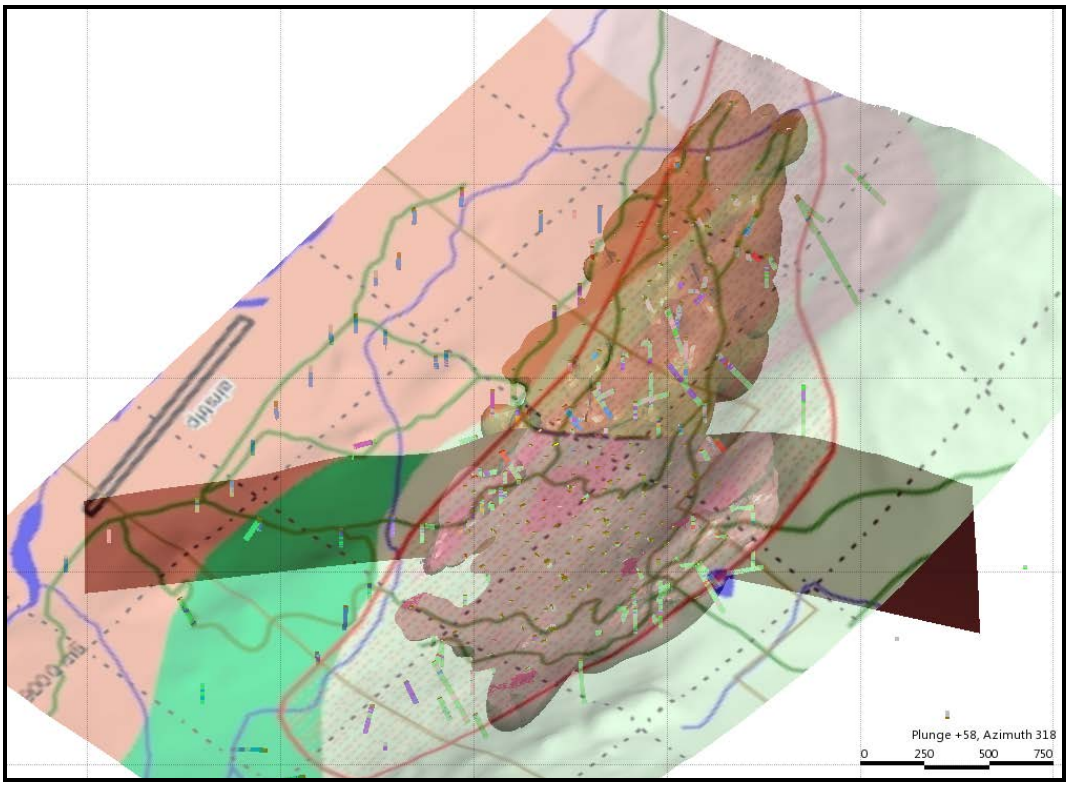
The limits of mineralization of the deposit were defined by two 0.25 CuEq% cut-off grade shell solid wireframes generated by Tetra Tech in Vancouver, utilizing Leapfrog™ software.

A plane dipping shallowly to the west (dip 24.83°, dip azimuth 294.94°, pitch 152.87°), and a plane dipping moderately to the east (dip 67.02°, dip azimuth 88.05°, pitch 104.27°) were chosen to best represent the planes of preferred mineralization for the Liard and Paramount Zones, respectively. For both wireframes, a Gaussian Grade Transformation was employed, using all available sample data. For the variogram parameters, a spheroidal model was chosen, with a nugget of 0.4, sill of

1.0, and range of 200.0 m. For exploratory purposes, grade shells using a CuEq% cut-off of 0.15%, 0.2%, 0.25%, 0.3% and 0.6% were generated.

To determine the boundary between the Liard and Paramount Zones, a map of local geology (Figure 4-2 of Kulla et al. 2011) containing a fault through the deposit area (shown as dashed black line in Figure 14.1) was draped onto the topography. Draping this line and bending it slightly southwards to fit the contact between the Hickman intrusive rocks and the wedge of mafic volcanic rocks created a plausible dislocation between the two zones. Based on the geological environment, sub-vertical structures are to be expected, trending roughly north-south, and the fault was therefore extrapolated accordingly at depth. Using this divide, the West Breccia Zone has been modelled as part of the Liard Zone.

Figure 14.1 Illustration of Local Geology Map Draped onto Topography – Divide Between Liard and Paramount Zones

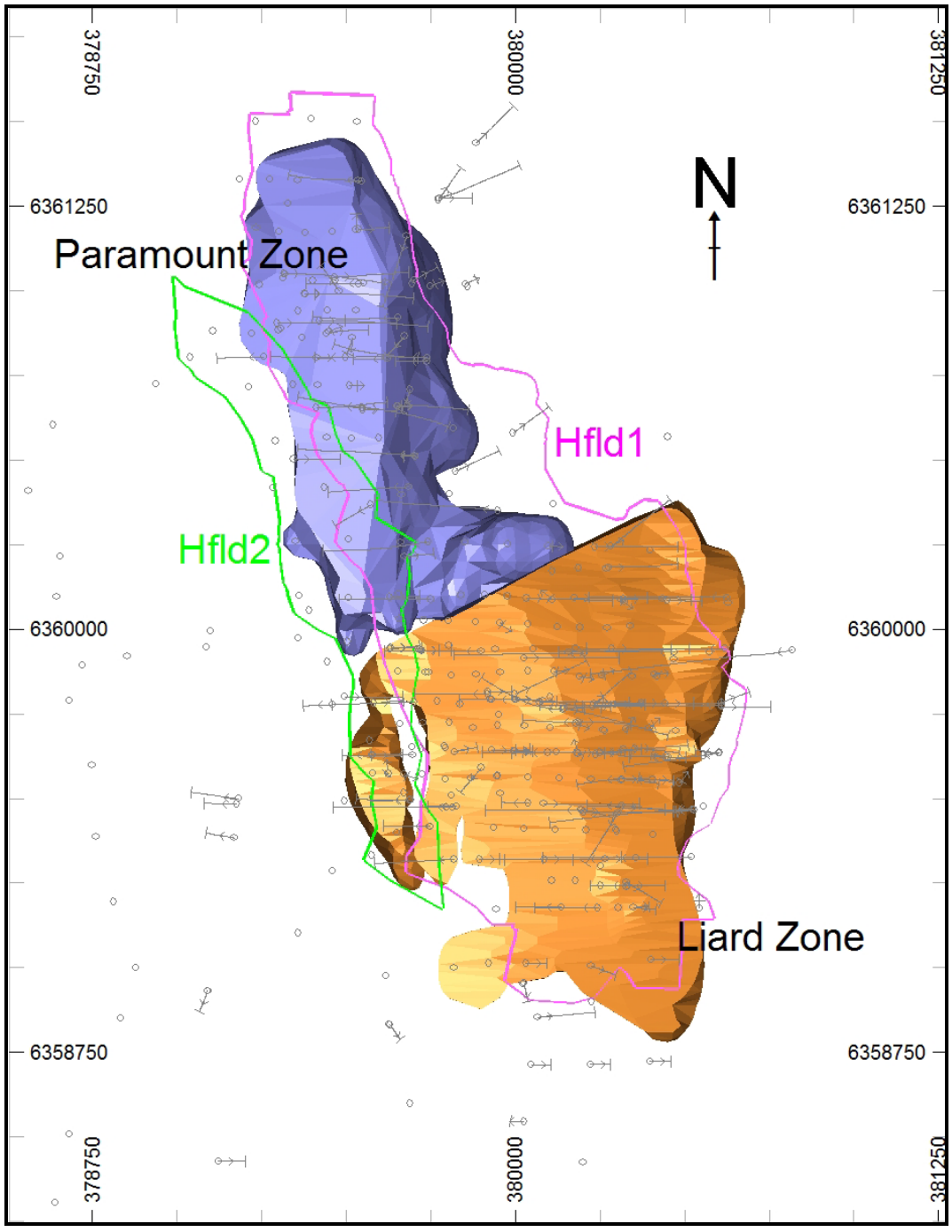


Initially, the most plausible cut-offs for appropriate grade shells were thought to be 0.2 CuEq% for Paramount and 0.25 CuEq% for Liard. If a 0.2 CuEq% cut-off was chosen for Liard, the deposit would have been overly extended with vague boundaries only driven by the existence of data. This suggests that the bottom of the deposit has not been defined by drilling, and that the mineralization is still open at depth. Additionally, the 0.25 CuEq% cut-off grade shells have plausible envelopes that may relate to the alteration and mineralization patterns. For these reasons, cut-off grade shells of 0.25 CuEq% were used in the resource estimation.

The wireframes generated in Leap Frog™ were subsequently modified by Tetra Tech in Toronto for use in Datamine™ software. Modifications included removing extra external and interior solids, smoothing out inconsistencies in the wireframe and patching any triangle voids. The resulting solids are illustrated in Figure 14.2.

Cambria also provided solid wireframes defining fault planes, alteration zones and breccia zones. The alteration zones (Hfld1 and Hfld2) represent two disconnected iron-stained feldspathic alteration bodies that were interpreted from filtered 3D data of coded alteration, at 50 m spaced level plans (Figure 14.2). These zones were incorporated into the Datamine™ resource model and cells within were assigned a categorical attribute. The breccia wireframe, although initially used in an earlier resource estimate to define the limits of mineralization, was not used in the resource model.

Figure 14.2 Plan View Map of 0.25 CuEq% Grade Shells (Paramount and Liard Zones) and Alteration Wireframes (Hfld1 and Hfld2)



Note: Drillhole collars and traces are illustrated by grey circles and lines, respectively.

14.5 EXPLORATORY DATA ANALYSIS

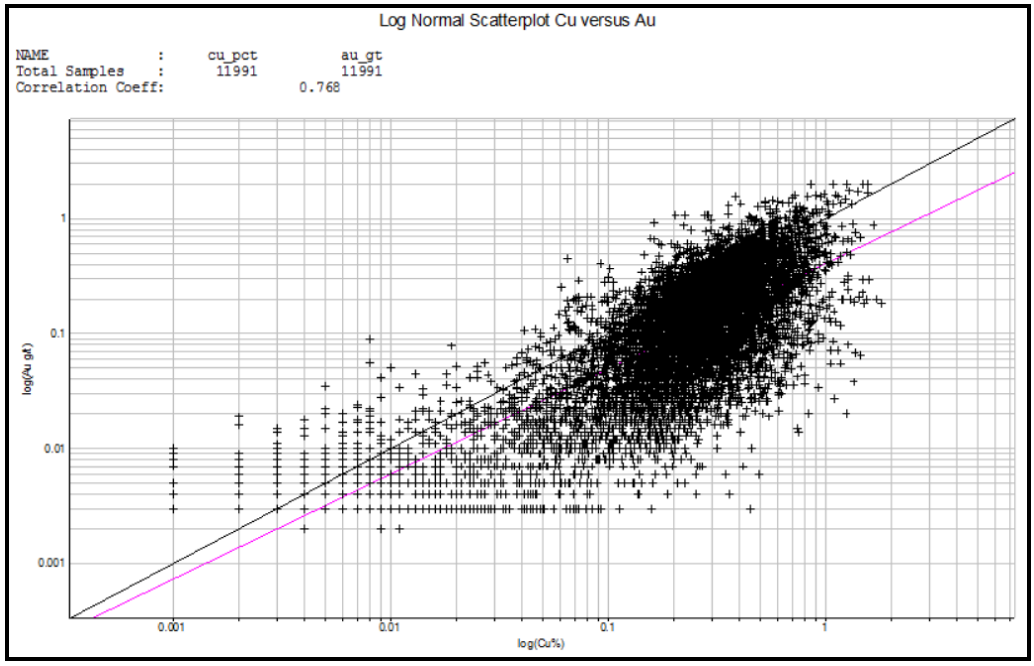
The following discussion describes the data used in the Schaft Creek resource estimate. It outlines the data statistics for respective domains; methodology used to identify and control the influence of outlier data and compositing data to maintain consistency in the estimation process.

14.5.1 SCATTER PLOTS

Only copper, molybdenum, gold and silver were considered in the assay database for resource estimation. As is expected in porphyry copper deposits, the correlation between copper and gold is very high with a correlation coefficient of 0.768. Copper-molybdenum and copper-silver also have relatively high correlation coefficients (greater than 0.6), indicating that mineralization of different metals was concurrent. However, molybdenum-gold and molybdenum-silver have a less pronounced correlation coefficient, indicating that molybdenum mineralization was somewhat independent of both silver and gold. The positive correlation between metals confirms that only one metal domain is required for estimating all metals.

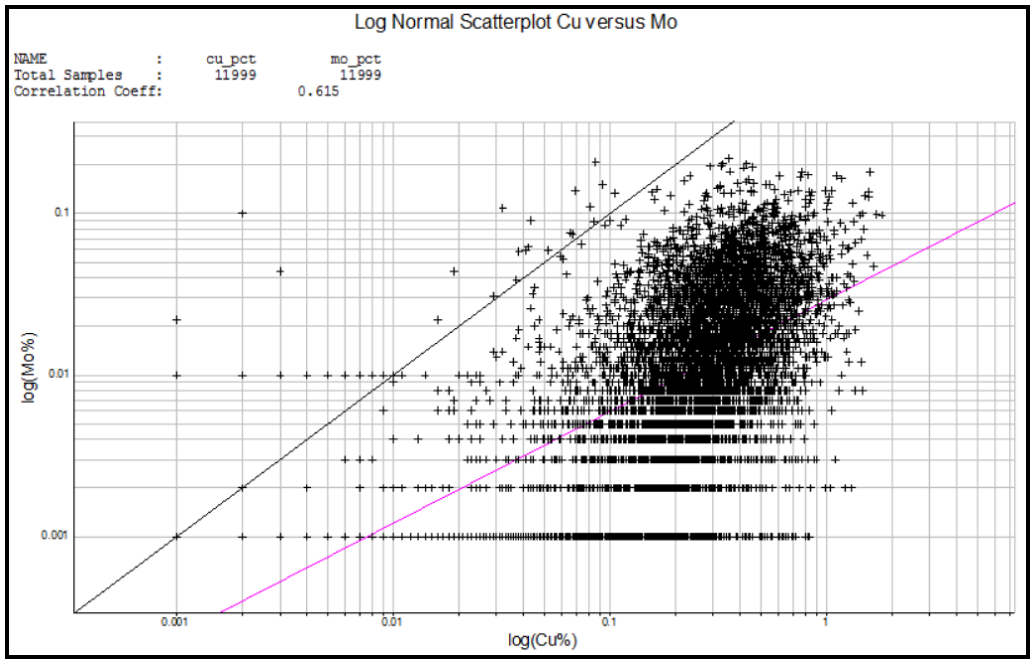
Figure 14.3 to Figure 14.6 show the scatter plots of copper-molybdenum, copper-gold and copper-silver, respectively.

Figure 14.3 Log Normal Scatter Plot of Cu (%) and Au (g/t) from Composited Drillhole Data



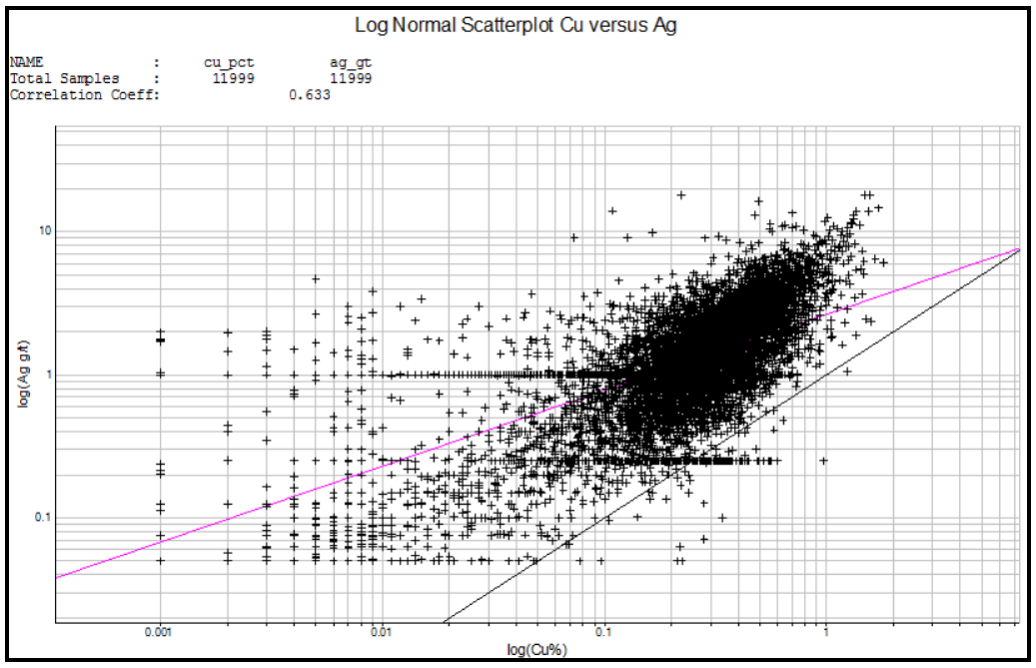
Note: The blue line depicts the polynomial regression curve of copper versus gold and the magenta line depicts the diagonal (X=Y). The data reflects a very high correlation (0.768).

Figure 14.4 Log Normal Scatter Plot of Cu (%) and Mo (%) from Composited Drillhole Data



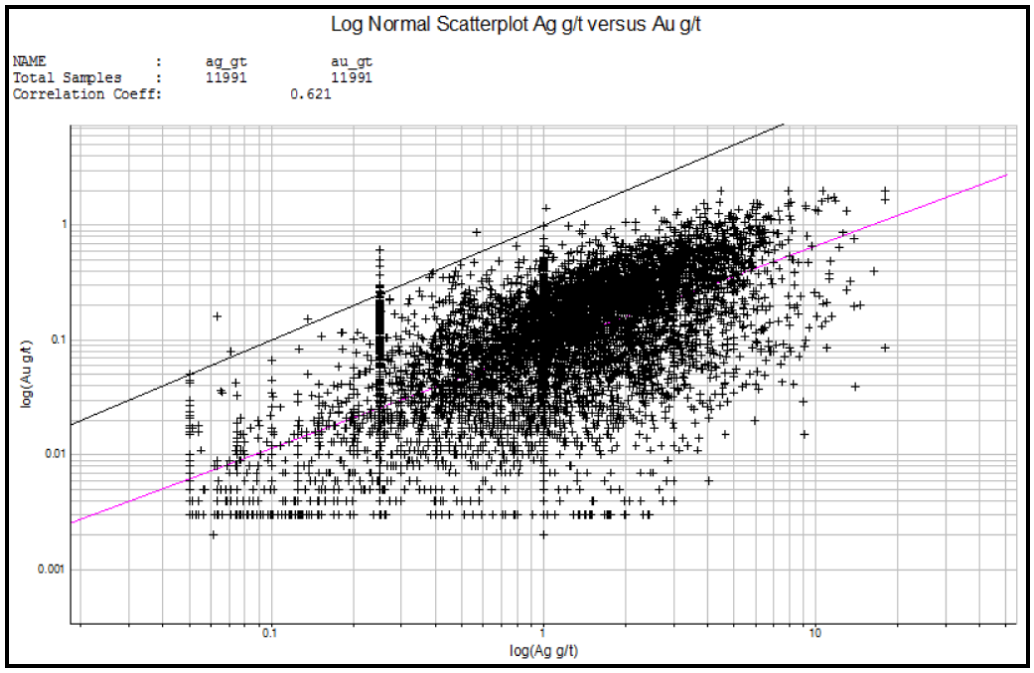
Note: The blue line depicts the polynomial regression curve of copper versus molybdenum and the magenta line depicts the diagonal (X=Y). The data reflects a high correlation (0.615).

Figure 14.5 Log Normal Scatter Plot of Cu (%) and Ag (g/t) from Composited Drillhole Data



Note: The blue line depicts the polynomial regression curve of copper versus silver and the magenta line depicts the diagonal (X=Y). The data reflects a high correlation (0.633).

Figure 14.6 Log Normal Scatter Plot of Ag (g/t) and Au (g/t) from Composited Drillhole Data



Note: The blue line depicts the polynomial regression curve of silver versus gold and the magenta line depicts the diagonal (X=Y). The data reflects a high correlation (0.621).

14.5.2 *Quantile-Quantile Plots*

In order to compare historic and more recent assay results, assay percentiles were calculated at 5%, 10%, 20%, 30%, 40%, 50%, 60%,70%, 80%, 90%, and 95% for each of the modelled elements. Quantile-quantile (QQ) plots were then generated and are presented in Figure 14.7 to Figure 14.10.

Figure 14.7 QQ Plot for Cu (%) – Comparison of Historic and Non-historic Assay Results

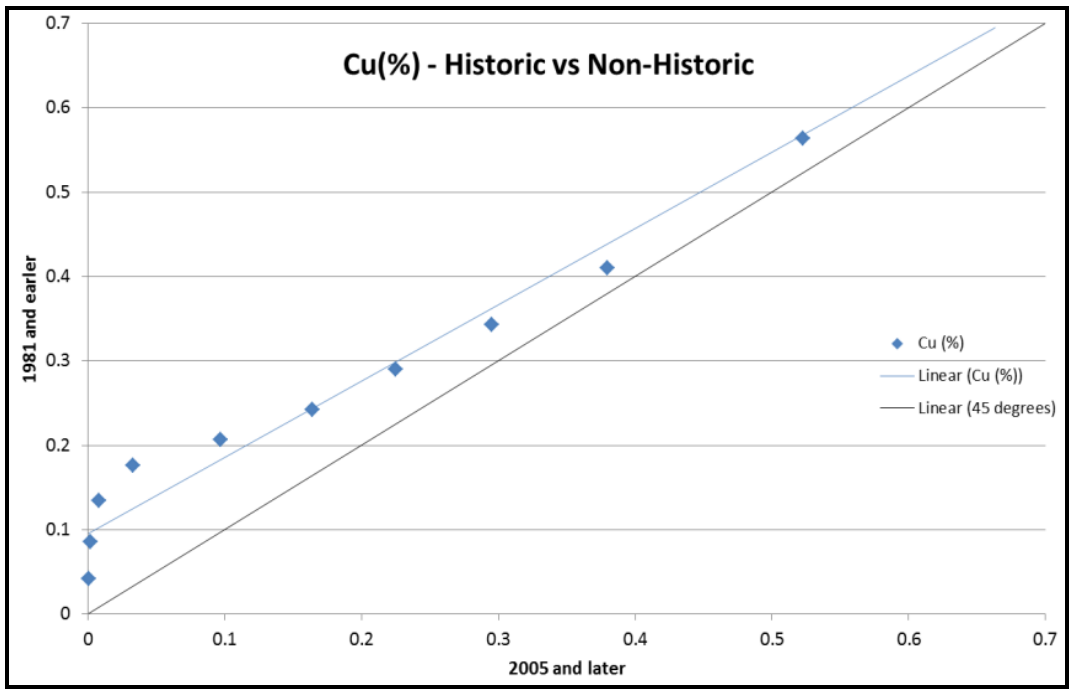


Figure 14.8 QQ Plot for Au (g/t) – Comparison of Historic and Non-historic Assay Results

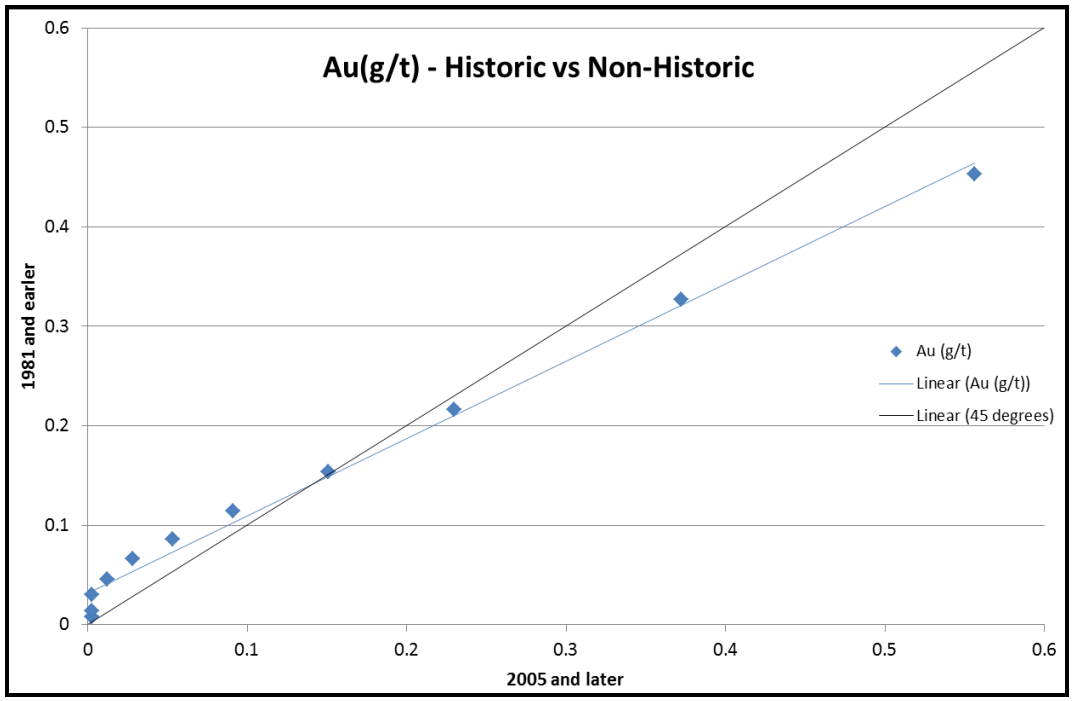


Figure 14.9 QQ Plot for Mo (%) – Comparison of Historic and Non-historic Assay Results

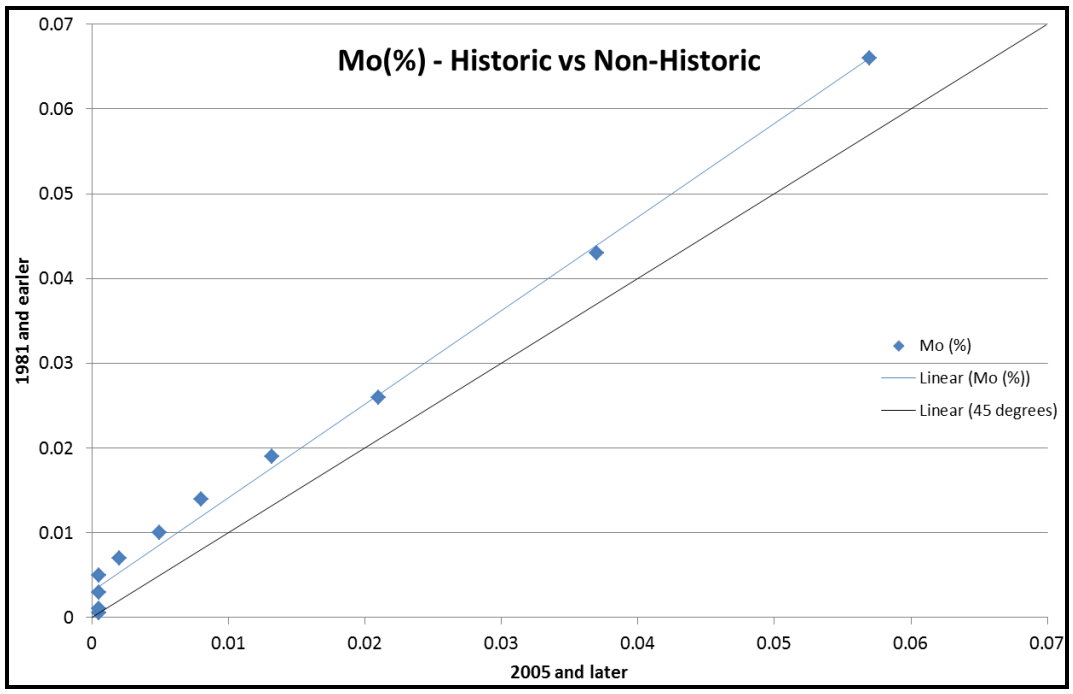
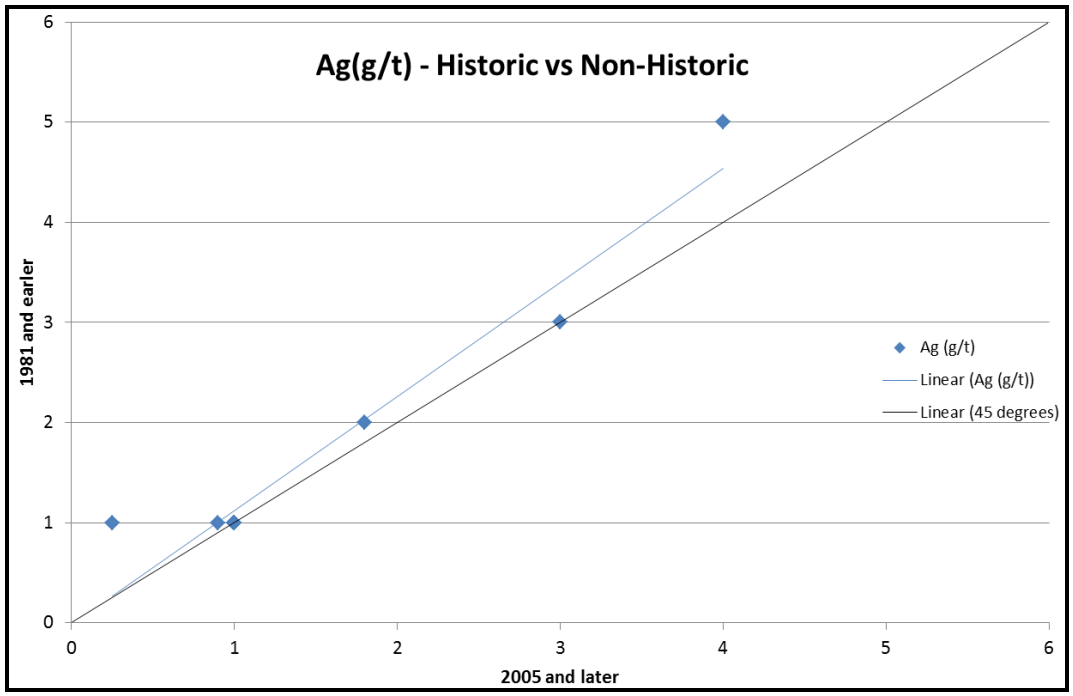


Figure 14.10 QQ Plot for Ag (g/t) – Comparison of Historic and Non-historic Assay Results



It was observed that there was a slight bias for higher copper and molybdenum grades in the historic holes, and very little to no bias for gold and silver grades. The slight differences that were observed were deemed to be sufficiently minor to warrant using historic drill results in the resource estimate calculation.

14.5.3 ASSAYS AND STATISTICS

All data provided represents results of diamond drilling. Summary statistics for these data for the Liard and Paramount Zones are provided in the Table 14.4 and Table 14.5.

Table 14.4 Raw Assay Statistics for Liard Zone

	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	CuEq (%)	Density
Count	16,662	16,635	12,582	12,573	12,560	2,174
Minimum	-	-	0.003	0.050	0.004	0.220
Maximum	4.503	2.872	20.86	300.0	10.41	19.63
Mean	0.283	0.016	0.219	1.732	0.482	2.698
Variance	0.049	0.001	0.097	9.806	0.133	0.187
Standard Deviation	0.222	0.034	0.311	3.131	0.364	0.433
Coefficient of Variance	0.785	2.168	1.423	1.808	0.756	0.160

Table 14.5 Raw Assay Statistics for Paramount Zone

	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	CuEq (%)	Density
Count	8,755	8,755	8,165	8,168	8,165	343
Minimum	0.001	0.000	0.003	-	0.004	0.260
Maximum	3.628	0.588	10.834	200	5.896	26.75
Mean	0.293	0.022	0.174	1.869	0.469	2.799
Variance	0.063	0.001	0.094	13.503	0.150	3.414
Standard Deviation	0.251	0.031	0.307	3.675	0.387	1.848
Coefficient of Variance	0.858	1.412	1.767	1.966	0.825	0.660

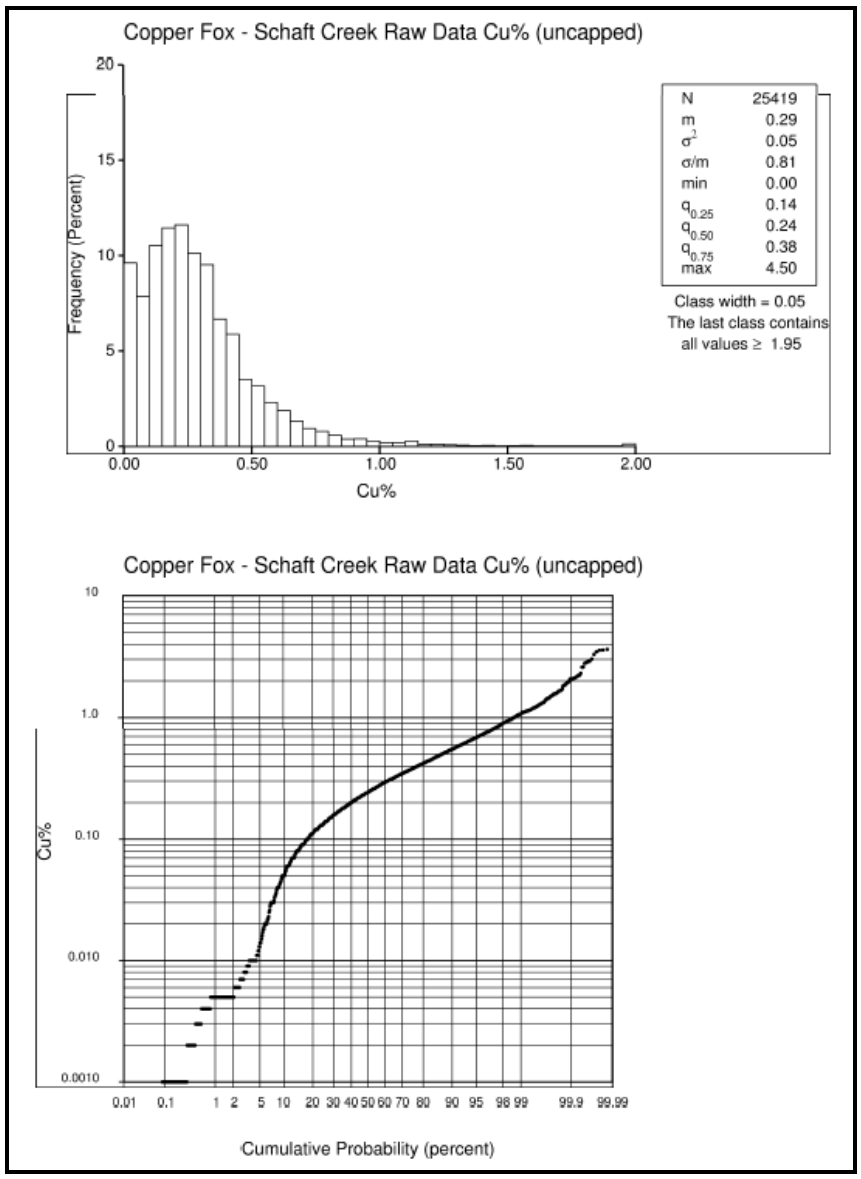
14.5.4 OUTLIER MANAGEMENT AND CAPPING STRATEGY

For sample outlier population management, the entire dataset was considered. The paragenesis of the deposit did not differ between the Paramount Zone and the Liard Zone. Furthermore, the entire dataset provided sufficient samples to adequately interrogate the statistics for capping. Histograms and lognormal plots were used to identify outlier sample populations. These populations were subsequently confirmed not to form independent volumetrically discrete high-grade domains. The following discussion provides a synopsis of this management strategy.

COPPER

A top-cut or “cap” of 1.8% was chosen for copper. Out of 25,398 samples with assays, 39 are greater than 1.8% copper, or 0.122% of the sample population. Figure 14.11 depicts the characteristics of the total copper grade distribution within the Paramount and Liard Zones combined. Note the lognormal deviation of the high grade samples around the 1.8% copper position.

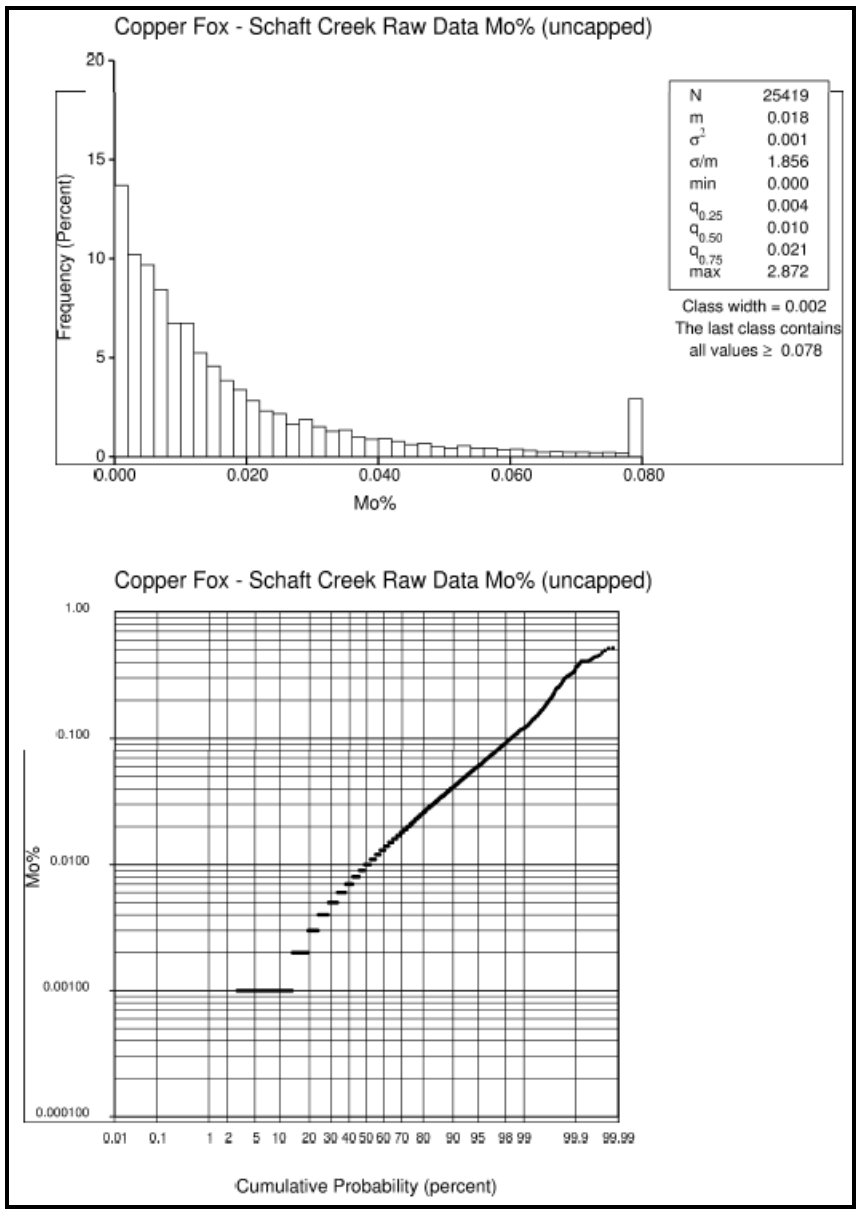
Figure 14.11 Raw Data Histogram, Lognormal Distribution Curve and Summary Statistics for Copper



MOLYBDENUM

A top-cut or “cap” of 0.25% was chosen for molybdenum. Out of 25,382 samples with assays, 63 are greater than 0.25% molybdenum, or 0.248% of the sample population. Figure 14.12 depicts the characteristics of the total molybdenum grade distribution within the Paramount and Liard Zones combined. Note the lognormal deviation of the high-grade samples around the 0.25% molybdenum position.

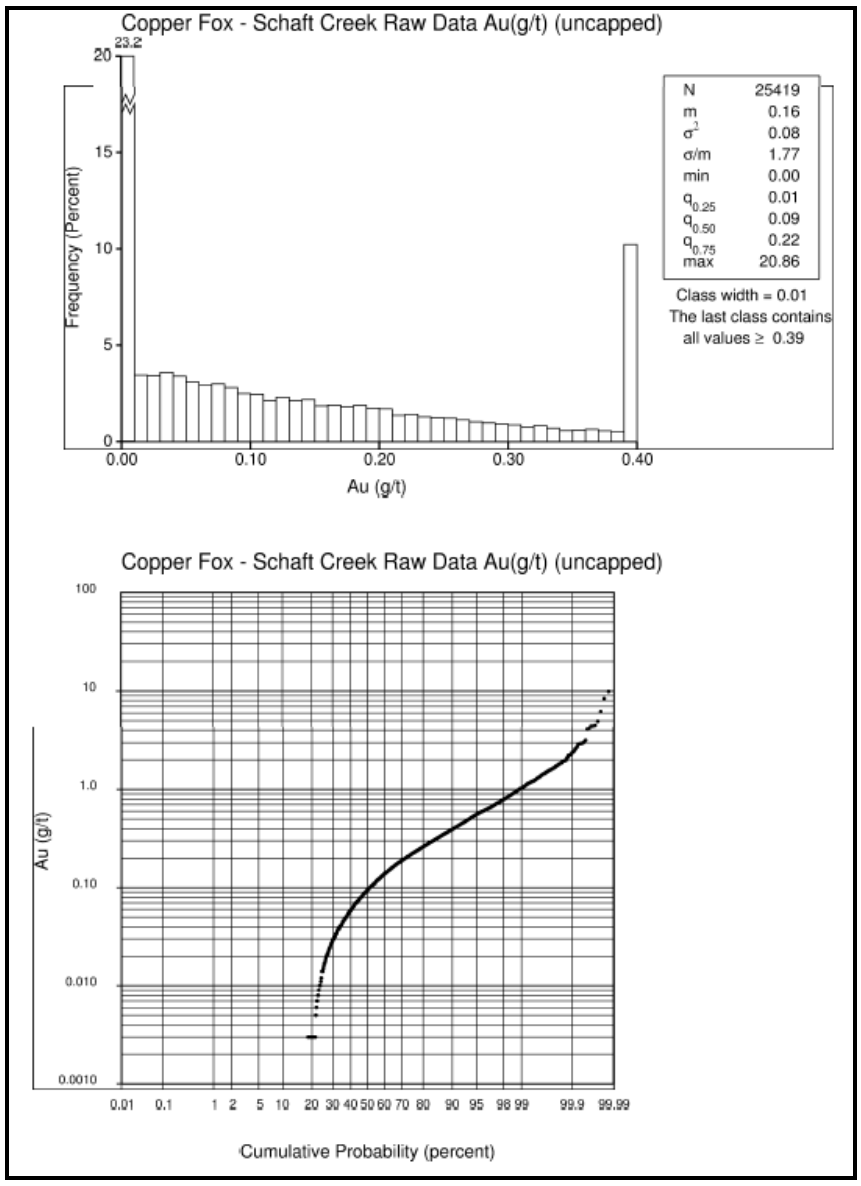
Figure 14.12 Raw Data Histogram, Lognormal Distribution Curve and Summary Statistics for Molybdenum



GOLD

A top-cut or “cap” of 2.0 g/t was chosen for gold. Out of 20,746 samples with assays, 33 are greater than 2.0 g/t gold, or 0.159% of the sample population. Figure 14.13 depicts the characteristics of the total molybdenum grade distribution within the Paramount and Liard Zones combined. Note the lognormal deviation of the high grade samples around 2.0 g/t gold position.

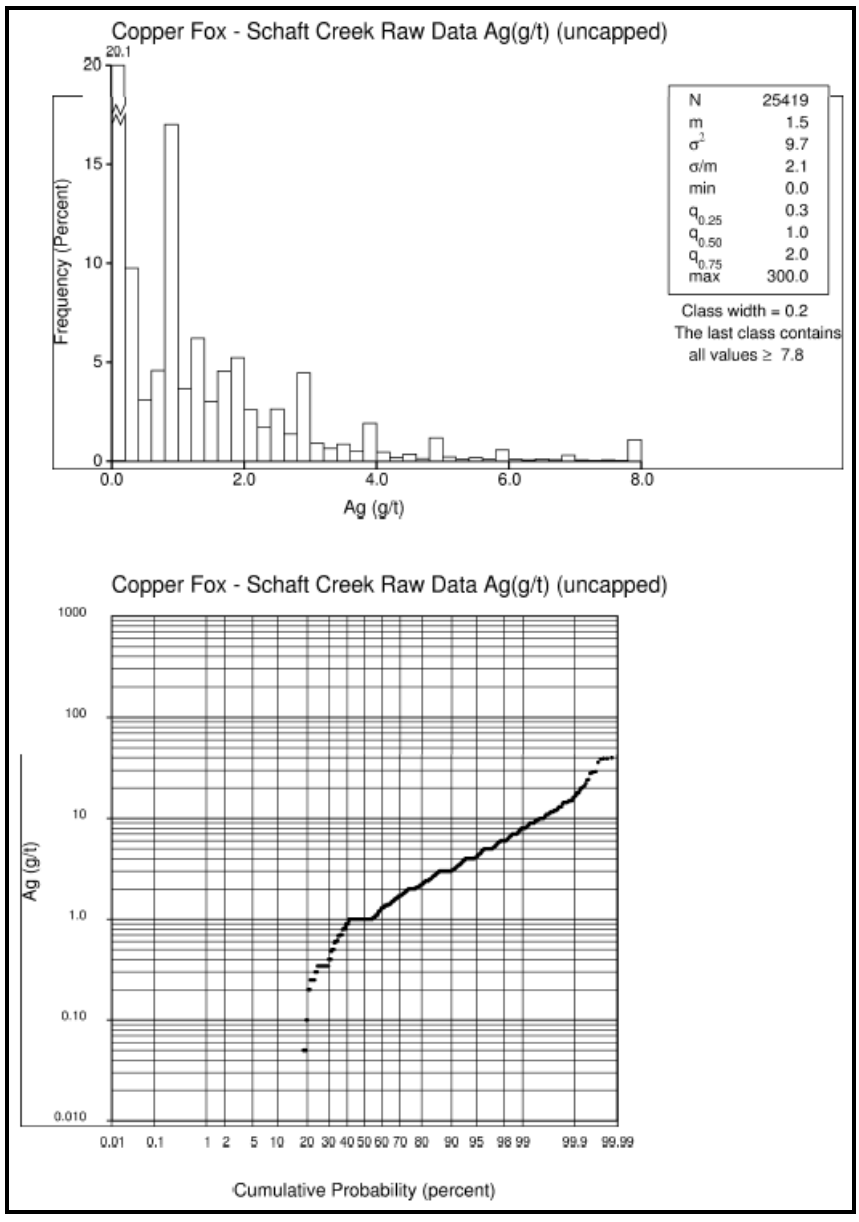
Figure 14.13 Raw Data Histogram, Lognormal Distribution Curve and Summary Statistics for Gold



SILVER

A top-cut or “cap” of 18 g/t was chosen for silver. Out of 20,746 samples with assays, 20 are greater than 18 g/t silver, or 0.096% of the sample population. Figure 14.14 depicts the characteristics of the total molybdenum grade distribution within the Paramount and Liard Zones combined. Note the lognormal deviation of the high grade samples around 18 g/t silver position.

Figure 14.14 Raw Data Histogram, Lognormal Distribution Curve and Summary Statistics for Silver



A summary of the statistics on the capped drillhole data for both the Liard and Paramount Zones are listed in Table 14.6 and Table 14.7. Table 14.8 shows a comparison between uncapped (raw) and capped data for copper and molybdenum.

Table 14.6 Raw Assay Statistics for Liard Zone; Capped Data

	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	CuEq (%)	Density
Count	16,662	16,635	12,582	12,573	12,560	2,157
Minimum	-	-	0.003	0.050	0.004	1.920
Maximum	1.800	0.250	2.000	18	10.409	3.750
Mean	0.282	0.015	0.215	1.704	0.482	2.695
Variance	0.045	0.001	0.048	2.499	0.133	0.007
Standard Deviation	0.213	0.023	0.218	1.581	0.364	0.084
Coefficient of Variance	0.756	1.503	1.014	0.928	0.756	0.031

Table 14.7 Raw Assay Statistics for Paramount Zone; Capped Data

	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	CuEq (%)	Density
Count	8,755	8,755	8,165	8,168	8,165	339
Minimum	0.001	0.000	0.003	-	0.004	1.660
Maximum	1.800	0.250	2.000	18	5.896	2.890
Mean	0.291	0.022	0.169	1.812	0.469	2.653
Variance	0.056	0.001	0.053	3.322	0.150	0.010
Standard Deviation	0.237	0.029	0.231	1.823	0.387	0.102
Coefficient of Variance	0.814	1.306	1.361	1.006	0.825	0.038

Table 14.8 Comparison of Capped and Uncapped Cu% and Mo%

	Cu% Uncapped	Cu% Capped	Mo% Uncapped	Mo% Capped
Liard Zone				
Count	16,662	16,662	16,635	16,635
Minimum	-	-	-	-
Maximum	4.503	1.800	2.872	0.250
Mean	0.283	0.282	0.016	0.015
Variance	0.049	0.045	0.001	0.001
Standard Deviation	0.222	0.213	0.034	0.023
Coefficient of Variance	0.785	0.756	2.168	1.503
Paramount Zone				
Count	8,755	8,755	8,755	8,755
Minimum	0.001	0.001	0.000	0.000

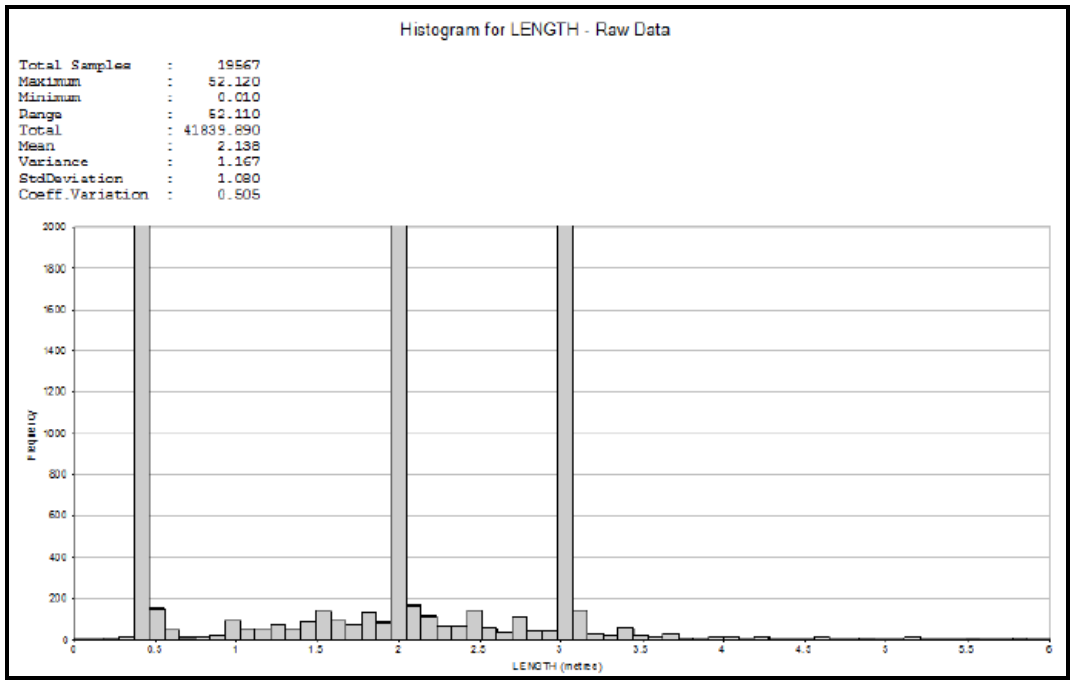
table continues…

	Cu% Uncapped	Cu% Capped	Mo% Uncapped	Mo% Capped
Maximum	3.628	1.800	0.588	0.250
Mean	0.293	0.291	0.022	0.022
Variance	0.063	0.056	0.001	0.001
Standard Deviation	0.251	0.237	0.031	0.029
Coefficient of Variance	0.858	0.814	1.412	1.306

14.5.5 DRILLHOLE COMPOSITING

The majority of raw sample lengths used for assaying measured 1, 2, or 3 m in length. Figure 14.15 illustrates the descriptive statistics on the sample lengths.

Figure 14.15 Histogram of Raw Sample Length (m)



In order to capture most of the sample lengths into a consistent composite, while maintaining sufficient resolution and maximising the number of composited samples available for grade interpolation, a composite length greater than 3 m was required. Thus, a 4 m composite length was used in this resource estimate. Compositing honoured the Liard (rock=3) and Paramount (rock=4) boundaries.

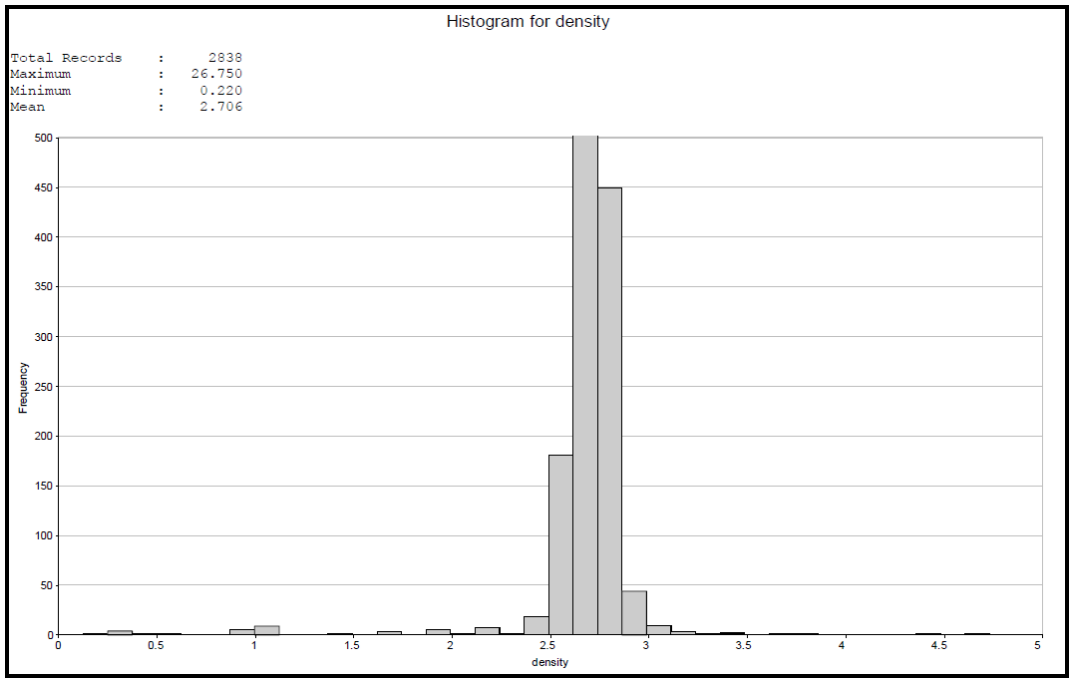
14.6 DENSITY

Density (or specific gravity (SG) recorded as t/m^3) measurements were completed on 2,838 drill core samples. Of these, 2,516 drill core samples occur within the

combined Paramount and Liard Zones. The histogram and summary statistics for these measurements are tabulated in Figure 14.16. Due to the extreme range of SG values, it was assumed that any measurements above 3.8 and below 1.5 were removed from the dataset. There are 15 measurements with SG below 1.8 and 8 measurements with SG greater than 3.8.

The density model for the Schaft Creek deposit was estimated to the block model by means of ID^2 interpolation method. Any fresh rock cells that failed to be interpolated were assigned the average SG value of 2.69. Cells recognized as overburden were assigned a SG of 2.0.

Figure 14.16 Histogram of Density (SG)



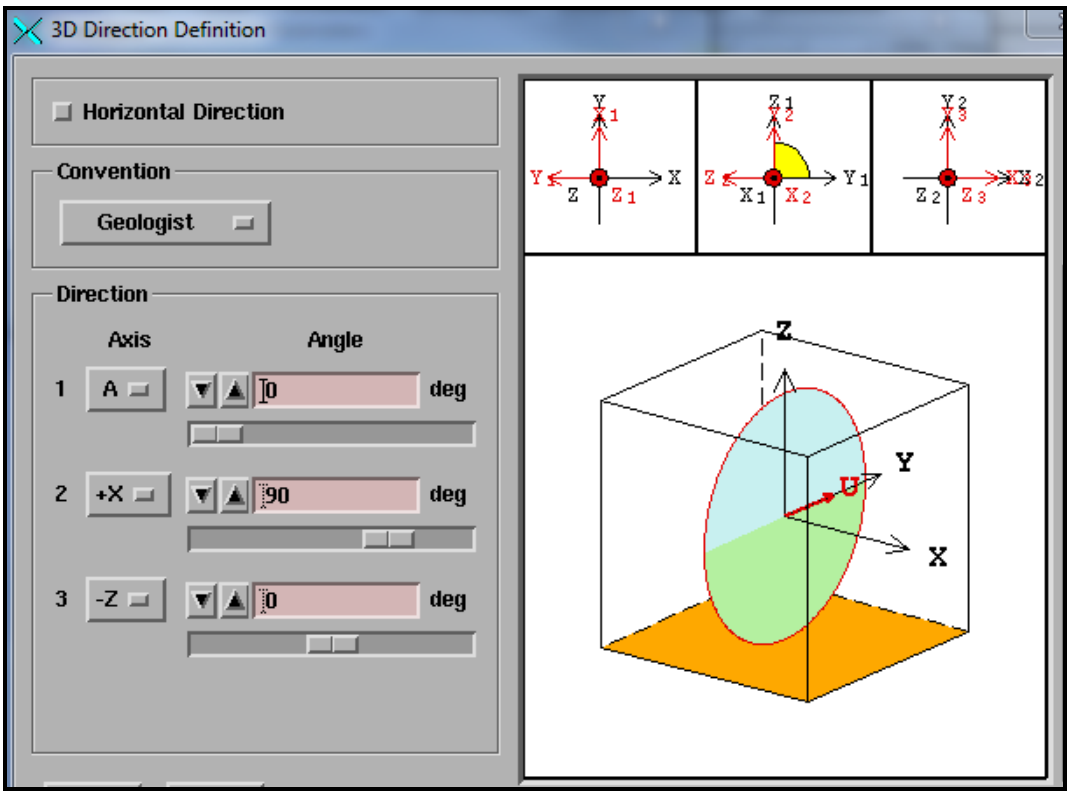
14.7 SPATIAL ANALYSIS

14.7.1 VARIOGRAPHY

Data for experimental variography was restricted to those samples which fell within the 0.25 CuEq% indicator wireframes for both the Liard and Paramount Zones. These experimental variograms were constructed on lags which are multiples of the 3 m composites (12 and 15 m) using Isatis™ software (v. 2011.4).

The preferred orientation for the variography of both the Liard and Paramount Zones has the long-axis positioned north-south as defined in Figure 14.17.

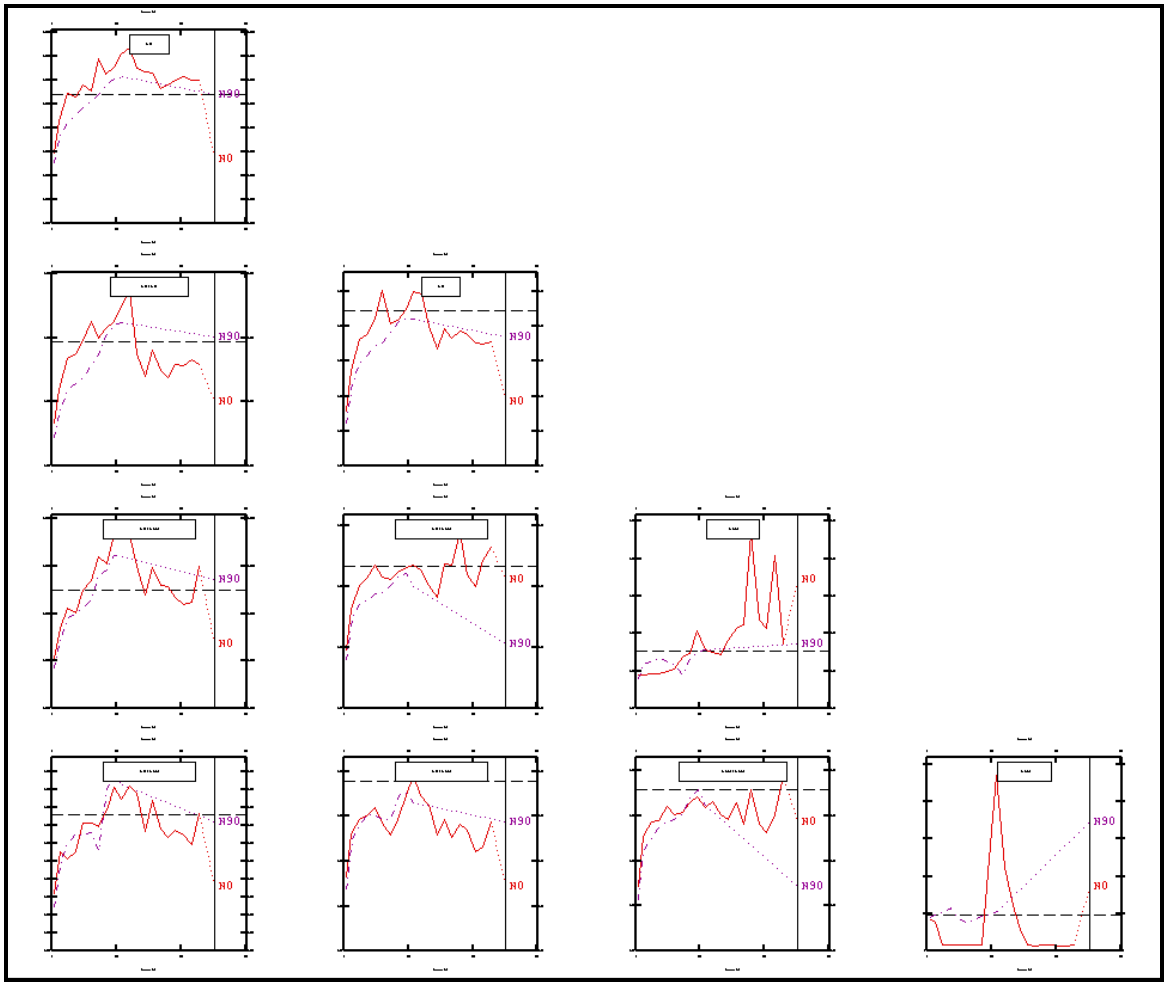
Figure 14.17 Variography Orientation used in both the Liard and Paramount Zones



Copper, silver, gold and molybdenum were modeled with cross-variograms between the various elements as well as the individual element variograms as depicted below for the Liard Zone (Figure 14.18) and for the Paramount Zone (Figure 14.19). A simple approach was adopted, nugget plus sill. The solid red lines reflect the variography modeled in a vertical north-south plane (more continuity is expected in this plane on geological grounds), while the broken purple lines show the variography modeled at right angles to that plane.

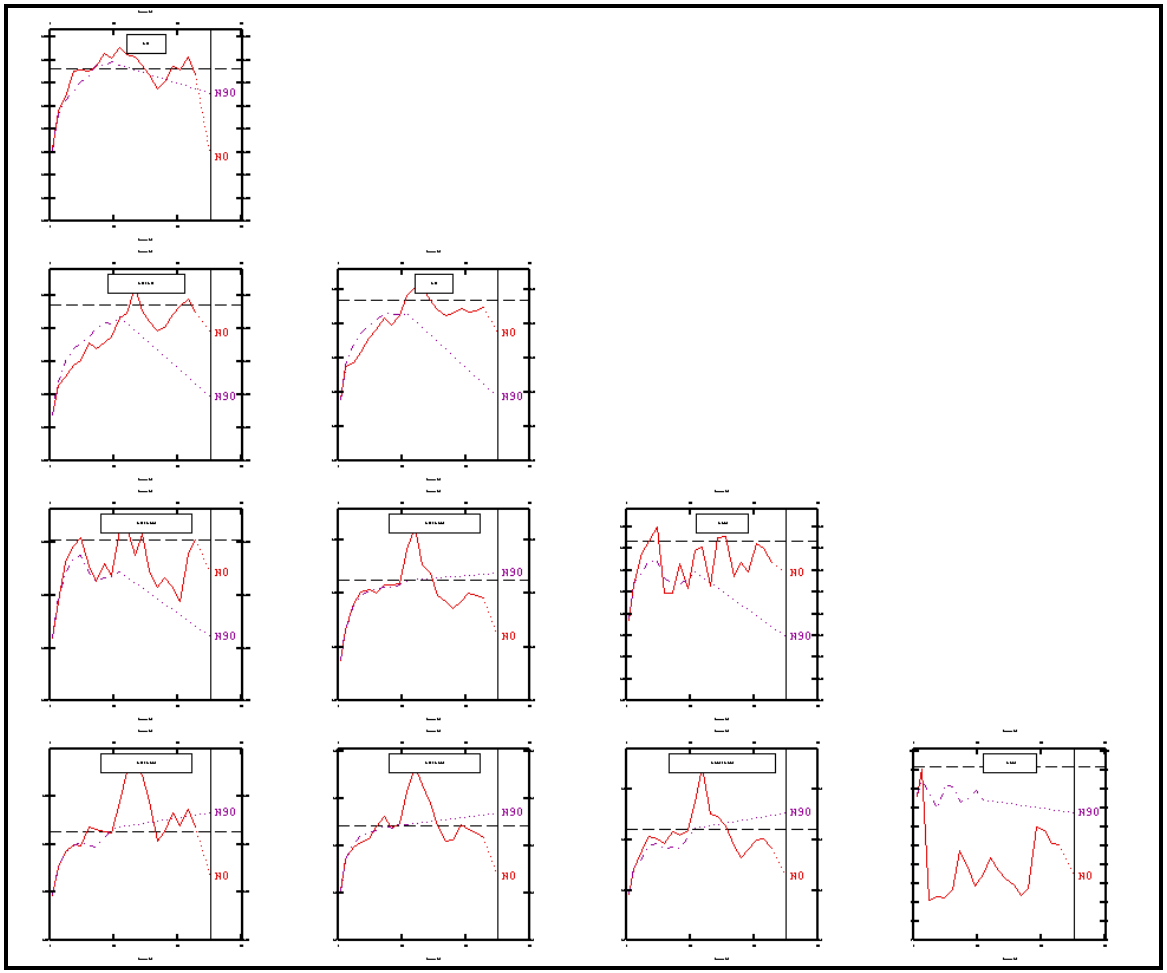
A more detailed depiction of this variography can be found in Appendix D. Tabulation of the modelled variography is presented in Section 14.8.3.

Figure 14.18 Experimental Variography for the Liard Zone – Summary Variography



Note: See Appendix D for details

Figure 14.19 Experimental Variography for the Paramount Zone – Summary Variography



Note: See Appendix D for details

14.8 INTERPOLATION PLAN – KRIGING PARAMETERS

For block model estimation in Datamine™ software, three separate parameter files are required:

- estimation parameter file
- search and sample selection parameter file
- variography parameter file.

Estimation also included the calculation of the Kriging Variance, the Lagrange Multiplier and the F-Function. These calculations were undertaken in order to calculate the Z/Z* and the KE. Both Z/Z* and KE are used to evaluate the quality of the OK estimate, and Z/Z* in particular was used to determine resource classification.

14.8.1 ESTIMATION PARAMETER FILE

The estimation parameter file defines the domains used (i.e. rock 3 and 4), estimation variables (e.g. copper, molybdenum, gold, and silver), and estimation method (e.g. OK, ID^2, and nearest neighbour (NN)). OK results are used in reporting the resource, whereas ID^2 is used for density. Other interpolations (i.e. ID^2, NN) methods are used for model validation. The estimation parameter file is tabulated in Table 14.9.

14.8.2 SEARCH AND SAMPLE PARAMETER FILE

The search and sample parameter file dictates the conditions for a successful cell interpolation of grade. It specifies the sample search ellipse parameters including size and orientation. In this case, they reflect the variography. It also states the number of samples required for a successful interpolation based on the search and search pass (maximum of three passes with search distances expanding by a factor of two for the second pass and a factor of three for the third pass). The maximum number of samples which can be used from a single composited drillhole is set to three. This is not dissimilar (total of 12 m of samples per drillhole) to the interpolation conditions set by Kulla et al.'s 2011 (AMEC) resource estimate, which uses 15 m composites. The search and sample parameter file is tabulated below (Table 14.10).

14.8.3 VARIOGRAPHY PARAMETER FILE

The variography parameter file specifies the nugget, structure ranges and orientations for respective structure variance for each of the estimated metals. Note no variography was undertaken for density. The variography parameter file is tabulated below (Table 14.11).

Table 14.9 Estimation Parameter Files

Domain	EDESC	EREFNUM	VALUE_IN	VALUE_OUT	SREFNUM	NUMSAM_F	SVOL_F	VAR_F	MINDIS_F	IMETHOD	VREFNUM	KRIGNEGW	KRIGVARS
Liard	Cu_Zone_1	1	cu_pct	cu_ok	1	NUMSAM	SVOL	KV	TDIST	3	1	0	1
	Mo_Zone_1	2	mo_pct	mo_ok	2	-	-	-	-	3	2	0	1
	Au_Zone_1	3	au_gt	au_ok	3	-	-	-	-	3	3	0	1
	Ag_Zone_1	4	ag_gt	ag_ok	4	-	-	-	-	3	4	0	1
	F_Zone_1	5	cu_pct	F	1	-	-	-	-	101	1	0	1
	LG_Zone_1	6	cu_pct	LG	1	-	-	-	-	102	1	0	1
	SG_Zone_1	7	density	density	5	-	-	-	-	2	1	0	1
Paramount	Cu_Zone_2	1	cu_pct	cu_ok	1	NUMSAM	SVOL	KV	TDIST	3	1	0	1
	Mo_Zone_2	2	mo_pct	mo_ok	2	-	-	-	-	3	2	0	1
	Au_Zone_2	3	au_gt	au_ok	3	-	-	-	-	3	3	0	1
	Ag_Zone_2	4	ag_gt	ag_ok	4	-	-	-	-	3	4	0	1
	F_Zone_2	5	cu_pct	F	1	-	-	-	-	101	1	0	1
	LG_Zone_2	6	cu_pct	LG	1	-	-	-	-	102	1	0	1
	SG_Zone_2	7	density	density	5	-	-	-	-	2	1	0	1

Note: KRIGVARS – KV set equal to sill. KRIGNEGW – keep and use negative Kriging weights

Table 14.10 Search and Sample Parameter Files

Domain	SDESC	SREFNUM	SMETHOD	SDIST1	SDIST2	SDIST3	SANGLE1	SANGLE2	SANGLE3	SAXIS1	SAXIS2	SAXIS3
Liard	Cu_Zone_1	1	2	140	84	84	90	0	90	3	2	1
	Mo_Zone_1	2	2	140	84	84	90	0	90	3	2	1
	Au_Zone_1	3	2	140	84	84	90	0	90	3	2	1
	Ag_Zone_1	4	2	140	84	84	90	0	90	3	2	1
	SG_Zone_1	5	2	140	84	84	90	0	90	3	2	1
Paramount	Cu_Zone_2	1	2	135	84	84	90	0	90	3	2	1
	Mo_Zone_2	2	2	135	84	84	90	0	90	3	2	1
	Au_Zone_2	3	2	135	84	84	90	0	90	3	2	1
	Ag_Zone_2	4	2	135	84	84	90	0	90	3	2	1
	SG_Zone_2	5	2	135	84	84	90	0	90	3	2	1

Domain	SDESC	SREFNUM	SMETHOD	MINNUM1	MAXNUM1	SVOLFAC2	MINNUM2	MAXNUM2	SVOLFAC3	MINNUM3	MAXNUM3	MAXKEY
Liard	Cu_Zone_1	1	2	20	24	2	16	24	3	12	24	3
	Mo_Zone_1	2	2	20	24	2	16	24	3	12	24	3
	Au_Zone_1	3	2	20	24	2	16	24	3	12	24	3
	Ag_Zone_1	4	2	20	24	2	16	24	3	12	24	3
	SG_Zone_1	5	2	12	24	2	9	24	3	6	24	3
Paramount	Cu_Zone_2	1	2	20	24	2	16	24	3	12	24	3
	Mo_Zone_2	2	2	20	24	2	16	24	3	12	24	3
	Au_Zone_2	3	2	20	24	2	16	24	3	12	24	3
	Ag_Zone_2	4	2	20	24	2	16	24	3	12	24	3
	SG_Zone_2	5	2	12	24	2	9	24	3	6	24	3

Note: MAXKEY – Maximum number of samples used from single drillhole.

Table 14.11 Variography Parameter Files

Domain	VREFNUM	VDESC	VANGLE1	VANGLE2	VANGLE3	VAXIS1	VAXIS2	VAXIS3	NUGGET	ST1	ST1PAR1	ST1PAR2	ST1PAR3	ST1PAR4
Liard	1	cu_l	90	0	90	3	2	1	0.373	1	140	84	84	0.627
	2	mo_l	90	0	90	3	2	1	0.461	1	140	84	84	0.539
	3	au_l	90	0	90	3	2	1	0.506	1	140	84	84	0.494
	4	ag_l	90	0	90	3	2	1	0.742	1	140	84	84	0.258
Paramount	1	cu_p	90	0	90	3	2	1	0.438	1	135	84	84	0.562
	2	mo_p	90	0	90	3	2	1	0.506	1	135	84	84	0.494
	3	au_p	90	0	90	3	2	1	0.607	1	135	84	84	0.393
	4	ag_p	90	0	90	3	2	1	0.913	1	135	84	84	0.087

14.9 RESOURCE BLOCK MODEL

14.9.1 CONFIGURATION

The block model is oriented with the model origin at the lower left hand corner (bottom southwest) where all dimensions are in metres. Cell and sub-cell sizes configuration was designed to reflect minimum mining widths and heights. The block model configuration is recorded in Table 14.12. Sub-cells were used to define the topographic surface and the base of overburden.

Table 14.12 Block Model Configuration

	Easting (m)	Northing (m)	Elevation (m)
Origin	11,000	8,800	4,300
Parent cell	15	15	15
Number of Parent cells	200	267	120
Sub-cell	5	5	5
Number of Sub-cells per Parent cell	3	3	3

14.9.2 CELL ATTRIBUTES

Categorical and deterministic variables for the cells of the block model are tabulated in Table 14.13. Categorical variables include, but are not limited to, rock type (fresh rock, overburden and mineralization domains (rock), resource classification (rescat) and mining status (mstatus). Deterministic variables include, but are not limited to, copper, molybdenum, gold, and silver grade estimation.

Table 14.13 List of Cell Attributes in Block Model

Name	Description	Type	Association
IJK	Unique parent cell code	Integer	Assigned
rock	Domain2 (1-4)	Integer	Assigned
XC	Cell centroid (x)	Variable	Assigned
YC	Cell centroid (y)	Variable	Assigned
ZC	Cell centroid (z)	Variable	Assigned
XINC	Cell length (x)	Variable	Assigned
YINC	Cell width (y)	Variable	Assigned
ZINC	Cell height (z)	Variable	Assigned
ZONE	Datamine default (not used)	Integer	Assigned
rescat	Resource classification (1-3)	Integer	Assigned
mstatus	Mining Status (1)	Integer	Assigned
density	Specific Gravity (ID^2)	Variable	Assigned
cu_ok	Cu grade (OK)	Variable	Estimated

table continues…

Name	Description	Type	Association
cu_id	Cu grade (ID^2)	Variable	Estimated
cu_nn	Cu grade (NN)	Variable	Estimated
F	Cu (F-Function)	Variable	Estimated
LG	Cu (LaGrange Multiplier)	Variable	Estimated
mo_ok	Mo grade (OK)	Variable	Estimated
mo_id	Mo grade (ID^2)	Variable	Estimated
mo_nn	Mo grade (NN)	Variable	Estimated
au_ok	Au grade (OK)	Variable	Estimated
au_id	Au grade (ID^2)	Variable	Estimated
au_nn	Au grade (NN)	Variable	Estimated
ag_ok	Ag grade (OK)	Variable	Estimated
ag_id	Ag grade (ID^2)	Variable	Estimated
ag_nn	Ag grade (NN)	Variable	Estimated
sg_nn	Specific Gravity (NN)	Variable	Estimated
NUMSAM	Number of Samples for Estimate	Integer	Calculated
SVOL	Search Estimate Pass (1-3)	Integer	Calculated
MINDIS	Sample Distances for Estimate	Variable	Calculated
KV	Cu Kriging Variance	Variable	Calculated
BV	Cu Block Variance	Variable	Calculated
KE	Cu KE	Variable	Calculated
Z/Z*	Cu Z/Z*	Variable	Calculated
cu_eq	Cu Equivalent (Cu + Mo + Au + Ag)	Variable	Calculated
XMORIG	Block Model Origin (x)	Integer	Assigned
YMORIG	Block Model Origin (y)	Integer	Assigned
ZMORIG	Block Model Origin (z)	Integer	Assigned
NX	Number of Cells (x)	Integer	Assigned
NY	Number of Cells (y)	Integer	Assigned
NZ	Number of Cells (z)	Integer	Assigned

14.9.3 INTERPOLATION

Block model interpolation utilized OK for estimation of copper, molybdenum, gold and silver grades. ID^2 and NN were also employed block model validation purposes.

The following discusses the results of the interpolation, both in terms of block model validation (Section 14.9) and in tabulation of the mineral resource (Section 14.11).

14.10 MODEL VALIDATION

14.10.1 STATISTICS

Block model statistics for all elements of the block model are tabulated in Table 14.14 and Table 14.15, both for the total modelled resource and the un-mined portion

of the modelled resource. The statistics are reported as a function of the interpreted Liard and Paramount Zones.

Table 14.14 Assay Statistics for Liard Zone; Composite Data

	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	CuEq (%)	Density
Count	156501	156501	156501	156501	156501	156501
Minimum	0.002	0	0	0	0.014	2.395
Maximum	1.246	0.161	1.054	7.284	1.816	3.033
Mean	0.229	0.013	0.182	1.569	0.359	2.692
Variance	0.011	0.000	0.009	0.350	0.023	0.001
Standard Deviation	0.107	0.009	0.095	0.591	0.151	0.030
Coefficient of Variance	0.467	0.727	0.522	0.377	0.420	0.011

Table 14.15 Raw Assay Statistics for Paramount Zone; Composite Data

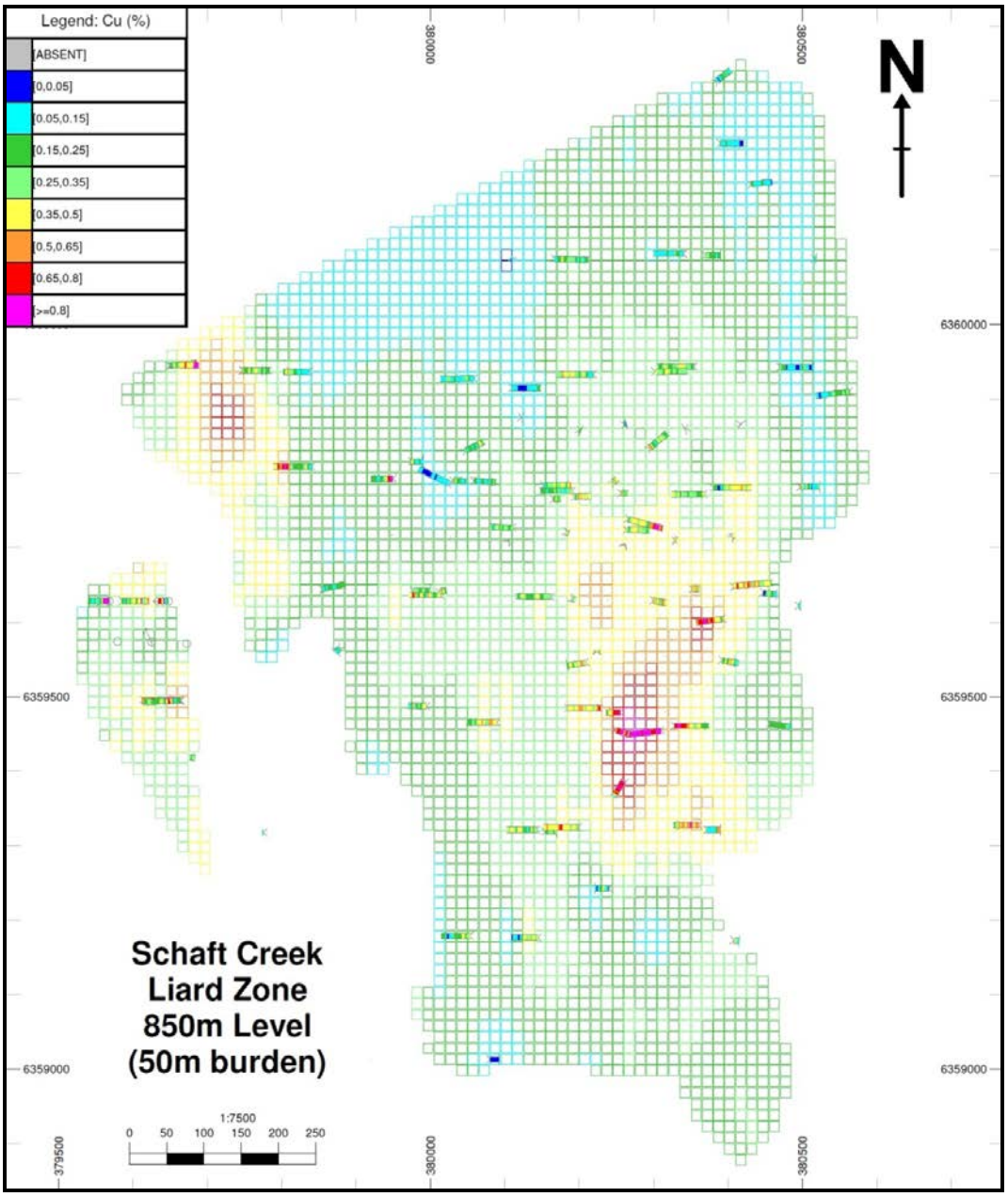
	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	CuEq (%)	Density
Count	93622	93622	93622	93622	93622	93622
Minimum	0.036	0.001	0	0	0.074	2.374
Maximum	1.066	0.121	0.971	5.664	1.626	2.860
Mean	0.273	0.021	0.172	1.812	0.427	2.690
Variance	0.010	0.000	0.012	0.294	0.024	0.001
Standard Deviation	0.100	0.010	0.111	0.542	0.156	0.031
Coefficient of Variance	0.364	0.501	0.644	0.299	0.366	0.012

14.10.2 SECTIONS

The results of the grade interpolation were visually confirmed against corresponding cross-sections and plan views. Figure 14.20 to Figure 14.23 depict the block model grades against the composited and capped drillhole (i.e. ore1_tc-c.dm) grades used in the resource estimation. These sections confirmed good correlation between modeled grade and drillhole grade.

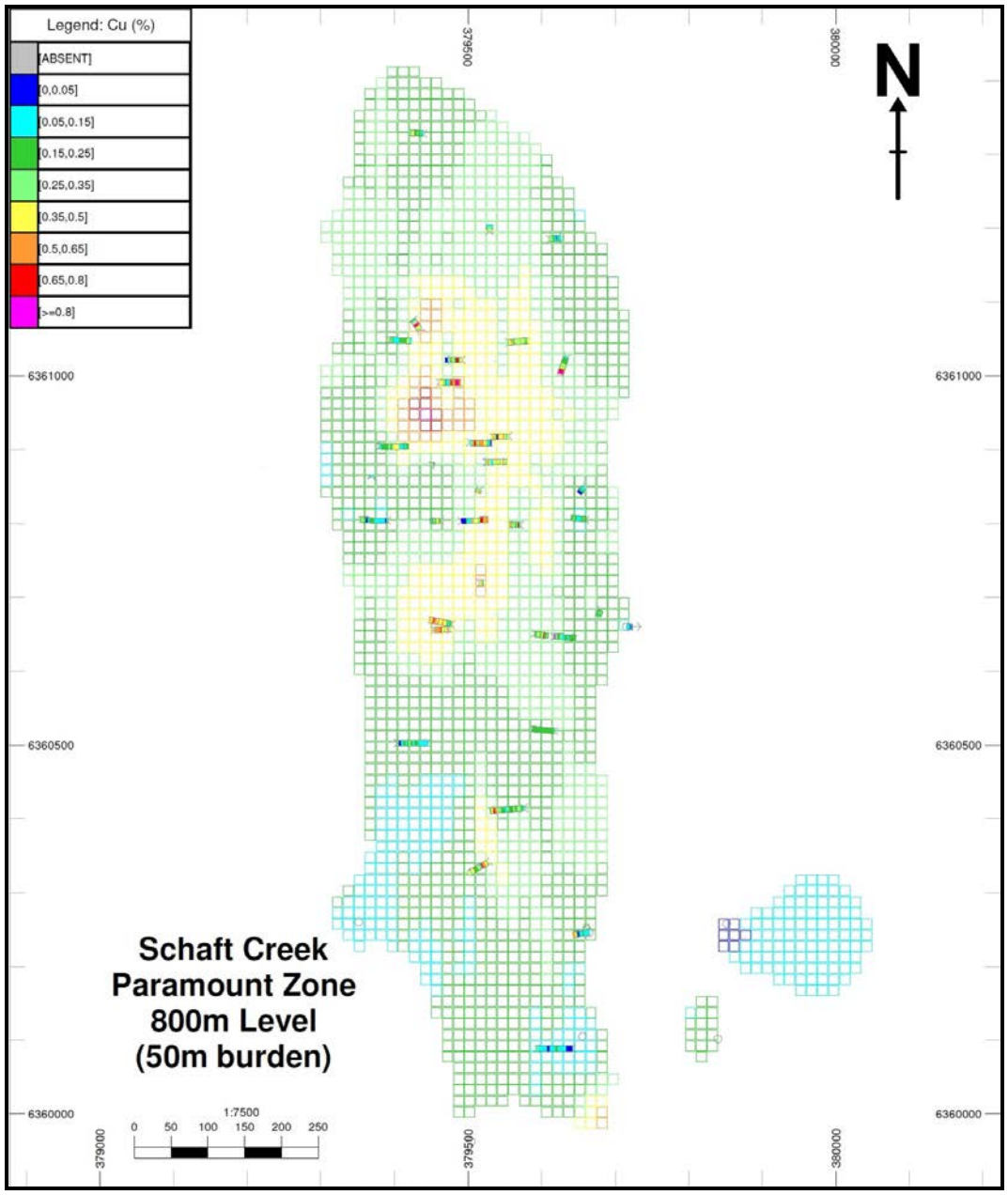
Images include drillhole data, coloured also by grade, and are clipped to 50 m. Depicted below are representative images of the Liard and Paramount Zones. A complete set of images is contained in Appendix E.

Figure 14.20 Model Plan View Liard Zone at 850 m Elevation – Cu% Grade



Note: Drillholes also depicted. Total section clipping distance is 50 m.

Figure 14.21 Model Plan View Paramount Zone at 850 m Elevation – Cu% Grade



Note: Drillholes also depicted. Total section clipping distance is 50 m.

Figure 14.22 Model Cross-section View Liard Zone at 639500 mN – Cu% Grade

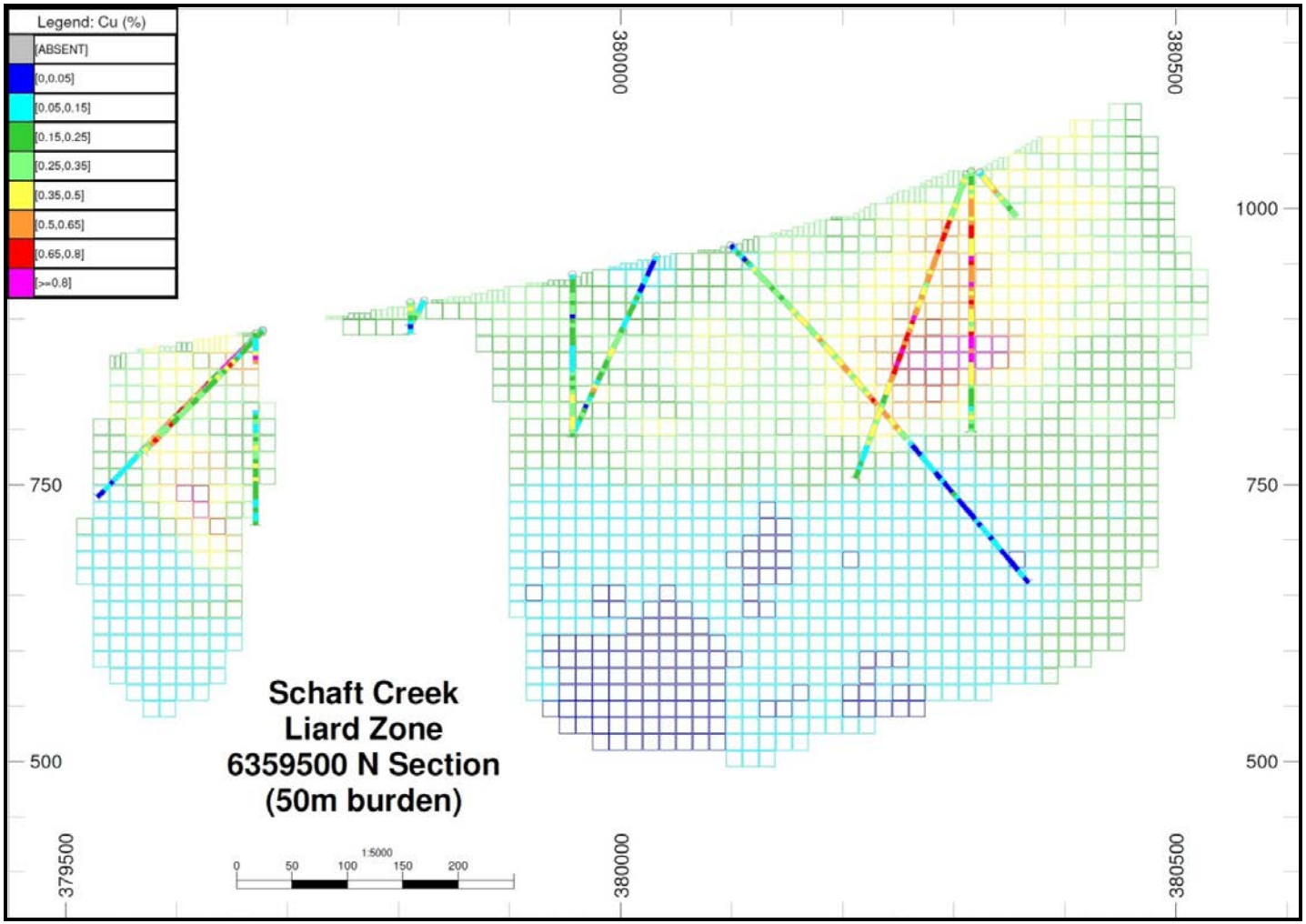
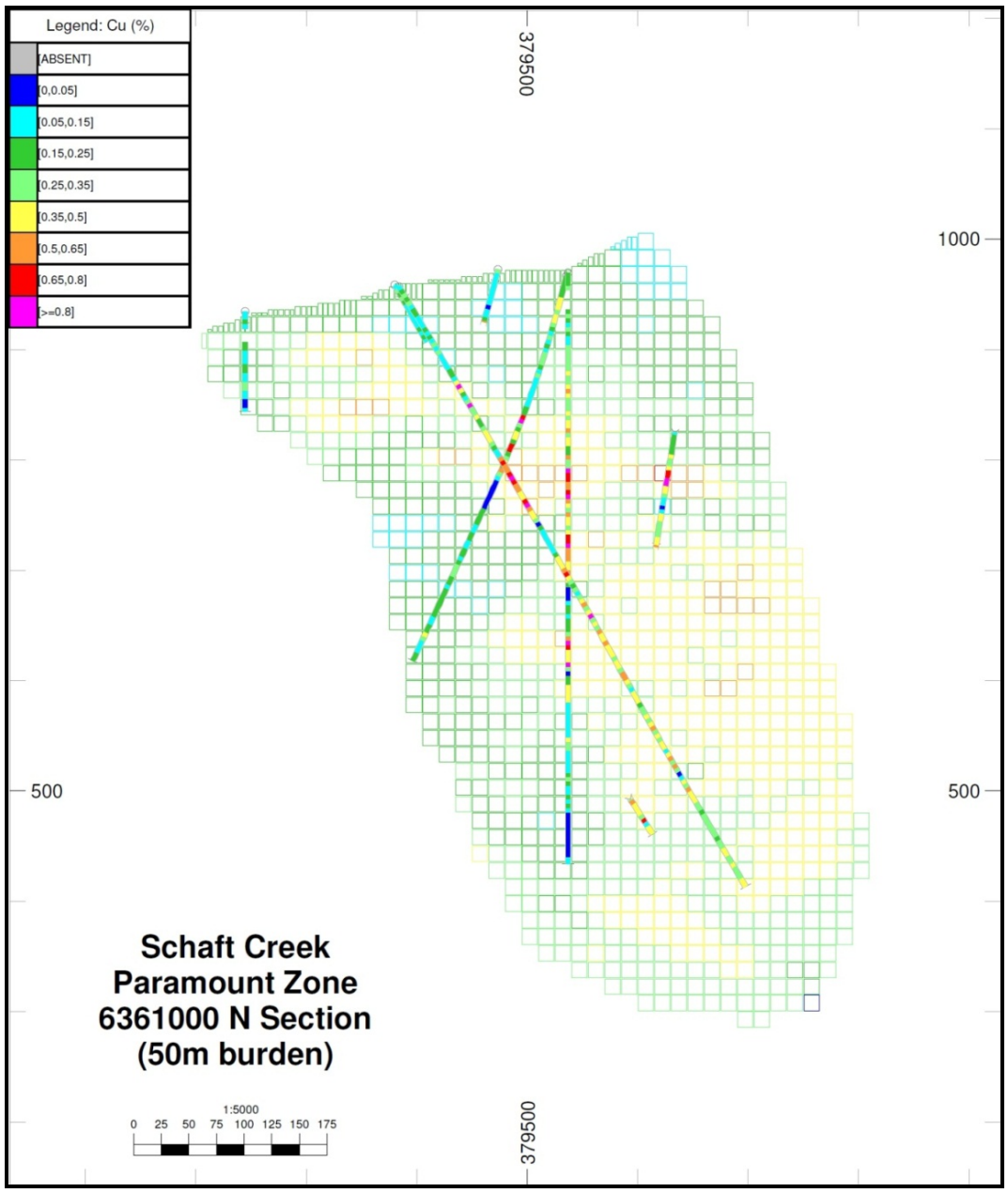


Figure 14.23 Model Cross-section View Paramount Zone at 6361000 mN – Cu% Grade



14.10.3 SWATH PLOTS

Swath plots are used to visually compare the differences and similarities in the estimated grades between the different estimators (OK, ID^2 and NN) with respect to each domain (Liard and Paramount). The search and sample estimation parameter file used for ID^2 and NN estimation is the same as that for the OK estimation. Results are presented below for copper, molybdenum, gold, silver and density in the

form of average grades recorded across eastings, northings and elevations. Note that as no OK estimation was completed for density, only ID^2 and NN are compared.

Below (Figure 14.24 to Figure 14.26) are presented examples of the results of the swath plots. A complete set of all swath plots can be found in Appendix F. Note that for the purposes of these plots, the Liard Zone and the Paramount Zone were not separated. All mineralization was considered as a single domain.

Figure 14.24 Swath Plot for Cu% by Easting

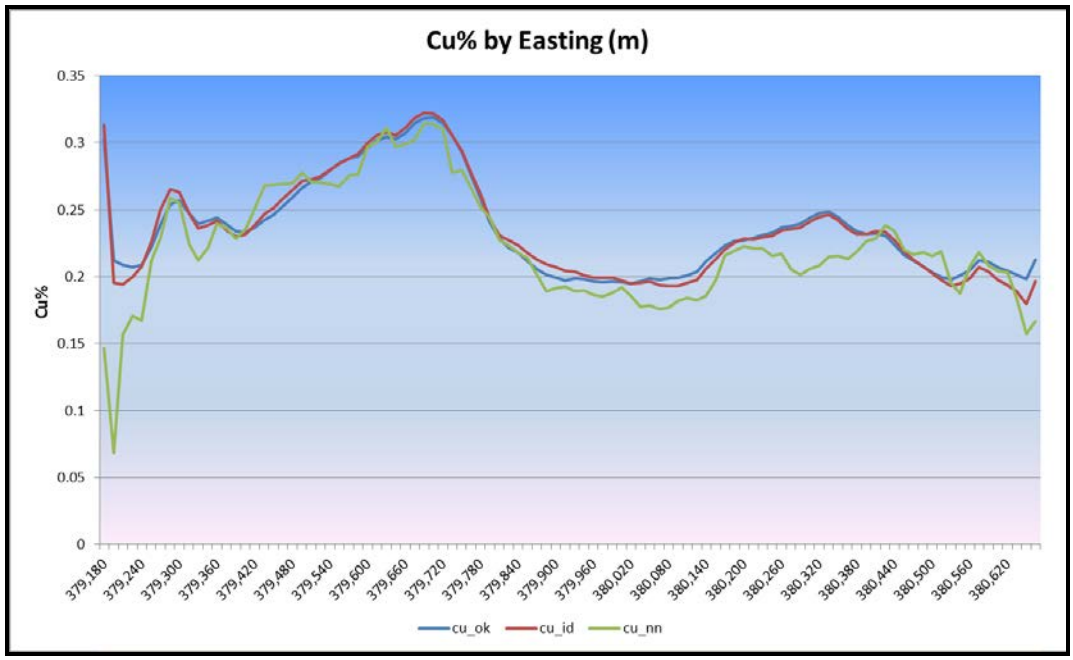


Figure 14.25 Swath Plot for Cu% by Northing

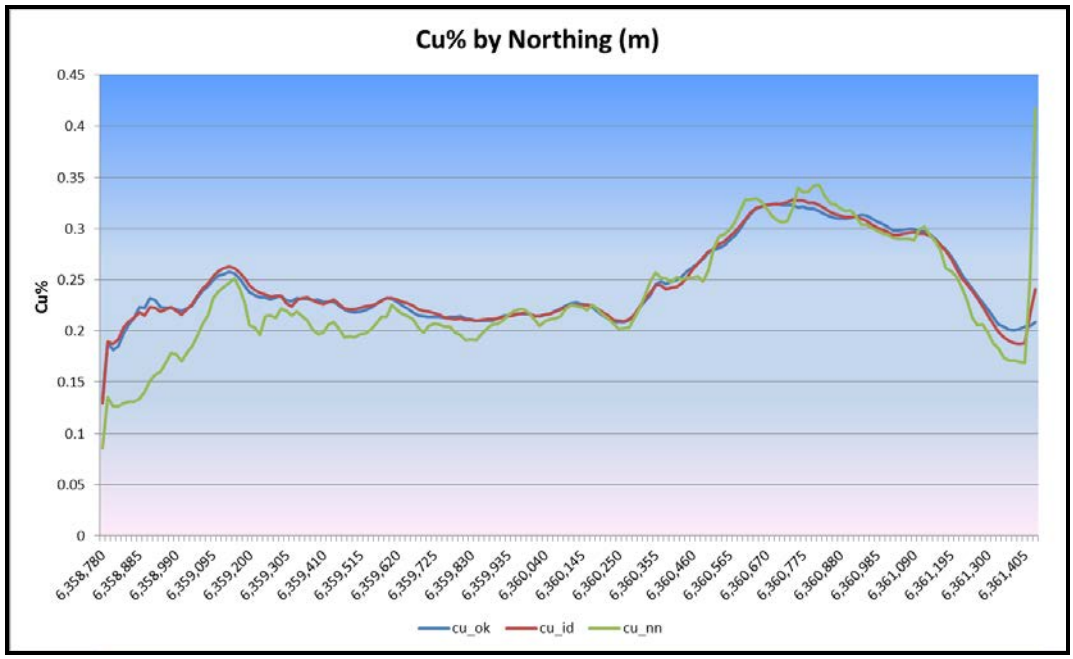
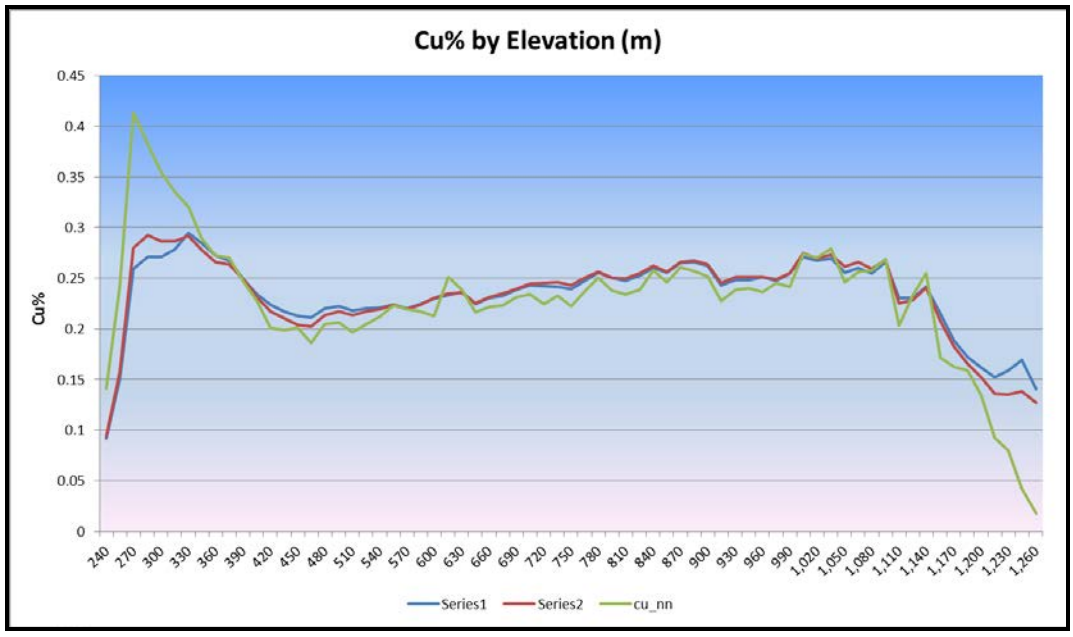


Figure 14.26 Swath Plot for Cu% by Elevation



In general, from interrogation of the above images, it can be concluded that there is good correlation between OK and ID^2 grade interpolators. The NN interpolation will always be problematic as there is no averaging of grades. It should also be noted that variability along the margins of the deposit, where there is little sample support, is inevitable.

14.11 MINERAL RESOURCE CLASSIFICATION

14.11.1 INTRODUCTION

Mineral resource classification is the application of Measured, Indicated and Inferred categories, in order of decreasing geological confidence, to the resource block model. These are CIM definition standards (adopted by the CIM Council on December 11, 2005) for reporting on mineral resources and reserves, which were incorporated by reference in NI 43-101.

A Measured Mineral Resource is that part of the total resource for which the physical characteristics are well established that it can be used for production planning and economic evaluation. Data is sufficient enough to confirm both geological and grade continuity. An Indicated Mineral Resource is that part of the total resource for which the physical characteristics are well established that it can be used production planning and economic evaluation. Data is sufficient enough to reasonably assume both geological and grade continuity. An Inferred Mineral Resource is that part of the total resource for which the quantity and grade can be estimated. Data is sufficient enough to reasonably assume, but cannot verify, geological and grade continuity.

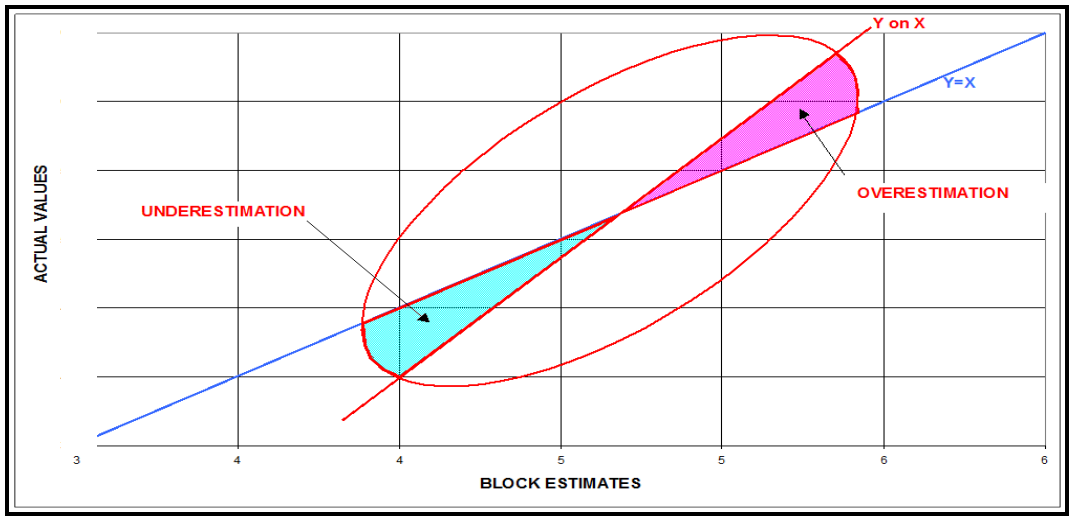
These categories are applied in consideration of, but not limited to, drill and sample spacing, QA/QC, deposit-type and mineralization continuity, surface and/or underground mineralization exposure, variography, KE, Z/Z* and/or prior mining experience. With respect to resource classification of the Schaft Creek deposit, Kulla et al. (2011) pre-classified resource model cells on the basis of sample distance to interpolated cell. In addition, they took into consideration “higher confidence” drillholes for assigning Measured Resource classification.

In this resource model, the Z/Z* is exclusively used to assign resource classification.

14.11.2 THEORETICAL SLOPE OF REGRESSION

Conditional bias is the systematic under- and over-valuation of block estimates in different grade categories (see Figure 14.27). Krige (1996) presented a practical analysis of the effects of spatial continuity and the available data within the search ellipse as it affects measures of conditional bias.

Figure 14.27 Actual Value (Z) Versus Estimated Value (Z*), Slope of Regression is Expressed as Z/Z*



The two parameters Krige suggested using to investigate whether the block size used for grade estimation is appropriate are KE (KE as a percentage) and Z/Z* which can also be used to calibrate the confidence in block estimates and are given as follows:

$$KE = (BV-KV)/BV$$

$$Z/Z^* = BV-KV+ |\mu|$$

Where:

BV = theoretical variance of blocks within domain

KV = variance between Kriged grade and true (unknown) grade, i.e. kriging variance

μ = LaGrange multiplier

Perfect estimation would give values of KV = 0, KE = 100% and Z/Z* = 1.

Confidence in the geological framework is all-important and generally takes precedence over any mathematical indicator of confidence. However, KE and Z/Z* can be used to identify “challenged” estimated areas within a specified resource classification which require further investigation. Ultimately, KE and Z/Z* are both tools to be used in conjunction with block size, drill spacing, mineralization continuity and geological confidence.

With respect to the Schaft Creek resource model, the LaGrange multiplier and F-Function were estimated into each cell as a function of the copper drillhole data and

associated variography. Thus drill spacing, sample support and variography all were intrinsically involved in the assigning of resource classification. The Measured category was assigned to all cells with Z/Z* greater than 0.95. All cells with Z/Z* greater than 0.25, but less than 0.95, were assigned Indicated resource category. The Inferred resource category was assigned to all cells with Z/Z* less than 0.25. Thus the resource classification reflects more the quality and confidence of the block estimate.

The difficulty in using this methodology for resource classification is that individual cells may have different categories than their contiguous neighbour. However, it is quantitative and reproducible.

14.12 MINERAL RESOURCE TABULATION

14.12.1 CUT-OFFS

The mineral resource reported on the Schaft Creek deposits employs a CuEq% cut-off. This represents the total metal content (i.e. copper + molybdenum + gold + silver) expressed as copper. CuEq% is calculated as a function of metal price (in US dollars) and metal recovery for molybdenum, gold and silver. The metal price and recovery parameters used to determine CuEq% is shown in Table 14.16.

Table 14.16 Metal Price and Recovery Parameters for CuEq% Calculation

Metal	Metal Price (US$)	Updated Recovery (%)
Copper	2.97/lb	100.0
Molybdenum	16.80/lb	60.9
Gold	1,256.00/oz	70.6
Silver	20.38/oz	43.4

The following calculation is used to convert the OK grades for each metal (copper, molybdenum, gold and silver) within each interpolated cell into a CuEq% based on the parameters in Table 14.17. No recoveries are applied for copper.

Cu_1 = (cu_ok*2.97*22.0462)

Cu_2 = (mo_ok*0.609*16.80*22.0462)

Cu_3 = (au_ok*0.706/31.1035*1256.00)

Cu_4 = (ag_ok*0.434/31.1035*20.38)

Cu_5 = Cu_1+Cu_2+Cu_3+Cu_4

CuEq = (Cu_5/2.97/22.0462)

[erase (Cu_*)]

The final function removes the temporary calculations from the resource model.

14.12.2 RESOURCE TABLES AND IMAGES

The Schaft Creek mineral resource tabulation (Measured, Indicated and Inferred) is reported in metric tonnes (1 t = 1,000 kg), grades are in molybdenum percent, copper percent, gold grams per tonne and silver grams per tonne. Gold and silver metal are reported as troy ounces. Copper and molybdenum metal are reported as metric tonnes.

Reporting cut-offs are in CuEq%. CuEq% calculations are outlined in Section 14.12.1 above.

The Paramount Zone and the Liard Zone are reported together in Table 14.17 and independently in Table 14.18 to Table 14.20. Visual illustrations of the mineral resource category distributions are provided in Figure 14.28 and Figure 14.29.

Table 14.17 Summary of the Schaft Creek Resource – Liard and Paramount Zones Combined

Resource Category	Cut-off CuEq%	Volume (m3)	Tonnes	Density	Tonnes			Ounces		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Measured	0.05	54,921,900	147,979,067	2.694	710,181	455,400	25,280	1,153,898	8,457,472	0.480	0.308	0.017	0.243	1.778
	0.10	54,794,250	147,635,596	2.694	709,909	455,262	25,275	1,153,196	8,444,100	0.481	0.308	0.017	0.243	1.779
	0.15	54,416,250	146,615,287	2.694	708,572	454,548	25,238	1,149,944	8,402,626	0.483	0.310	0.017	0.244	1.783
	0.20	53,423,325	143,941,114	2.694	703,786	451,685	25,093	1,140,495	8,295,854	0.489	0.314	0.017	0.246	1.793
	0.25	51,190,275	137,927,871	2.694	690,087	443,086	24,687	1,115,692	8,041,256	0.500	0.321	0.018	0.252	1.813
	0.30	47,069,175	126,829,423	2.695	659,244	423,451	23,736	1,061,997	7,553,077	0.520	0.334	0.019	0.260	1.852
	0.35	41,014,050	110,534,082	2.695	606,161	389,880	22,096	967,410	6,775,078	0.548	0.353	0.020	0.272	1.906
	0.40	34,230,000	92,271,368	2.696	537,531	345,890	19,980	848,292	5,871,693	0.583	0.375	0.022	0.286	1.979
	0.45	27,547,650	74,277,384	2.696	461,099	296,713	17,472	720,235	4,930,538	0.621	0.399	0.024	0.302	2.065
	0.50	21,376,200	57,645,235	2.697	382,035	245,617	14,641	594,891	4,010,802	0.663	0.426	0.025	0.321	2.164
Indicated	0.05	410,498,250	1,105,697,109	2.694	4,345,344	2,784,969	182,101	6,298,821	59,248,807	0.393	0.252	0.016	0.177	1.667
	0.10	409,486,800	1,102,969,036	2.694	4,342,975	2,783,763	182,031	6,292,801	59,169,486	0.394	0.252	0.017	0.177	1.669
	0.15	401,707,200	1,081,939,528	2.693	4,315,345	2,769,692	181,360	6,218,068	58,335,449	0.399	0.256	0.017	0.179	1.677
	0.20	379,482,825	1,021,909,252	2.693	4,208,686	2,709,474	178,138	5,983,941	55,645,466	0.412	0.265	0.017	0.182	1.694
	0.25	339,968,625	915,477,325	2.693	3,966,748	2,556,808	169,794	5,584,025	50,932,173	0.433	0.279	0.019	0.190	1.730
	0.30	286,106,100	770,430,025	2.693	3,566,919	2,294,959	154,453	5,020,199	44,435,161	0.463	0.298	0.020	0.203	1.794
	0.35	227,489,925	612,662,375	2.693	3,053,899	1,957,733	133,946	4,317,656	37,027,689	0.498	0.320	0.022	0.219	1.880
	0.40	172,406,625	464,552,311	2.695	2,499,086	1,596,667	110,819	3,550,138	29,522,275	0.538	0.344	0.024	0.238	1.977
	0.45	127,310,100	343,308,026	2.697	1,984,814	1,264,944	88,415	2,837,462	22,967,207	0.578	0.368	0.026	0.257	2.081
	0.50	89,803,875	242,367,103	2.699	1,506,209	958,560	67,076	2,166,438	17,166,035	0.621	0.395	0.028	0.278	2.203

table continues…

Resource Category	Cut-off CuEq%	Volume (m3)	Tonnes	Density	Tonnes			Ounces		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Inferred	0.05	232,068,900	625,134,106	2.694	2,154,900	1,319,749	94,296	3,444,780	32,423,450	0.345	0.211	0.015	0.171	1.613
	0.10	228,899,775	616,607,156	2.694	2,149,258	1,314,696	94,205	3,443,000	32,400,049	0.349	0.213	0.015	0.174	1.634
	0.15	221,727,900	597,191,283	2.693	2,123,136	1,303,101	93,581	3,359,565	31,601,369	0.356	0.218	0.016	0.175	1.646
	0.20	199,885,500	538,065,824	2.692	2,018,913	1,247,192	91,028	3,095,694	28,800,765	0.375	0.232	0.017	0.179	1.665
	0.25	167,424,000	450,670,341	2.692	1,822,334	1,128,998	84,380	2,725,750	24,815,546	0.404	0.251	0.019	0.188	1.713
	0.30	132,156,675	355,826,449	2.692	1,561,588	966,790	73,365	2,321,034	20,533,048	0.439	0.272	0.021	0.203	1.795
	0.35	98,202,825	264,462,368	2.693	1,264,919	780,660	59,756	1,894,709	16,148,473	0.478	0.295	0.023	0.223	1.899
	0.40	71,670,000	193,060,107	2.694	998,088	611,650	46,871	1,535,576	12,597,631	0.517	0.317	0.024	0.247	2.030
	0.45	51,542,175	138,916,161	2.695	768,777	468,363	35,316	1,224,170	9,603,460	0.553	0.337	0.025	0.274	2.150
	0.50	35,177,925	94,914,213	2.698	560,445	340,682	25,029	916,792	6,945,542	0.590	0.359	0.026	0.300	2.276

Table 14.18 Mineral Resources in the Liard Zone

Resource Category	Cut-off CuEq%	Volume (m^3)	Tonnes	Density	Tonnes			Ounces		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Measured	0.05	47,184,150	127,193,721	2.696	610,276	390,733	20,693	1,023,178	7,175,502	0.480	0.307	0.016	0.250	1.755
	0.10	47,059,875	126,859,329	2.696	610,014	390,600	20,688	1,022,488	7,162,450	0.481	0.308	0.016	0.251	1.756
	0.15	46,749,375	126,020,347	2.696	608,916	390,038	20,661	1,019,557	7,128,691	0.483	0.310	0.016	0.252	1.759
	0.20	45,917,550	123,779,785	2.696	604,907	387,671	20,543	1,011,306	7,040,561	0.489	0.313	0.017	0.254	1.769
	0.25	44,189,925	119,122,898	2.696	594,308	381,080	20,268	990,639	6,848,150	0.499	0.320	0.017	0.259	1.788
	0.30	40,758,075	109,876,225	2.696	568,636	364,831	19,543	943,473	6,449,182	0.518	0.332	0.018	0.267	1.826
	0.35	35,735,175	96,347,804	2.696	524,551	337,120	18,307	860,365	5,810,257	0.544	0.350	0.019	0.278	1.876
	0.40	29,831,550	80,450,235	2.697	464,807	298,972	16,603	752,060	5,028,300	0.578	0.372	0.021	0.291	1.944
	0.45	23,947,800	64,593,720	2.697	397,431	255,638	14,541	635,203	4,202,747	0.615	0.396	0.023	0.306	2.024
	0.50	18,390,450	49,608,101	2.697	326,183	209,614	12,081	519,755	3,378,836	0.658	0.423	0.024	0.326	2.118
Indicated	0.05	235,976,100	635,732,714	2.694	2,320,769	1,488,713	83,133	3,709,310	32,080,790	0.365	0.234	0.013	0.181	1.570
	0.10	234,979,875	633,046,112	2.694	2,318,436	1,487,532	83,065	3,703,313	32,002,533	0.366	0.235	0.013	0.182	1.572
	0.15	228,144,825	614,567,158	2.694	2,294,220	1,475,755	82,533	3,632,447	31,254,668	0.373	0.240	0.013	0.184	1.582
	0.20	211,684,200	570,084,066	2.693	2,215,539	1,433,882	80,495	3,433,249	29,174,976	0.389	0.252	0.014	0.187	1.592
	0.25	184,576,200	497,089,456	2.693	2,049,842	1,333,364	75,413	3,114,131	25,876,543	0.412	0.268	0.015	0.195	1.619
	0.30	150,701,775	405,879,294	2.693	1,798,775	1,172,700	66,887	2,703,990	21,813,551	0.443	0.289	0.016	0.207	1.672
	0.35	115,269,675	310,468,398	2.693	1,488,708	971,227	56,134	2,219,110	17,456,840	0.480	0.313	0.018	0.222	1.749
	0.40	84,036,000	226,396,694	2.694	1,174,007	766,193	45,017	1,733,144	13,342,373	0.519	0.338	0.020	0.238	1.833
	0.45	58,776,525	158,404,537	2.695	885,704	578,314	34,210	1,301,603	9,823,636	0.559	0.365	0.022	0.256	1.929
	0.50	37,814,100	101,924,933	2.695	618,086	404,925	23,893	899,222	6,717,269	0.606	0.397	0.023	0.274	2.050

table continues…

Resource Category	Cut-off CuEq%	Volume (m^3)	Tonnes	Density	Tonnes			Ounces		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Inferred	0.05	142,989,450	385,285,911	2.695	1,060,681	643,867	40,502	1,868,318	17,966,814	0.275	0.167	0.011	0.151	1.450
	0.10	139,820,325	376,758,961	2.695	1,055,039	638,814	40,410	1,866,538	17,943,413	0.280	0.170	0.011	0.154	1.481
	0.15	132,692,325	357,461,112	2.694	1,029,083	627,338	39,791	1,783,284	17,149,108	0.288	0.175	0.011	0.155	1.492
	0.20	111,596,700	300,350,584	2.691	928,582	573,930	37,380	1,524,056	14,424,834	0.309	0.191	0.012	0.158	1.494
	0.25	81,603,075	219,607,861	2.691	747,128	466,190	31,438	1,167,992	10,705,011	0.340	0.212	0.014	0.165	1.516
	0.30	52,151,025	140,421,557	2.693	530,005	333,241	22,747	803,337	7,115,356	0.377	0.237	0.016	0.178	1.576
	0.35	29,370,000	79,118,235	2.694	331,628	209,809	14,535	488,186	4,170,468	0.419	0.265	0.018	0.192	1.640
	0.40	15,210,600	40,980,379	2.694	189,514	118,751	8,493	283,286	2,325,049	0.462	0.290	0.021	0.215	1.765
	0.45	7,737,075	20,840,817	2.694	104,576	65,198	4,666	159,541	1,256,993	0.502	0.313	0.022	0.238	1.876
	0.50	3,264,675	8,795,606	2.694	47,620	29,706	2,114	72,922	559,423	0.541	0.338	0.024	0.258	1.978

Table 14.19 Mineral Resources in the Paramount Zone

Resource Category	Cut-off CuEq%	Volume (m^3)	Tonnes	Density	Tonnes			Ounces		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Measured	0.05	7,737,750	20,785,347	2.686	99,904	64,667	4,587	130,719	1,281,970	0.481	0.311	0.022	0.196	1.918
	0.10	7,734,375	20,776,268	2.686	99,895	64,661	4,587	130,708	1,281,650	0.481	0.311	0.022	0.196	1.919
	0.15	7,666,875	20,594,940	2.686	99,657	64,510	4,577	130,387	1,273,935	0.484	0.313	0.022	0.197	1.924
	0.20	7,505,775	20,161,329	2.686	98,878	64,015	4,549	129,189	1,255,293	0.490	0.318	0.023	0.199	1.937
	0.25	7,000,350	18,804,973	2.686	95,778	62,006	4,420	125,053	1,193,105	0.509	0.330	0.024	0.207	1.973
	0.30	6,311,100	16,953,197	2.686	90,608	58,620	4,193	118,524	1,103,894	0.534	0.346	0.025	0.217	2.025
	0.35	5,278,875	14,186,278	2.687	81,610	52,760	3,788	107,045	964,821	0.575	0.372	0.027	0.235	2.115
	0.40	4,398,450	11,821,133	2.688	72,725	46,918	3,377	96,232	843,394	0.615	0.397	0.029	0.253	2.219
	0.45	3,599,850	9,683,664	2.690	63,668	41,075	2,930	85,032	727,791	0.657	0.424	0.030	0.273	2.338
	0.50	2,985,750	8,037,133	2.692	55,852	36,003	2,560	75,136	631,966	0.695	0.448	0.032	0.291	2.446
Indicated	0.05	174,522,150	469,964,395	2.693	2,024,576	1,296,257	98,968	2,589,511	27,168,017	0.431	0.276	0.021	0.171	1.798
	0.10	174,506,925	469,922,925	2.693	2,024,540	1,296,232	98,966	2,589,488	27,166,953	0.431	0.276	0.021	0.171	1.798
	0.15	173,562,375	467,372,370	2.693	2,021,125	1,293,937	98,827	2,585,621	27,080,780	0.432	0.277	0.021	0.172	1.802
	0.20	167,798,625	451,825,186	2.693	1,993,147	1,275,592	97,643	2,550,692	26,470,490	0.441	0.282	0.022	0.176	1.822
	0.25	155,392,425	418,387,869	2.692	1,916,905	1,223,444	94,380	2,469,894	25,055,630	0.458	0.292	0.023	0.184	1.863
	0.30	135,404,325	364,550,731	2.692	1,768,144	1,122,259	87,566	2,316,208	22,621,610	0.485	0.308	0.024	0.198	1.930
	0.35	112,220,250	302,193,978	2.693	1,565,191	986,506	77,812	2,098,546	19,570,850	0.518	0.326	0.026	0.216	2.014
	0.40	88,370,625	238,155,616	2.695	1,325,079	830,474	65,802	1,816,994	16,179,902	0.556	0.349	0.028	0.237	2.113
	0.45	68,533,575	184,903,489	2.698	1,099,110	686,630	54,205	1,535,858	13,143,571	0.594	0.371	0.029	0.258	2.211
	0.50	51,989,775	140,442,171	2.701	888,122	553,635	43,183	1,267,216	10,448,766	0.632	0.394	0.031	0.281	2.314

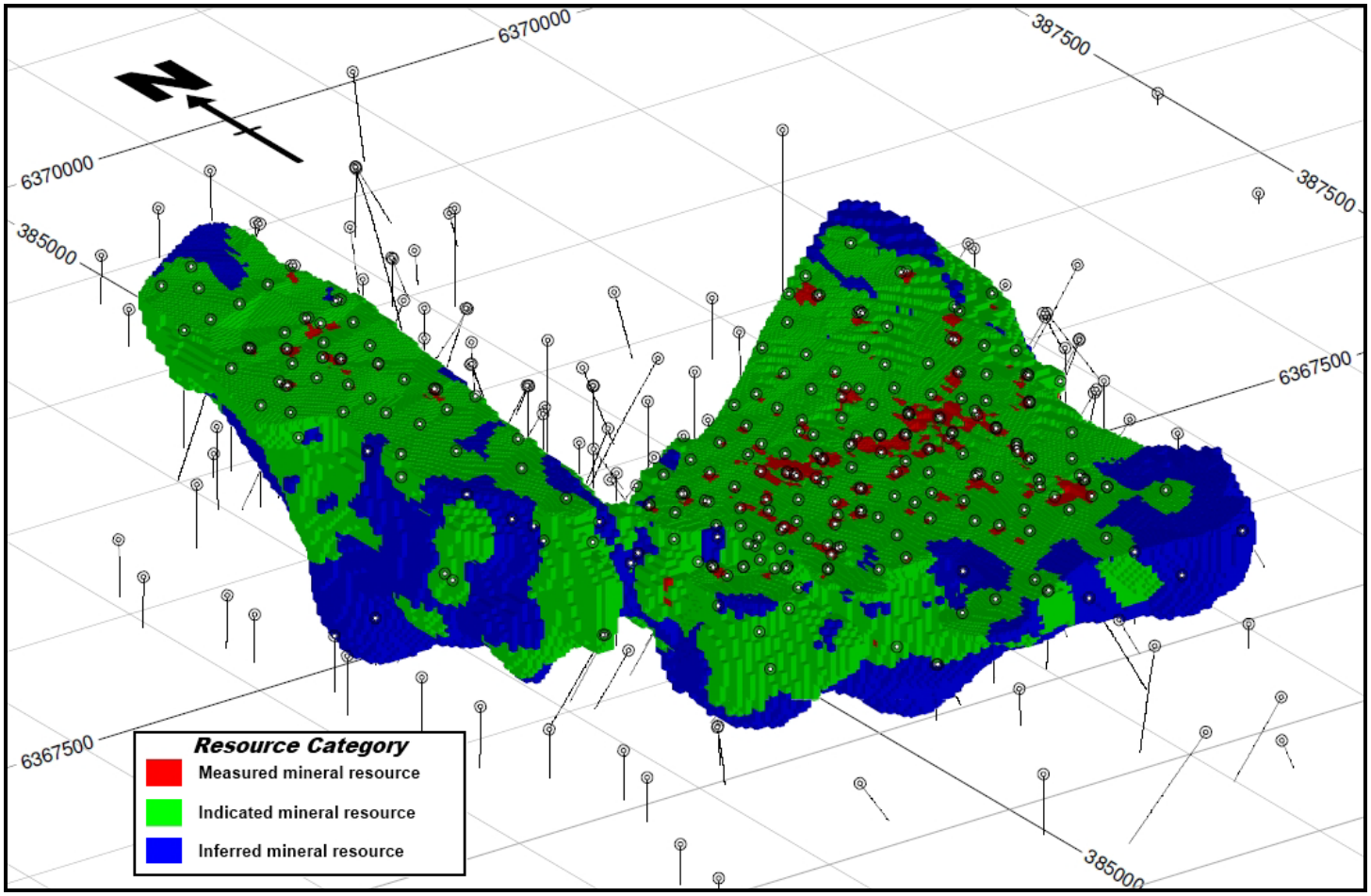
table continues…

Resource Category	Cut-off CuEq%	Volume (m^3)	Tonnes	Density	Tonnes			Ounces		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Inferred	0.05	89,079,450	239,848,195	2.693	1,094,219	675,882	53,794	1,576,462	14,456,636	0.456	0.282	0.022	0.204	1.875
	0.10	89,079,450	239,848,195	2.693	1,094,219	675,882	53,794	1,576,462	14,456,636	0.456	0.282	0.022	0.204	1.875
	0.15	89,035,575	239,730,171	2.693	1,094,053	675,763	53,789	1,576,281	14,452,261	0.456	0.282	0.022	0.205	1.875
	0.20	88,288,800	237,715,239	2.692	1,090,331	673,262	53,647	1,571,638	14,375,930	0.459	0.283	0.023	0.206	1.881
	0.25	85,820,925	231,062,480	2.692	1,075,207	662,808	52,942	1,557,758	14,110,535	0.465	0.287	0.023	0.210	1.899
	0.30	80,005,650	215,404,892	2.692	1,031,583	633,549	50,618	1,517,697	13,417,692	0.479	0.294	0.023	0.219	1.937
	0.35	68,832,825	185,344,133	2.693	933,290	570,851	45,221	1,406,523	11,978,005	0.504	0.308	0.024	0.236	2.010
	0.40	56,459,400	152,079,728	2.694	808,574	492,900	38,377	1,252,291	10,272,582	0.532	0.324	0.025	0.256	2.101
	0.45	43,805,100	118,075,344	2.695	664,201	403,165	30,649	1,064,629	8,346,467	0.563	0.341	0.026	0.280	2.199
	0.50	31,913,250	86,118,608	2.699	512,826	310,976	22,915	843,870	6,386,119	0.595	0.361	0.027	0.305	2.306

Table 14.20 Combined Measured and Indicated Resources in the Liard and Paramount Zones

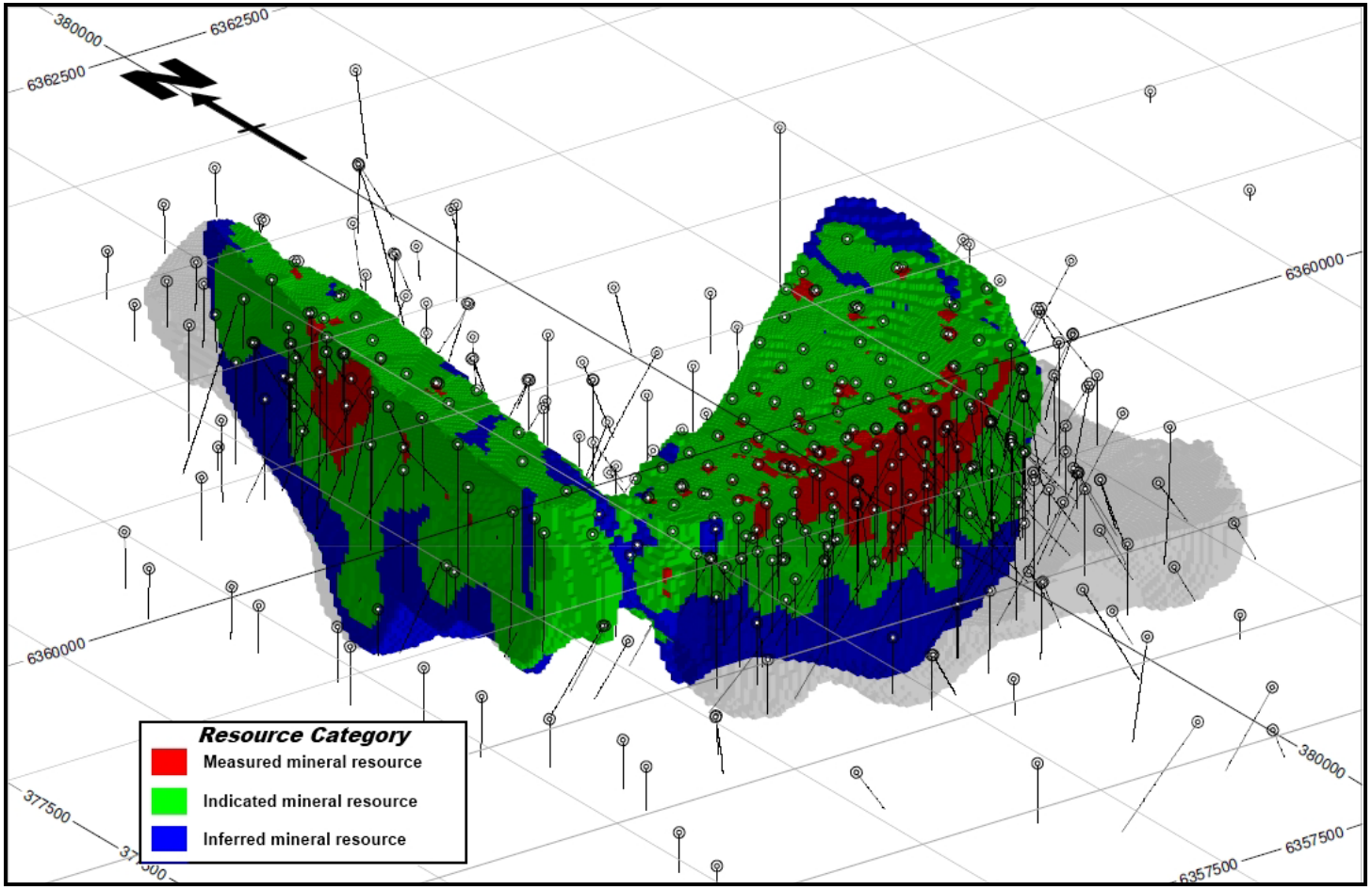
Zone	CuEq (%)	Volume (m^3)	Tonnes	Density	Tonnes Metal			Ounces Metal		Grade				
					CuEq	Cu	Mo	Au	Ag	CuEq (%)	Cu (%)	Mo (%)	Au (gt)	Ag (gt)
Liard	0.05	283,160,250	762,926,435	2.694	2,931,045	1,879,446	103,826	4,732,488	39,256,292	0.384	0.246	0.014	0.193	1.600
	0.10	282,039,750	759,905,440	2.694	2,928,449	1,878,132	103,753	4,725,802	39,164,983	0.385	0.247	0.014	0.193	1.603
	0.15	274,894,200	740,587,505	2.694	2,903,135	1,865,793	103,194	4,652,003	38,383,359	0.392	0.252	0.014	0.195	1.612
	0.20	257,601,750	693,863,851	2.694	2,820,446	1,821,552	101,038	4,444,555	36,215,537	0.406	0.263	0.015	0.199	1.623
	0.25	228,766,125	616,212,354	2.694	2,644,151	1,714,444	95,681	4,104,770	32,724,693	0.429	0.278	0.016	0.207	1.652
	0.30	191,459,850	515,755,520	2.694	2,367,412	1,537,531	86,430	3,647,463	28,262,733	0.459	0.298	0.017	0.220	1.704
	0.35	151,004,850	406,816,201	2.694	2,013,260	1,308,347	74,441	3,079,475	23,267,097	0.495	0.322	0.018	0.235	1.779
	0.40	113,867,550	306,846,929	2.695	1,638,814	1,065,165	61,620	2,485,204	18,370,672	0.534	0.347	0.020	0.252	1.862
	0.45	82,724,325	222,998,257	2.696	1,283,135	833,952	48,751	1,936,806	14,026,383	0.575	0.374	0.022	0.270	1.956
	0.50	56,204,550	151,533,034	2.696	944,270	614,539	35,974	1,418,977	10,096,105	0.623	0.406	0.024	0.291	2.072
Paramount	0.05	182,259,900	490,749,741	2.693	2,124,480	1,360,924	103,556	2,720,230	28,449,987	0.433	0.277	0.021	0.172	1.803
	0.10	182,241,300	490,699,192	2.693	2,124,435	1,360,893	103,553	2,720,196	28,448,603	0.433	0.277	0.021	0.172	1.803
	0.15	181,229,250	487,967,310	2.693	2,120,782	1,358,447	103,404	2,716,008	28,354,715	0.435	0.278	0.021	0.173	1.807
	0.20	175,304,400	471,986,515	2.692	2,092,025	1,339,607	102,192	2,679,881	27,725,784	0.443	0.284	0.022	0.177	1.827
	0.25	162,392,775	437,192,842	2.692	2,012,684	1,285,450	98,800	2,594,947	26,248,736	0.460	0.294	0.023	0.185	1.867
	0.30	141,715,425	381,503,928	2.692	1,858,752	1,180,880	91,759	2,434,732	23,725,504	0.487	0.310	0.024	0.199	1.934
	0.35	117,499,125	316,380,256	2.693	1,646,801	1,039,266	81,600	2,205,591	20,535,671	0.521	0.328	0.026	0.217	2.019
	0.40	92,769,075	249,976,750	2.695	1,397,803	877,392	69,180	1,913,226	17,023,296	0.559	0.351	0.028	0.238	2.118
	0.45	72,133,425	194,587,154	2.698	1,162,778	727,705	57,135	1,620,890	13,871,363	0.598	0.374	0.029	0.259	2.217
	0.50	54,975,525	148,479,304	2.701	943,974	589,638	45,743	1,342,353	11,080,732	0.636	0.397	0.031	0.281	2.321

Figure 14.28 Oblique View (Looking Northeast) Illustrating Mineral Resource Classification of Schaft Creek – Entire Deposit



Note: Scale of 1:12,500.

Figure 14.29 Oblique View (Looking Northeast) Illustrating Mineral Resource Classification of Schaft Creek – Sliced through 6359750N and 379470E



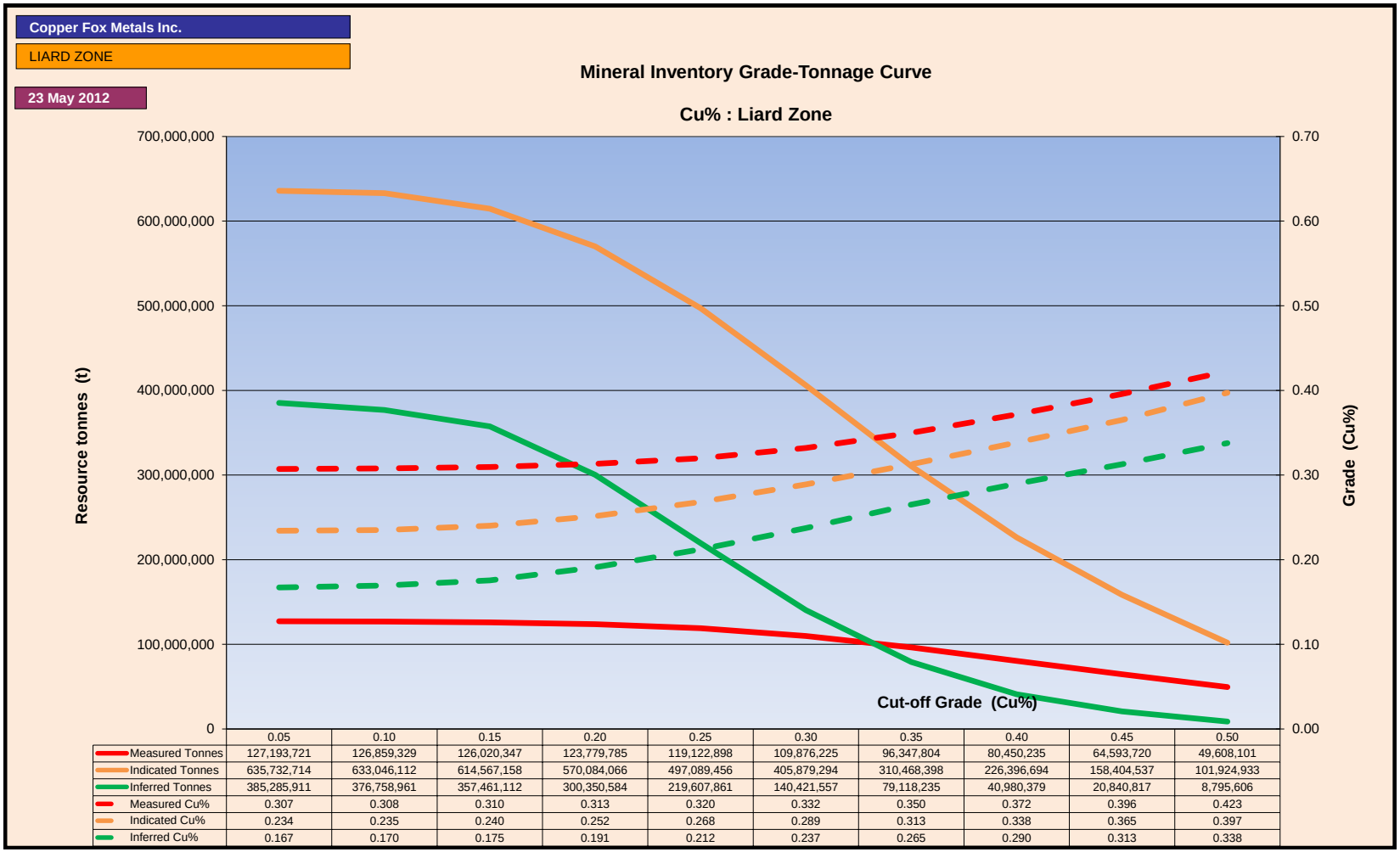
Note: Scale of 1:20,000.

14.12.3 GRADE – TONNAGE CURVES

Grade – Tonnage Curves were calculated for separate domains (Liard Zone and Paramount Zone) with respect to each resource classification. Representative curves for Cu% for the Liard Zone and Paramount Zone are depicted in Figure 14.30 and Figure 14.31 below, respectively. A complete set of these Grade – Tonnage Curves for all metals are presented in Appendix G.

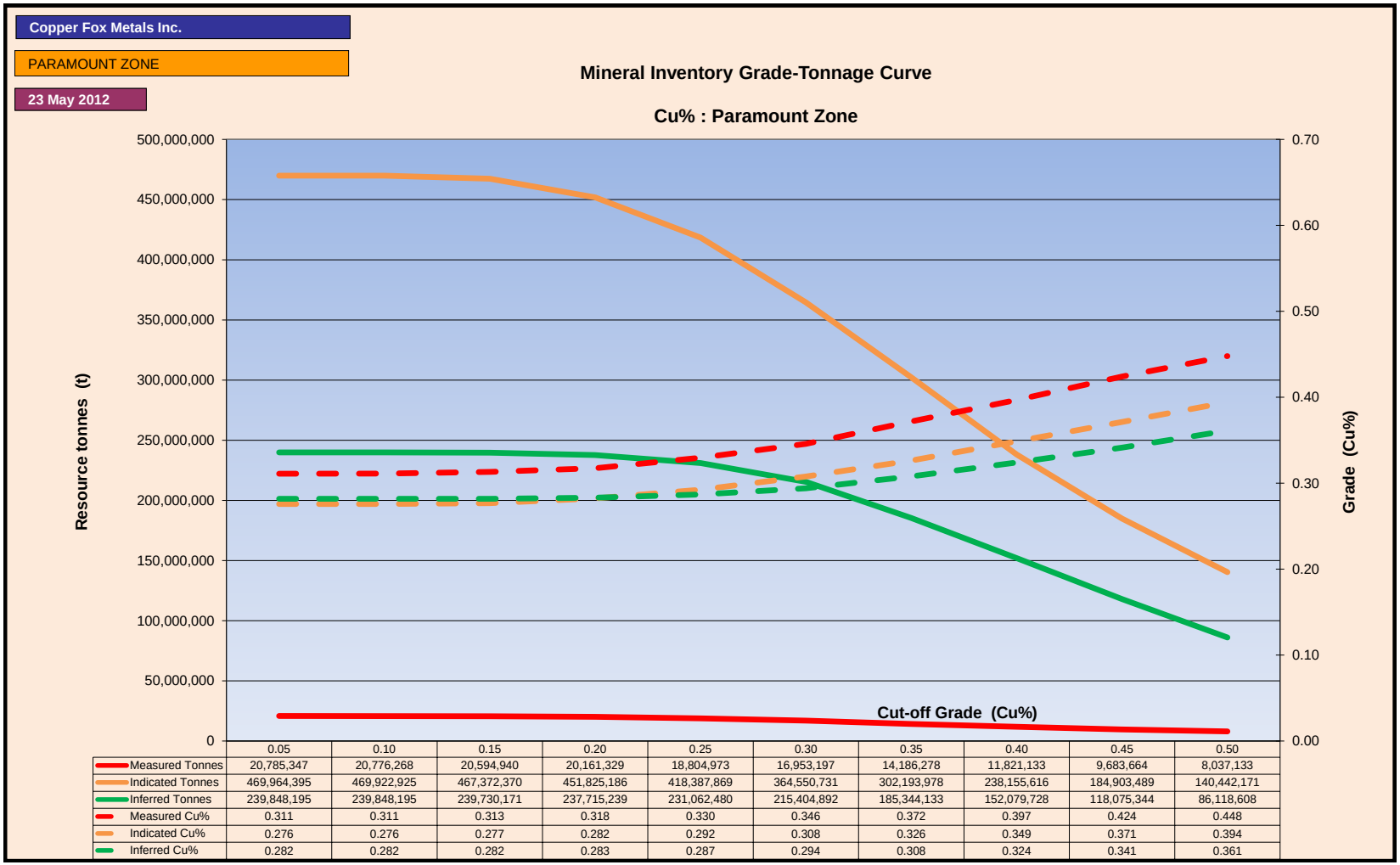
Note the prominent curves inflection at approximately 0.20 Cu%. This corresponds to the result of the 0.25 CuEq% indicator boundary wireframe, essentially excluding the influence of low grade assay data in cell grade interpolation.

Figure 14.30 Liard Zone Cu% Grade – Tonnage Curve



	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Measured Tonnes	127,193,721	126,859,329	126,020,347	123,779,785	119,122,898	109,876,225	96,347,804	80,450,235	64,593,720	49,608,101
Indicated Tonnes	635,732,714	633,046,112	614,567,158	570,084,066	497,089,456	405,879,294	310,468,398	226,396,694	158,404,537	101,924,933
Inferred Tonnes	385,285,911	376,758,961	357,461,112	300,350,584	219,607,861	140,421,557	79,118,235	40,980,379	20,840,817	8,795,606
Measured Cu%	0.307	0.308	0.310	0.313	0.320	0.332	0.350	0.372	0.396	0.423
Indicated Cu%	0.234	0.235	0.240	0.252	0.268	0.289	0.313	0.338	0.365	0.397
Inferred Cu%	0.167	0.170	0.175	0.191	0.212	0.237	0.265	0.290	0.313	0.338

Figure 14.31 Paramount Zone Cu% Grade – Tonnage Curve



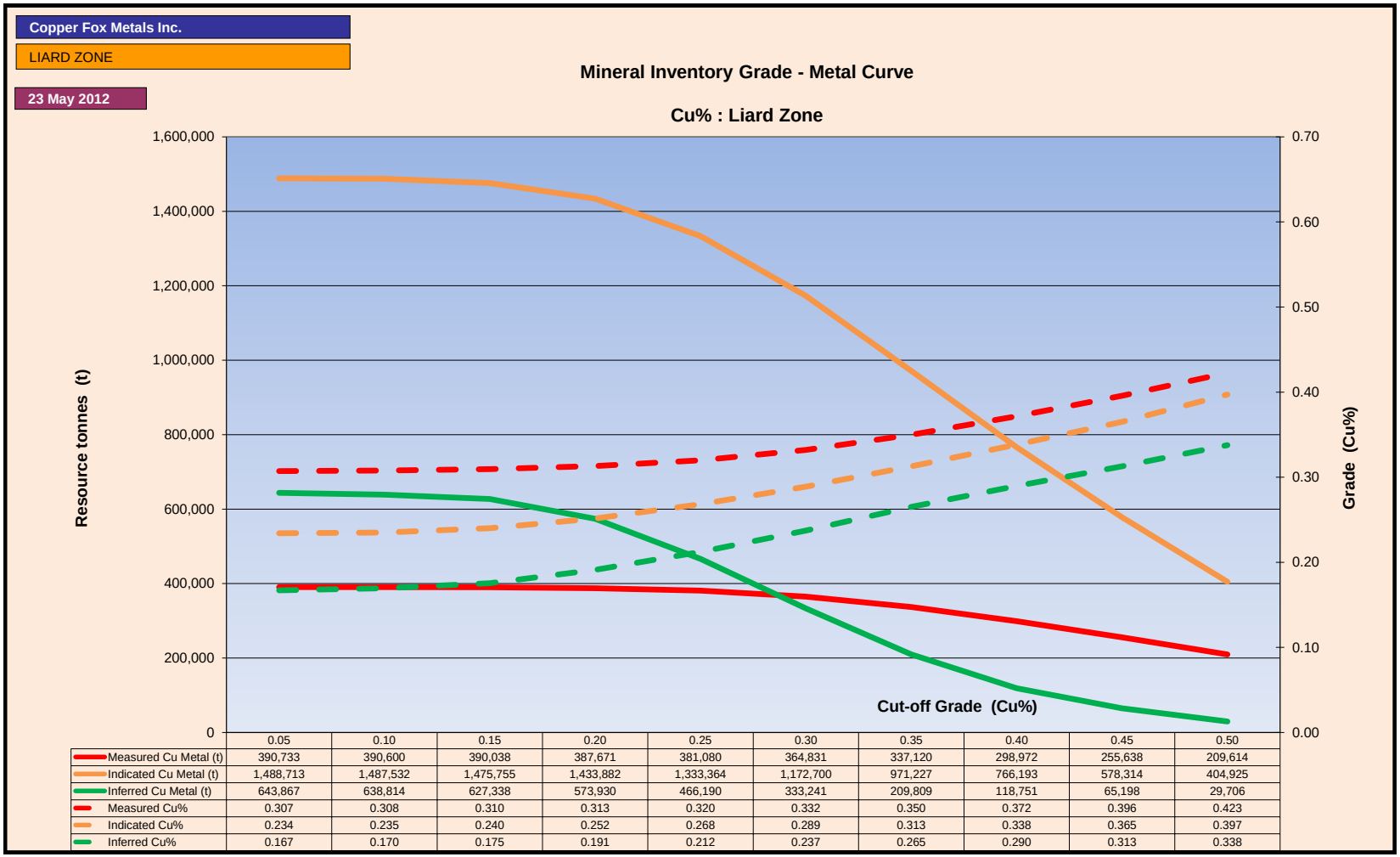
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Measured Tonnes	20,785,347	20,776,268	20,594,940	20,161,329	18,804,973	16,953,197	14,186,278	11,821,133	9,683,664	8,037,133
Indicated Tonnes	469,964,395	469,922,925	467,372,370	451,825,186	418,387,869	364,550,731	302,193,978	238,155,616	184,903,489	140,442,171
Inferred Tonnes	239,848,195	239,848,195	239,730,171	237,715,239	231,062,480	215,404,892	185,344,133	152,079,728	118,075,344	86,118,608
Measured Cu%	0.311	0.311	0.313	0.318	0.330	0.346	0.372	0.397	0.424	0.448
Indicated Cu%	0.276	0.276	0.277	0.282	0.292	0.308	0.326	0.349	0.371	0.394
Inferred Cu%	0.282	0.282	0.282	0.283	0.287	0.294	0.308	0.324	0.341	0.361

14.12.4 GRADE – METAL CURVES

Grade – Metal Curves were calculated for the two separate domains, Liard Zone and Paramount Zone, with respect to each resource classification. Representative curves for Cu% for the Liard and Paramount Zones are depicted in Figure 14.32 and Figure 14.33 below, respectively. A complete set of these Grade – Metal Curves for all metals are presented in Appendix H.

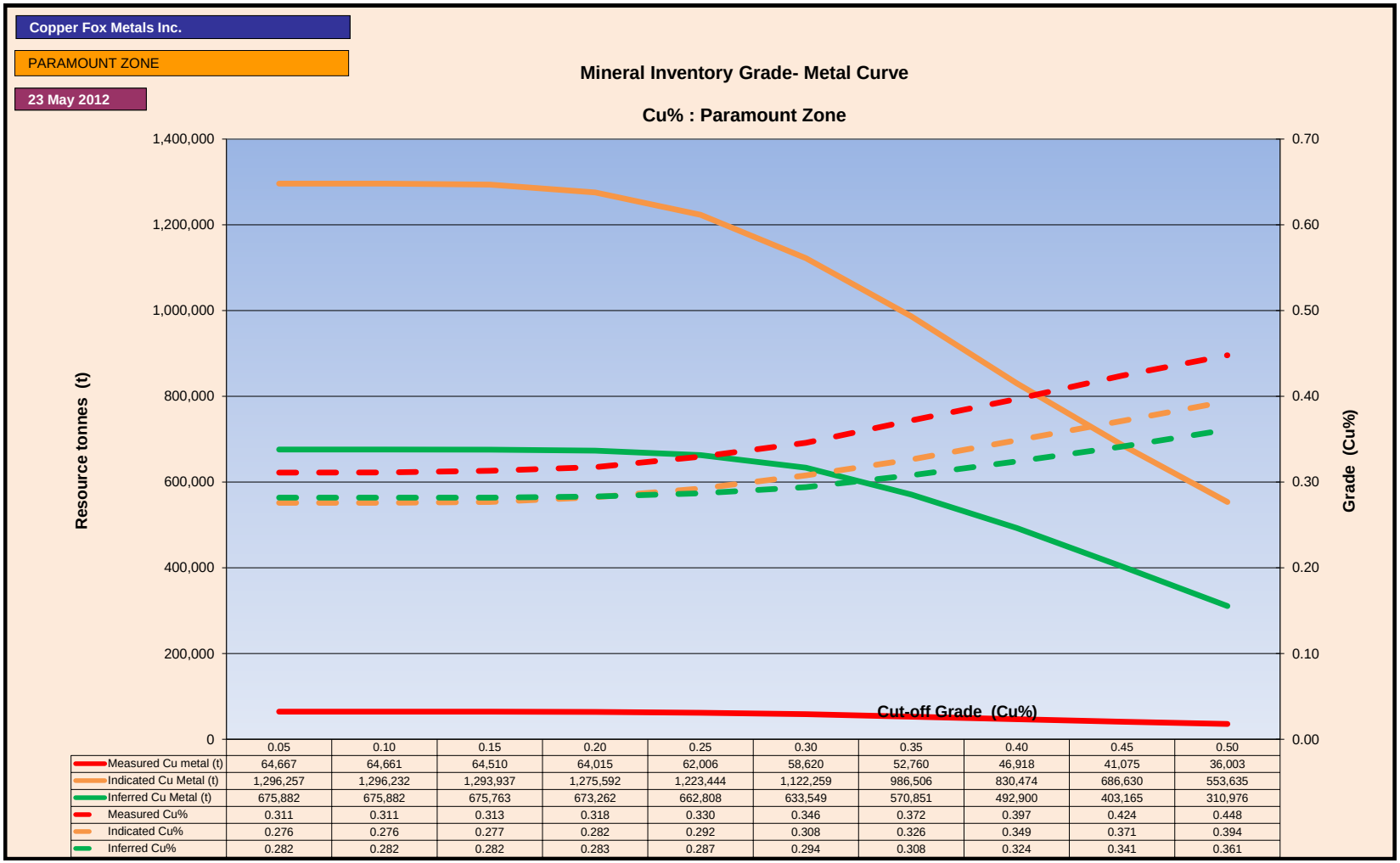
Note the prominent curves inflection at approximately 0.20 Cu%. This corresponds to the result of the 0.25 CuEq% indicator boundary wireframe, essentially excluding the influence of low-grade assay data in cell grade interpolation.

Figure 14.32 Liard Zone Cu% Grade – Metal Curves



	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Measured Cu Metal (t)	390,733	390,600	390,038	387,671	381,080	364,831	337,120	298,972	255,638	209,614
Indicated Cu Metal (t)	1,488,713	1,487,532	1,475,755	1,433,882	1,333,364	1,172,700	971,227	766,193	578,314	404,925
Inferred Cu Metal (t)	643,867	638,814	627,338	573,930	466,190	333,241	209,809	118,751	65,198	29,706
Measured Cu%	0.307	0.308	0.310	0.313	0.320	0.332	0.350	0.372	0.396	0.423
Indicated Cu%	0.234	0.235	0.240	0.252	0.268	0.289	0.313	0.338	0.365	0.397
Inferred Cu%	0.167	0.170	0.175	0.191	0.212	0.237	0.265	0.290	0.313	0.338

Figure 14.33 Paramount Zone Cu% Grade – Metal Curves



	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Measured Cu metal (t)	64,667	64,661	64,510	64,015	62,006	58,620	52,760	46,918	41,075	36,003
Indicated Cu Metal (t)	1,296,257	1,296,232	1,293,937	1,275,592	1,223,444	1,122,259	986,506	830,474	686,630	553,635
Inferred Cu Metal (t)	675,882	675,882	675,763	673,262	662,808	633,549	570,851	492,900	403,165	310,976
Measured Cu%	0.311	0.311	0.313	0.318	0.330	0.346	0.372	0.397	0.424	0.448
Indicated Cu%	0.276	0.276	0.277	0.282	0.292	0.308	0.326	0.349	0.371	0.394
Inferred Cu%	0.282	0.282	0.282	0.283	0.287	0.294	0.308	0.324	0.341	0.361

15.0 ADJACENT PROPERTIES

There are no material Adjacent Properties.

16.0 OTHER RELEVANT DATA AND INFORMATION

In 2010, Copper Fox retained Tetra Tech (the main contractor), Knight Piésold, Stantec, McElhanney, and BGC Engineering Inc. (BGC) to complete the feasibility study on the Schaft Creek deposit, with a minimum 120,000 t/d open pit mine. The feasibility study will incorporate the updated mineral resource estimate that is the subject of this report, as well as a mineral reserve estimate, revised capital cost and operating costs estimates and other technical, socioeconomic and financial aspects. The study is anticipated to be completed in 2012. Primary responsibilities for each contractor are as follows:

- Tetra Tech: site layout, pit optimization, mine planning, dilution studies, process mass balance, piping and electrical planning, maintenance and explosive facilities, road system, metallurgical process, mill design, expected mill recoveries, and options for transportation and shipping facilities of bulk concentrate for smelting and refining.
- Knight Piésold: open pit geotechnical and hydrogeological study, plant site geotechnical drilling, hydrometeorology study and mine site water balance, alignment for the transmission line to supply electrical power to site, tailing storage facility design, location of tailings pipeline, water reclamation designs for the mill, milling and maintenance facilities sites, various components of infrastructure, pit slope design and overall pit slope angle.
- McElhanney: road design and adjustments in areas where potential geo-hazards have been identified.
- BGC: potential geo-hazards assessment for the road and power line access to Schaft Creek.
- Stantec: assemble environmental data collected to date and prepare the EA application.

This technical report addresses all information relevant to the accompanying updated resource estimate, and does not include results from the ongoing feasibility study.

17.0 INTERPRETATION AND CONCLUSIONS

Tetra Tech was retained by Copper Fox to undertake a mineral resource update and accompanying NI 43-101 technical report on the Schaft Creek deposit. The QPs responsible for this work are Robert Morrison and Laura Karrei who are based in Toronto, Ontario.

A previous mineral resource update and technical report for the Schaft Creek deposit was completed by AMEC (Kulla et al. 2011). Tetra Tech concurs with the interpretations and conclusions in the AMEC report, including:

> *...mining tenure held by Copper Fox in the Project area is valid, and sufficient to support declaration of Mineral Resources.*
>
> *Sampling methods are acceptable, meet industry-standard practice, and are acceptable for Mineral Resource estimation purposes.*
>
> *The quality of the Copper Fox copper, gold, and molybdenum drill core and analytical data is reliable and that sample preparation, analysis, and security are generally performed in accordance with exploration best practices and industry standards.*
>
> *Legacy drill data have been validated by Copper Fox's re-logging and re-assay programs, and copper, molybdenum and gold data from these programs are reliable, and can be used to support Mineral Resource estimates.*

In comparison with the AMEC 2011 Schaft Creek Resource estimate of Kulla et al. (2011), there are some important differences with the Tetra Tech resource estimate that is the subject of this report:

- The Liard Zone and Paramount Zone were domained separately. Ongoing geological investigations by Copper Fox indicate that these two domains represent different styles of mineralization. These two zones are separated by a postulated northeast-southwest trending and steeply dipping fault.
- A 0.25% copper equivalent grade shell wireframe was generated to confine the extrapolation of grade in the Tetra Tech model. AMEC used a copper equivalent grade shell cut-off of 0.1% and molybdenum cut-off of 0.01%. Tetra Tech did not utilize a separate molybdenum grade shell for resource estimation.
- Tetra Tech's grade shell wireframe was initially completed using Leapfrog™ software and refined using Datamine™ software. The block model and resource estimate were completed using Datamine™ software.

- A composite length of 4 m was employed by Tetra Tech in comparison with AMEC's 15 m composite. This length was chosen to maximize the available samples for interpolation, while ensuring interpolations were not dominated by single drillholes (no more than three composites permitted for interpolation from a single drillhole).
- Silver was included in the resource estimate. Copper Fox completed sufficient re-assays of drill core to facilitate independent estimation of silver into the Tetra Tech block model.
- No linear regression calculation with copper was used in gold estimation. Gold was estimated independently of copper. AMEC used a basic regression equation, based on the correlation between copper and gold, to accommodate missing gold assays in their resource estimate. The problems inherent in this strategy are two-fold: (1) the correlation between copper and gold will introduce error to the gold resource estimate; and (2) copper is significantly less skewed than gold. Copper Fox completed sufficient re-assays of drill core to facilitate independent estimation of gold into the Tetra Tech block model.
- Density was estimated into the Tetra Tech resource model where practical. Top-cuts and bottom-cuts were applied to the density data set to remove spurious measurements. Densities were assigned to cells which could not be estimated.
- The F-Function and LaGrange Multiplier were estimated into cells (based on the copper grade) to facilitate the calculation of the KE and Z/Z* as a means to evaluate the quality of the Ordinary Kriged estimate.
- The Z/Z* was used to assign a resource classification. Measured was applied to cells with greater than 0.95 Z/Z*, Indicated was applied to cells with Z/Z* greater than 0.25 and less than 0.95, and Inferred was applied to cells with Z/Z* less than 0.25.

In Tetra Tech's opinion, the resulting block model and mineral resource estimate is a fair and reasonable representation of the Schaft Creek deposit. The model is sufficiently advanced and sophisticated to be used for a full mining feasibility study.

18.0 RECOMMENDATIONS

It is Tetra Tech's opinion that additional work expenditures are warranted, and two separate work programs are proposed. The execution of Phase II is contingent upon the results of Phase I.

18.1 PHASE 1 WORK PROGRAM

Phase I is designed to focus on exploring and delineating the new mineralized zones and chargeability anomalies identified in the Quantec Titan and High Resolution Magnetic surveys, and to infill drill part of the northern portion of the Paramount Zone in order to upgrade the resource category from inferred to indicated. Phase I will entail a combination of diamond drilling and geophysical surveying.

The exploration program should be designed to address the following objectives:

- Perform a Quantec Titan-24 survey as a follow-up to the previously completed surveys outlined in Section 9.0. The area to be targeted is between the GK and ES Zones and eastwards towards Mount LaCasse.
- Preliminary drilling into the Mike, GK and ES Zones to test the chargeability anomalies, which may represent additional zones of mineralization.
- Continue drilling into the Discovery Zone, situated approximately 1,200 m northwest of the deposit, as a follow-up to mineralization encountered in drillhole 2011CF422. While a considerable amount of drilling is required to delineate and determine the significance of this discovery, the continuity of the mineralization and its location on the western edge of a large strong chargeability anomaly suggests this zone could host significant mineralization.
- Perform infill drilling in the northern Paramount Zone to upgrade the resource category from indicated to inferred within that area of the proposed open pit.
- Perform drilling proximal to holes 2011CF423 and 2011CF424, as a follow-up to newly encountered mineralization. The area is located west of West Breccia Zone and outside of the currently defined deposit and western wall of the proposed open pit. Information gained could provide insight into the geological interpretation of the West Breccia Zone and could expand the mineral resource estimate.
- Perform drilling along the western margin of the proposed pit wall, proximal to the West Breccia Zone.

An estimated budget for Phase I is provided in Table 18.1 and details of proposed drillholes are summarized in Table 18.2. This is an estimation of costs, and is subject to change upon program execution.

Table 18.1 Estimated Budget for Phase I Work Program

Activity	Comments	Estimated Cost (CDN$)	
Quantec Titan-24 Survey	Follow-up to surveys performed in 2011 and 2012, cover area between GK and ES zones, and eastwards towards Mount LaCasse	30 line km, 100 m line spacing, interpretation, maps, etc.	$310,000
Drill untested chargeability anomalies identified in Quantec Titan-24 surveys	One drillhole into each of the zones (ES, GK, and Mike)	(3 drillholes)x (300 m)x($535/m)	$481,500
Drill test Discovery Zone	2 drillholes to follow-up on Titan-24 chargeability anomaly and mineralization encountered in drillhole 2011CF422	(2 drillholes)x(300 m each)x($535/m)	$321,000
Infill drilling in northern Paramount Zone	2 drillholes in northern part of Paramount Zone, proximal to 2011CF415, to increase resource from inferred to indicated, name TTProposed1 and TTProposed2 in Table 18.2	(2 drillholes)x(400 m)x ($535/m)	$428,000
Drilling proximal to mineralization intersected west of West Breccia Zone and the western margin of proposed pit wall	Proximal to drillholes 2011CF423 and 2011CF434, named TTProposed3 and TTProposed4 in Table 18.2	(2 drillholes)x(550 m)x ($535/m)	$588,500
Total	**-**	**-**	**$2,129,000**

Note: The estimate for drilling of $535/m includes the costs of freight, assaying, geological logging, drill contractor surcharges, etc. The value is representative of costs incurred during the 2011 drill program.

Table 18.2 Proposed Drillholes for Phase I Work Program

Drillhole Name	Coordinates (UTM, NAD 83, Zone 9)			Orientation		Length (m)	Comments
	Easting (m)	Northing (m)	Elevation (masl)	Azimuth (°)	Dip (°)		
TTProposed1	379420	6361250	1030	0	-90	200	Phase I - northern part of Paramount Zone, proximal to 2011CF415, purpose to increase resource from inferred to indicated
TTProposed2	379440	6361320	1055	0	-90	200	Phase I - northern part of Paramount Zone, proximal to 2011CF415, purpose to increase resource from inferred to indicated
TTProposed3	379190	6359620	865	275	-60	250	Phase I - west of Liard / West Breccia Zone, purpose to test mineralization intersected in nearby drillholes 2011CF423 and 2011CF424, mineralization in area currently not included in resource estimate
TTProposed4	379400	6359560	875	90	-50	300	Phase I - purpose to test for mineralization proximal to proposed pit wall at West Breccia Zone

18.2 PHASE II WORK PROGRAM

Pending positive results of Phase I, it is recommended that Copper Fox proceed to Phase II. Phase II is designed to further explore the GK, ES and Mike chargeability anomalies, and the area of mineralization west of the West Breccia Zone.

An estimated budget for Phase II is provided in Table 18.3 and details of proposed drillholes are summarized in Table 18.4. This is an estimation of costs, and is subject to change upon program execution.

Table 18.3 Estimated Budget for Phase II Work Program

Activity	Comments	Estimated Cost (CDN$)	
Drill chargeability anomalies identified in Quantec Titan-24 surveys	Follow-up drilling to Phase I for GK, ES, and Mike Zones, if successful	(6 drillholes)x (300 m)x($535/m)	$963,000
if Phase I of west wall of West Breccia Zone, further drilling (vertical holes making fence)	Fence of four drillholes, named TTProposed5 - TTProposed8 in Table 18.4	(4 drillholes)x (200 m)x($535/m)	$428,000
Total	**-**	**-**	**$1,391,000**

Note: The estimate for drilling of $535/m includes the costs of freight, assaying, geological logging, drill contractor surcharges, etc. The value is representative of costs incurred during the 2011 drill program.

Table 18.4 Proposed Drillholes for Phase II Work Program

Drillhole Name	Coordinates (UTM, NAD 83, Zone 9)			Orientation		Length (m)	Comments
	Easting (m)	Northing (m)	Elevation (masl)	Azimuth (°)	Dip (°)		
TTProposed5	379290	6359700	865	0	-90	200	Phase II - pending positive results of drillholes TTProposed3 and TTProposed4, drill fence of holes to test for continuous mineralization west of currently define resource (west of West Breccia Zone)
TTProposed6	379290	6359600	865	0	-90	200	Phase II - pending positive results of drillholes TTProposed3 and TTProposed4, drill fence of holes to test for continuous mineralization west of currently define resource (west of West Breccia Zone)

table continues…

Drillhole Name	Coordinates (UTM, NAD 83, Zone 9)			Orientation		Length (m)	Comments
	Easting (m)	Northing (m)	Elevation (masl)	Azimuth (°)	Dip (°)		
TTProposed7	379290	6359500	865	0	-90	200	Phase II - pending positive results of drillholes TTProposed3 and TTProposed4, drill fence of holes to test for continuous mineralization west of currently define resource (west of West Breccia Zone)
TTProposed8	379290	6359400	865	0	-90	200	Phase II - pending positive results of drillholes TTProposed3 and TTProposed4, drill fence of holes to test for continuous mineralization west of currently define resource (west of West Breccia Zone)

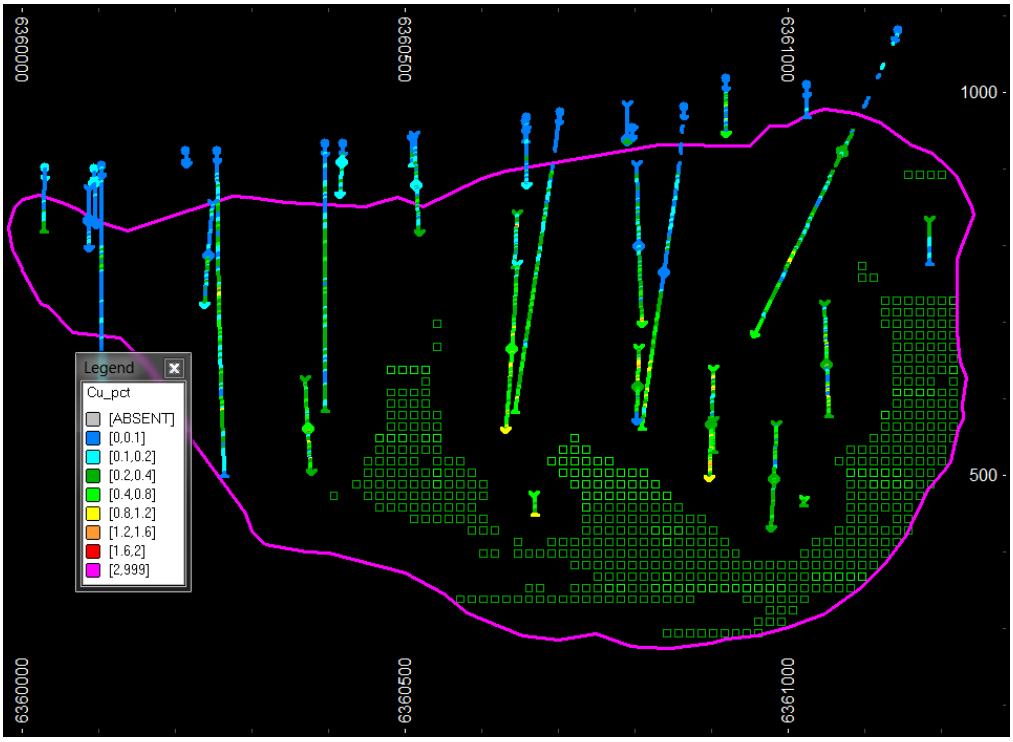
18.3 OTHER RECOMMENDATIONS

Other recommendations regarding database management and general procedures are:

- when using magnetic-based downhole survey instruments:
  - insert the magnetic field value into the database to later assess possibly questionable azimuths readings
  - record the magnetic declination used on either the original survey sheets or in the database to keep track of which values were used for the various drilling programs
  - consistently use the same magnetic declination per drilling program (inconsistently, values of either 21.2° or 21.23° were used in 2010)
- when a downhole survey reading is recorded in the database, but rejected from being considered a reliable value, record the reasoning behind that decision (e.g. magnetic field value was too high and reading taken too closely to rods, or instrument was in motion when was reading taken)

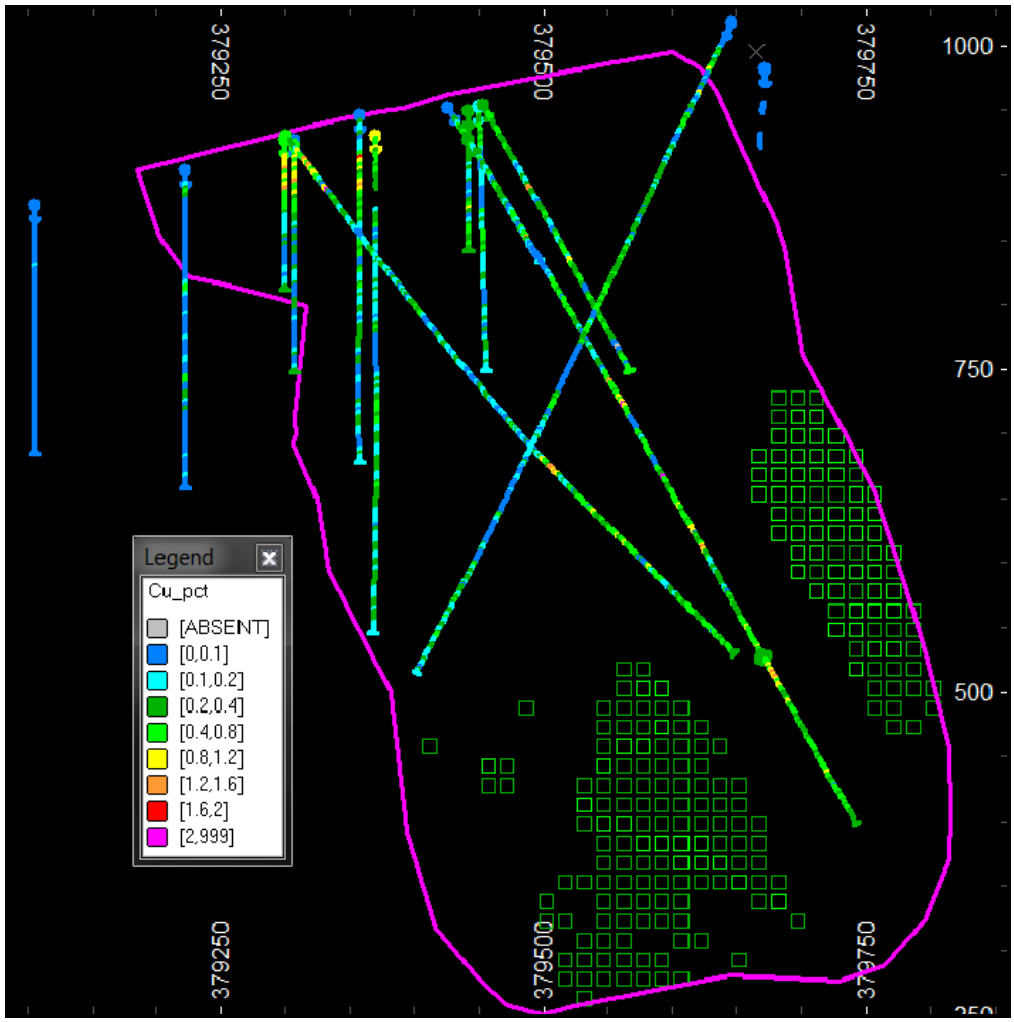
- when converting drillhole depth units from feet to metres, maintain a consistent conversion factor of 0.3048 and round the values to a consistent decimal place
- if a downhole station reading does not exist at the drillhole collar, maintain database consistency in assigning a value (e.g. either always use the planned azimuth or always extrapolate the shallowest station reading depth value upwards)
- collect additional specific gravity measurements and perform a review of spurious values in current dataset
- to test for possible high grade extensions at depth, and to develop a more robust resource estimate at depth, selectively drill deeper to avoid stopping holes in mineralization. This could be particularly beneficial for upgrading some of the mineralization currently classified as inferred. Potential targets for this objective are illustrated in Figure 18.1 and Figure 18.2. Cells shown in these two figures are classified as Inferred with copper equivalency greater than or equal to 0.5%, and drillholes and block model are shown with copper percent grade. Drillholes indicate copper grades are increasing at depth and terminate in mineralization.

Figure 18.1 Section 379650E – Paramount Zone



Note: South to left-hand side

Figure 18.2 Section 6360900 N – Paramount Zone



Note: West to left-hand side

It is recommended that Copper Fox consider completing a few deep diamond drillholes in these areas to test for higher grade mineralization at depth.

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WEBSITES

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World Climate website: www.worldclimate.com

Ministry of Energy and Mines of British Columbia website:
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20.0 CERTIFICATE OF QUALIFIED PERSON

ROBERT SINCLAIR MORRISON, PH.D., MAUSIMM (CP), P.GEO.

I, Robert Sinclair Morrison, Ph.D., MAusIMM (CP), P.Geo., of Toronto, Ontario, do hereby certify:

- I am a Lead Resource Geologist with Tetra Tech WEI Inc., with a business address at 900-330 Bay Street, Toronto, Ontario, Canada, M5H 2S8.
- This certificate applies to the technical report entitled "Technical Report and Resource Estimate on the Schaft Creek Cu-Au-Mo-Ag Project, BC, Canada", dated May 23, 2012 (the "Technical Report").
- I am a graduate of Acadia University, (B.Sc. 1981) and University of Adelaide (Ph.D. 1990). I am a Member in good standing of the Australasian Institute of Mining and Metallurgy (#11212), and I am registered as a Chartered Professional in Geology with the Australasian Institute of Mining and Metallurgy since 2004. I am a Member in good standing of the Association of Professional Geoscientists of Ontario (#1839) since 2010. My relevant experience with respect to deposit geology, ore body modelling and resource estimation includes 10 years with WMC Resources and Gold Fields Ltd as an Extensional Exploration Geologist, Senior Project Geologist, Resource Evaluation Geologist and Senior Resource Evaluation Geologist at the St Ives Gold Mine. I am a "Qualified Person" for purposes of National Instrument 43-101 (the "Instrument").
- I have not completed a personal inspection of the Property.
- I am responsible for Sections 1 to 11, and 13 to 20 of the Technical Report.
- I am independent of Copper Fox Metals Inc. as defined by Section 1.5 of the Instrument.
- I have no prior involvement with the Property that is the subject of the Technical Report.
- I have read the Instrument and the sections of the Technical Report that I am responsible for have been prepared in compliance with the Instrument.
- As of the date of this certificate, to the best of my knowledge, information and belief, the sections of the Technical Report that I am responsible for contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed and dated this 21st day of June, 2012 at Toronto, Ontario.

"Original document signed and sealed by
Robert Sinclair Morrison, Ph.D., MAusIMM (CP), P.Geo.

Robert Sinclair Morrison,Ph.D.,
MAusIMM (CP), P.Geo.
Lead Resource Geologist
Tetra Tech WEI Inc.

LAURA INARA KARREI, M.SC., P.GEO.

I, Laura Inara Karrei, M.Sc., P.Geo., of Toronto, Ontario, do hereby certify:

- I am a Geologist with Tetra Tech WEI Inc., with a business address at 900-330 Bay Street, Toronto, Ontario, M5H 2S8.
- This certificate applies to the technical report entitled "Technical Report and Resource Estimate on the Schaft Creek Cu-Au-Mo-Ag Project, BC, Canada", dated May 23, 2012 (the "Technical Report").
- I am a graduate of Carleton University (B.Sc. 2007) and the University of Toronto (M.Sc. 2008). I am a member in good standing of the Association of Professional Geoscientists of Ontario (#1972) since 2011. My relevant experience with respect to mineral exploration includes working as Project Geologist with Noront Resources Ltd. for their Ring of Fire projects in the James Bay Lowlands of northern Ontario, and as a consulting Geologist for other various exploration companies. I have planned and executed early-stage and advanced-stage exploration programs on shear-hosted gold, magmatic massive sulphides, massive chromite, U-REE carbonatite and V-Ti ferrogabbro projects. I have also worked as an Assistant Underground Production Geologist for Goldcorp Inc. at the Red Lake Gold Mine. I am a "Qualified Person" for purposes of National Instrument 43-101 (the "Instrument").
- My most recent personal inspection of the Property was on February 5, 2012 for two days.
- I am responsible for Section 12 of the Technical Report.
- I am independent of Copper Fox Metals Inc., as defined by Section 1.5 of the Instrument.
- I have no prior involvement with the Property that is the subject of the Technical Report.
- I have read the Instrument and the parts of the Technical Report that I am responsible for have been prepared in compliance with the Instrument.
- As of the date of this certificate, to the best of my knowledge, information and belief, the parts of the Technical Report that I am responsible for contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed and dated this 21st of June, 2012 at Toronto, Ontario

"Original document signed and sealed by
Laura Inara Karrei, M.Sc., P.Geo.

Laura Inara Karrei, M.Sc., P.Geo.
Geologist
Tetra Tech WEI Inc.

APPENDIX A

MINERAL TENURES

Tenure Number	Claim Name	Issue Date	Good To Date	Area (ha)	Date CUU Reported/ Acquired	Reported by or Acquired From	Mineral Titles Event	Purchase Price	Net Smelter Return Royalty	Partial NSR Buyout	CUU Shares
514595		2005/jun/16	2018/oct/30	1,653.04	2005/jun/16	Ablett	Conversion - Schedule A				
514596		2005/jun/16	2018/oct/30	1,550.96	2005/jun/16	Ablett	Conversion - Schedule A				
514598		2005/jun/16	2018/oct/30	1,412.62	2005/jun/16	Ablett	Conversion - Schedule A				
514603		2005/jun/16	2018/oct/30	1,291.06	2005/jun/16	Ablett	Conversion - Schedule A				
514637		2005/jun/17	2018/oct/30	1,256.71	2005/jun/17	Ablett	Conversion - Schedule A				
514721		2005/jun/17	2018/oct/30	1,169.95	2005/jun/17	Ablett	Conversion - Schedule A				
Teck Option Agreement				**8,334.34**							
514723		2005/jun/17	2018/oct/30	139.75	2005/jun/17	Ablett	Conversion - Guiziza 5				
514724		2005/jun/17	2018/oct/30	471.39	2005/jun/17	Ablett	Conversion - Guiziza 4				
514725		2005/jun/17	2018/oct/30	313.61	2005/jun/17	Ablett	Conversion - Guiziza 3				
514728		2005/jun/17	2018/oct/30	435.57	2005/jun/17	Ablett	Conversion - Guiziza 1&2				
515035		2005/jun/22	2018/oct/30	383.01	2005/jun/22	Ablett	Cell Acquisition				
515036		2005/jun/22	2018/oct/30	191.65	2005/jun/22	Ablett	Cell Acquisition				
548487	BLOCK B1	2007/jan/02	2018/jan/15	434.78	2007/jan/02	Ablett	Cell Acquisition				
548488	BLOCK B2	2007/jan/02	2018/jan/15	434.99	2007/jan/02	Ablett	Cell Acquisition				
548489	BLOCK B3	2007/jan/02	2018/jan/15	365.57	2007/jan/02	Ablett	Cell Acquisition				
548490	BLOCK B4	2007/jan/02	2018/jan/15	121.90	2007/jan/02	Ablett	Cell Acquisition				
548492	BLOCK C1	2007/jan/02	2018/jan/15	435.60	2007/jan/02	Ablett	Cell Acquisition				
548493	BLOCK C2	2007/jan/02	2018/jan/15	435.83	2007/jan/02	Ablett	Cell Acquisition				
548494	BLOCK C3	2007/jan/02	2018/jan/15	436.06	2007/jan/02	Ablett	Cell Acquisition				
548495	BLOCK C4	2007/jan/02	2018/jan/15	436.31	2007/jan/02	Ablett	Cell Acquisition				
548496	BLOCK C5	2007/jan/02	2018/jan/15	436.70	2007/jan/02	Ablett	Cell Acquisition				
548498	BLOCK C6	2007/jan/02	2018/jan/15	227.24	2007/jan/02	Ablett	Cell Acquisition				
548759	AREA A	2007/jan/05	2018/jan/15	365.06	2007/jan/05	Ablett	Cell Acquisition				
548764	AREA B1	2007/jan/05	2018/jan/15	366.04	2007/jan/05	Ablett	Cell Acquisition				
548766	AREA B2	2007/jan/05	2018/jan/15	418.11	2007/jan/05	Ablett	Cell Acquisition				
548767	AREA B3	2007/jan/05	2018/jan/15	435.38	2007/jan/05	Ablett	Cell Acquisition				
548768	AREA B4	2007/jan/05	2018/jan/15	435.60	2007/jan/05	Ablett	Cell Acquisition				
548769	AREA B5	2007/jan/05	2018/jan/15	418.19	2007/jan/05	Ablett	Cell Acquisition				
548770	AREA B6	2007/jan/05	2018/jan/15	418.19	2007/jan/05	Ablett	Cell Acquisition				
548771	AREA B7	2007/jan/05	2018/jan/15	418.19	2007/jan/05	Ablett	Cell Acquisition				
548772	AREA B8	2007/jan/05	2018/jan/15	418.19	2007/jan/05	Ablett	Cell Acquisition				
548760	AREA C1	2007/jan/05	2018/jan/05	436.90	2007/jan/05	Ablett	Cell Acquisition				
548761	AREA C2	2007/jan/05	2018/jan/05	437.12	2007/jan/05	Ablett	Cell Acquisition				

Tenure Number	Claim Name	Issue Date	Good To Date	Area (ha)	Date CUU Reported/ Acquired	Reported by or Acquired From	Mineral Titles Event	Purchase Price	Net Smelter Return Royalty	Partial NSR Buyout	CUU Shares
548762	AREA C3	2007/jan/05	2018/jan/05	367.41	2007/jan/05	Ablett	Cell Acquisition				
548763	AREA C4	2007/jan/05	2018/jan/05	122.54	2007/jan/05	Ablett	Cell Acquisition				
547789		2006/dec/21	2018/dec/21	418.70	2007/sep/26	Warren	Bill of Sale Completion				
547798		2006/dec/21	2018/dec/21	227.00	2007/sep/26	Warren	Bill of Sale Completion				
551325	AREA D1	2007/feb/06	2018/feb/06	435.18	2007/sep/26	Salazar	Bill of Sale Completion				
551326	AREA D2	2007/feb/06	2018/feb/06	435.17	2007/sep/26	Salazar	Bill of Sale Completion				
551328	AREA D3	2007/feb/06	2018/feb/06	417.71	2007/sep/26	Salazar	Bill of Sale Completion				
Acquired by CUU 2005-2007				**12,690.62**							
577025	SC SOUTH 1	2008/feb/23	2012/aug/23	437.83	2008/feb/23	Copper Fox	Cell Acquisition				
577026	SC SOUTH 2	2008/feb/23	2012/aug/23	438.04	2008/feb/23	Copper Fox	Cell Acquisition				
577028	SC SOUTH 3	2008/feb/23	2012/aug/23	438.24	2008/feb/23	Copper Fox	Cell Acquisition				
577031	SC SOUTH 4	2008/feb/23	2012/aug/23	438.49	2008/feb/23	Copper Fox	Cell Acquisition				
577033	SC SOUTH 5	2008/feb/23	2012/aug/23	438.73	2008/feb/23	Copper Fox	Cell Acquisition				
577034	SC SOUTH 6	2008/feb/23	2012/aug/23	438.94	2008/feb/23	Copper Fox	Cell Acquisition				
577037	SC SOUTH 7	2008/feb/23	2012/aug/23	439.02	2008/feb/23	Copper Fox	Cell Acquisition				
577039	SC SOUTH 8	2008/feb/23	2012/aug/23	438.88	2008/feb/23	Copper Fox	Cell Acquisition				
577042	SC SOUTH 9	2008/feb/23	2012/aug/23	438.90	2008/feb/23	Copper Fox	Cell Acquisition				
				3,947.06							
517462		2005/jul/12	2012/dec/30	17.44	2011/mar/18	Greig/Kreft	Bill of Sale Completion				
569460	GREATER KOPPER	2007/nov/05	2012/dec/30	2,769.10	2011/mar/18	Greig/Kreft	Bill of Sale Completion				
				2,786.53				$250,000	2%	1%/$1,500,000	1,250,000
521312	SCHAFT 1	2005/oct/18	2012/dec/30	191.78	2011/mar/31	Pembrook Mining	Bill of Sale Completion				
				191.78				$350,000	2%	1%/$1,500,000	
854488	SILVER FOX 86	2011/may/13	2012/may/13	366.56	2011/sep/15	Marko/Mott	Bill of Sale Completion				
854495	SILVER FOX 87	2011/may/13	2012/may/13	366.27	2011/sep/15	Marko/Mott	Bill of Sale Completion				
854513	SILVER FOX 89	2011/may/14	2012/may/14	157.18	2011/sep/15	Marko/Mott	Bill of Sale Completion				
854523	WHITE RABBIT 90	2011/may/14	2012/may/14	208.93	2011/sep/15	Marko/Mott	Bill of Sale Completion				
854536	SILVER FOX 91	2011/may/14	2012/may/14	156.94	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855206	PTARMIGAN 93	2011/may/18	2012/may/18	208.77	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855207	PTARMIGAN 95	2011/may/18	2012/may/18	278.34	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855348	WHITE RABBIT 92	2011/may/21	2012/may/21	104.43	2011/sep/15	Marko/Mott	Bill of Sale Completion				

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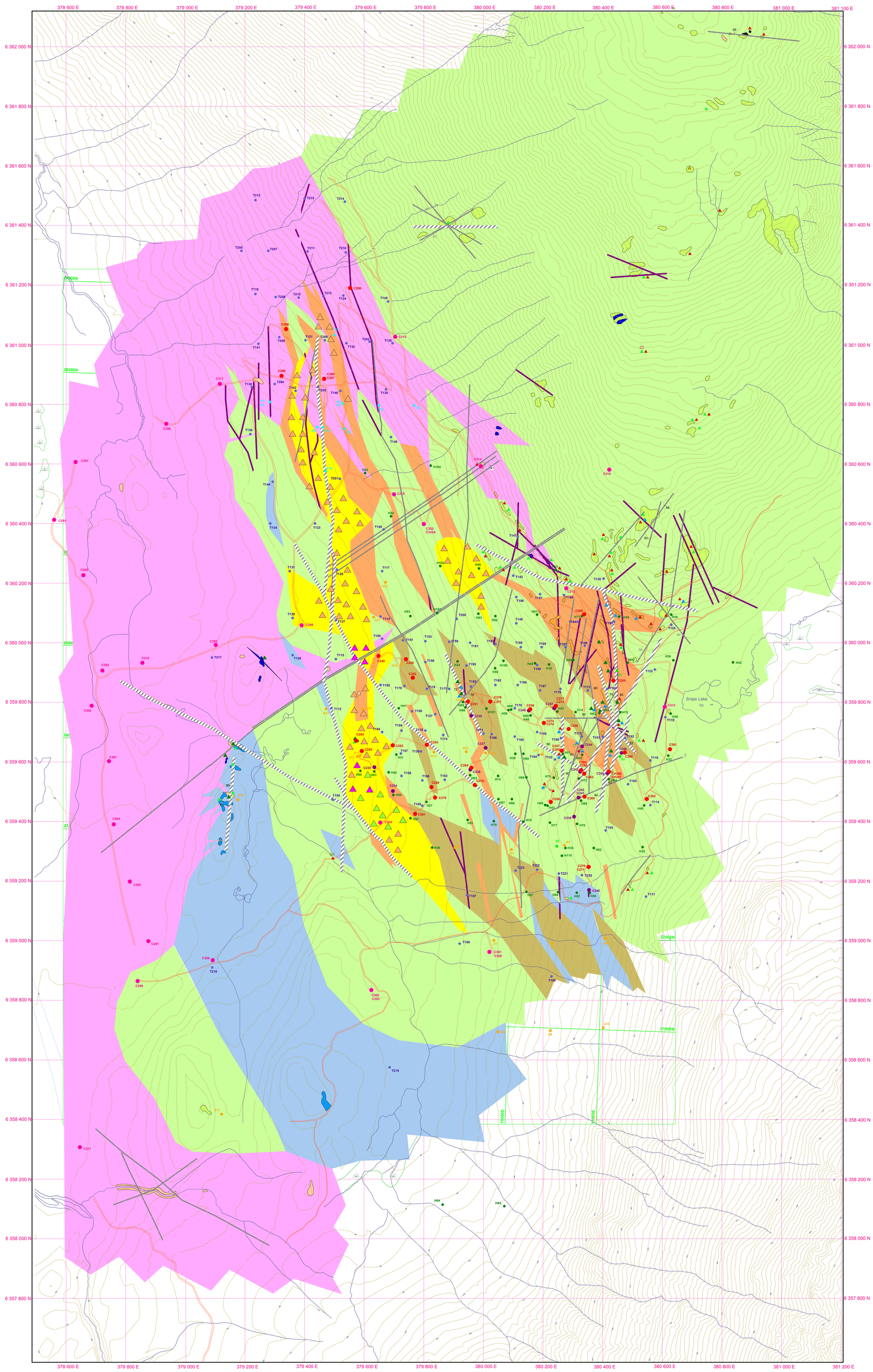
855461	PTARMIGAN 97	2011/may/24	2012/may/24	104.37	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855735	WHITE RABBIT 101	2011/may/26	2012/may/26	191.50	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855736	WHITE RABBIT 102	2011/may/26	2012/may/26	139.31	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855842	PTARMIGAN 103	2011/may/27	2012/may/27	104.39	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855868	TERN 120	2011/may/30	2012/may/30	295.40	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855869	TERN 121	2011/may/30	2012/may/30	34.75	2011/sep/15	Marko/Mott	Bill of Sale Completion				
855872	TERN 103	2011/may/30	2012/may/30	138.75	2011/sep/15	Marko/Mott	Bill of Sale Completion				
856232	SILVER FOX 118	2011/jun/03	2012/jun/03	139.73	2011/sep/15	Marko/Mott	Bill of Sale Completion				
856238	SILVER FOX 119	2011/jun/03	2012/jun/03	157.23	2011/sep/15	Marko/Mott	Bill of Sale Completion				
856450	ELK 151	2011/jun/08	2012/jun/08	105.02	2011/sep/15	Marko/Mott	Bill of Sale Completion				
856464	ELK 152	2011/jun/08	2012/jun/08	69.98	2011/sep/15	Marko/Mott	Bill of Sale Completion				
856487	ELK152	2011/jun/09	2012/jun/09	157.52	2011/sep/15	Marko/Mott	Bill of Sale Completion				
856673	ELK 153	2011/jun/10	2012/jun/10	174.99	2011/sep/15	Marko/Mott	Bill of Sale Completion				
857427	ELK 154	2011/jun/21	2012/jun/21	279.93	2011/sep/15	Marko/Mott	Bill of Sale Completion				
857428	ELK 155	2011/jun/21	2012/jun/21	70.00	2011/sep/15	Marko/Mott	Bill of Sale Completion				
857528	ELK 156	2011/jun/22	2012/jun/22	122.49	2011/sep/15	Marko/Mott	Bill of Sale Completion				
862647	ELK 158	2011/jul/04	2012/jul/04	140.01	2011/sep/15	Marko/Mott	Bill of Sale Completion				
865007	TERN 125	2011/jul/07	2012/jul/07	243.13	2011/sep/15	Marko/Mott	Bill of Sale Completion				
865167	TERN 127	2011/jul/08	2012/jul/08	242.96	2011/sep/15	Marko/Mott	Bill of Sale Completion				
865328	ELK 166	2011/jul/09	2012/jul/09	175.03	2011/sep/15	Marko/Mott	Bill of Sale Completion				
865619	ELK 167	2011/jul/11	2012/jul/11	140.05	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866050	TERN 128	2011/jul/13	2012/jul/13	104.25	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866517	TERN 130	2011/jul/18	2012/jul/18	138.78	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866518	TERN 131	2011/jul/18	2012/jul/18	208.14	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866536	TERN 132	2011/jul/18	2012/jul/18	208.01	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866630	TERN 131	2011/jul/19	2012/jul/19	51.99	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866669	TERN 133	2011/jul/20	2012/jul/20	69.35	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866670	TERN 134	2011/jul/20	2012/jul/20	34.72	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866671	TERN 135	2011/jul/20	2012/jul/20	17.33	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866677	TERN 135	2011/jul/20	2012/jul/20	17.33	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866678	TERN 136	2011/jul/20	2012/jul/20	86.82	2011/sep/15	Marko/Mott	Bill of Sale Completion				
866889	TERN 137	2011/jul/20	2012/jul/20	17.34	2011/sep/15	Marko/Mott	Bill of Sale Completion				
884429	GOLD BEAR	2011/aug/07	2012/aug/07	87.10	2011/sep/15	Marko/Mott	Bill of Sale Completion				
				6,115.11				$20,000	2%	1%/$1,000,000	25,200
895838	EAGLE 800	2011/sep/01	2012/sep/01	245.20	2012/mar/14	Marko/Mott	Bill of Sale Completion				
895839	EAGLE 801	2011/sep/01	2012/sep/01	332.73	2012/mar/14	Marko/Mott	Bill of Sale Completion				
895840	EAGLE 802	2011/sep/01	2012/sep/01	157.56	2012/mar/14	Marko/Mott	Bill of Sale Completion				

Tenure Number	Claim Name	Issue Date	Good To Date	Area (ha)	Date CUU Reported/ Acquired	Reported by or Acquired From	Mineral Titles Event	Purchase Price	Net Smelter Return Royalty	Partial NSR Buyout	CUU Shares
895841	EAGLE 803	2011/sep/01	2012/sep/01	315.27	2012/mar/14	Marko/Mott	Bill of Sale Completion				
895842	EAGLE 804	2011/sep/01	2012/sep/01	175.06	2012/mar/14	Marko/Mott	Bill of Sale Completion				
896151	EAGLE 805	2011/sep/06	2012/sep/06	52.52	2012/mar/14	Marko/Mott	Bill of Sale Completion				
896152	EAGLE 806	2011/sep/06	2012/sep/06	35.02	2012/mar/14	Marko/Mott	Bill of Sale Completion				
896353	EAGLE 807	2011/sep/09	2012/sep/09	140.08	2012/mar/14	Marko/Mott	Bill of Sale Completion				
896516	EAGLE 808	2011/sep/11	2012/sep/11	140.07	2012/mar/14	Marko/Mott	Bill of Sale Completion				
896517	EAGLE 809	2011/sep/11	2012/sep/11	105.05	2012/mar/14	Marko/Mott	Bill of Sale Completion				
900649	EAGLE 810	2011/sep/25	2012/sep/25	210.14	2012/mar/14	Marko/Mott	Bill of Sale Completion				
908069	TERN AROUND	2011/oct/08	2012/oct/08	69.50	2012/mar/14	Marko/Mott	Bill of Sale Completion				
910209	TERN AROUND	2011/oct/12	2012/oct/12	121.46	2012/mar/14	Marko/Mott	Bill of Sale Completion				
910229	TERN AROUND	2011/oct/12	2012/oct/12	121.55	2012/mar/14	Marko/Mott	Bill of Sale Completion				
927669	TERN LEFT	2011/nov/01	2012/nov/01	69.51	2012/mar/14	Marko/Mott	Bill of Sale Completion				
928489	TERN WEST	2011/nov/08	2012/nov/08	69.49	2012/mar/14	Marko/Mott	Bill of Sale Completion				
936631	EAGLE 815	2011/dec/07	2012/dec/07	262.10	2012/mar/14	Marko/Mott	Bill of Sale Completion				
946510	EAGLE 816	2012/feb/06	2013/feb/06	384.35	2012/mar/14	Marko/Mott	Bill of Sale Completion				
949269	EAGLE 812	2012/feb/14	2013/feb/14	262.89	2012/mar/14	Marko/Mott	Bill of Sale Completion				
949270	EAGLE 811	2012/feb/14	2013/feb/14	315.47	2012/mar/14	Marko/Mott	Bill of Sale Completion				
950890	EAGLE 814	2012/feb/20	2013/feb/20	105.06	2012/mar/14	Marko/Mott	Bill of Sale Completion				
952292	EAGLE 813	2012/feb/23	2013/feb/23	438.15	2012/mar/14	Marko/Mott	Bill of Sale Completion				
952293	EAGLE 817	2012/feb/23	2013/feb/23	350.34	2012/mar/14	Marko/Mott	Bill of Sale Completion				
953131	EAGLE 818	2012/feb/27	2013/feb/27	263.01	2012/mar/14	Marko/Mott	Bill of Sale Completion				
				4,741.55				$25,000	2%	1%/$1,000,000	
880149	BONANZA	2011/aug/03	2012/aug/03	350.26	2012/mar/13	Ruza	Bill of Sale Completion	$7,000	1%	$250,000	
880189	BONANZA1	2011/aug/03	2012/aug/03	350.42	2012/mar/13	Ruza	Bill of Sale Completion				
				700.68							
955309	TERN NORTH	2012/mar/04	2013/mar/04	225.3319	2012/may/01	Marko/Mott	Bill of Sale Completion				
961029	NORTH TERN 2	2012/mar/13	2013/mar/13	416.2977	2012/may/01	Marko/Mott	Bill of Sale Completion				
961049	NORT TERN 3	2012/mar/13	2013/mar/13	381.9542	2012/may/01	Marko/Mott	Bill of Sale Completion				
961110	SILVER EAGLE 900	2012/mar/13	2013/mar/13	280.4076	2012/may/01	Marko/Mott	Bill of Sale Completion				
964509	SILVER EAGLE 902	2012/mar/16	2013/mar/16	140.1358	2012/may/01	Marko/Mott	Bill of Sale Completion				
964529	SILVER EAGLE 903	2012/mar/16	2013/mar/16	332.823	2012/may/01	Marko/Mott	Bill of Sale Completion				
965029	SILVER EAGLE 901	2012/mar/17	2013/mar/17	105.2024	2012/may/01	Marko/Mott	Bill of Sale Completion				
968529	SILVER EAGLE 904	2012/mar/21	2013/mar/21	367.9731	2012/may/01	Marko/Mott	Bill of Sale Completion				
969349	SILVER EAGLE 905	2012/mar/21	2013/mar/21	385.2511	2012/may/01	Marko/Mott	Bill of Sale Completion				
969369	SILVER EAGLE 906	2012/mar/21	2013/mar/21	140.183	2012/may/01	Marko/Mott	Bill of Sale Completion				
970769	SILVER RABBIT	2012/mar/24	2013/mar/24	435.0489	2012/may/01	Marko/Mott	Bill of Sale Completion				

Tenure Number	Claim Name	Issue Date	Good To Date	Area (ha)	Date CUU Reported/ Acquired	Reported by or Acquired From	Mineral Titles Event	Purchase Price	Net Smelter Return Royalty	Partial NSR Buyout	CUU Shares
970789	SILVER RABBIT 2	2012/mar/24	2013/mar/24	347.9524	2012/may/01	Marko/Mott	Bill of Sale Completion				
971953	TERN SOUTH	2012/mar/26	2013/mar/26	208.6899	2012/may/01	Marko/Mott	Bill of Sale Completion				
971956	TERN SOUTH 2	2012/mar/26	2013/mar/26	382.3436	2012/may/01	Marko/Mott	Bill of Sale Completion				
971957	TERN SOUTH 3	2012/mar/26	2013/mar/26	104.355	2012/may/01	Marko/Mott	Bill of Sale Completion				
978394	SOUTH TERN 4	2012/apr/06	2013/apr/06	260.8388	2012/may/01	Marko/Mott	Bill of Sale Completion				
				4,514.79				$25,000	2%	1%/$1,000,000	
866909	JUSKATLA RESOURCES 2	2011/jul/20	2012/jul/20	104.2799	2012/may/14	Patterson	Bill of Sale Completion				
900609	JUSKATLA RESOURCES 3	2011/sep/25	2012/sep/25	17.3566	2012/may/14	Patterson	Bill of Sale Completion				
900629	JUSKATLA RESOURCE 4	2011/sep/25	2012/sep/25	34.6717	2012/may/14	Patterson	Bill of Sale Completion				
903029	JUSKATLA RESOURCES 5	2011/sep/28	2012/sep/28	17.3584	2012/may/14	Patterson	Bill of Sale Completion				
903049	JUSKATL RESOIURCES 6	2011/sep/28	2012/sep/28	17.3308	2012/may/14	Patterson	Bill of Sale Completion				
903069	JUSKATLA RESOURCES 7	2011/sep/28	2012/sep/28	34.6917	2012/may/14	Patterson	Bill of Sale Completion				
903089	JUSKATLA RESOURCES 8	2011/sep/28	2012/sep/28	17.3742	2012/may/14	Patterson	Bill of Sale Completion				
				243.0633				$5,000			
Total CUU Mineral Tenures				**44,265.52**							

APPENDIX B

GEOLOGICAL MAPS



copper FOX metals inc.

LEGEND

Diamond Drill Holes

- C305 — Copper Fox Metals, 2007: 30 holes, 5,311 meters
- C253 — Copper Fox Metals, 2006: 42 holes, 9,009 meters
- C234 — Copper Fox Metals, 2005: 15 holes, 3,160 meters
- T184 — Teck Corp, 1980-1981: 118 holes, 26,000 meters
- H69 — Hecla Mining Co., 1968-77: 76 holes, 34,500 meters
- P5 — Hecla-Paramount, 1968-73: 11 holes, 2,852 meters
- A23 — Asarco, 1966-67: 26 holes, 4,268 meters
- S2 — Silver Standard, pre 1966: 3 holes, 628 meters

Lithology

- Tmid — Mafic/Intermediate Dike. Phyric - aphyric andesite to basalt +- pyroxene. Tertiary and older.
- EJtbx — Tourmaline Breccia, quartz-epidote-chlorite-tourmaline pyrite matrix with xenoliths of feldspar-quartz porphyry, granodiorite and andesitic rocks. Late Triassic to early Jurassic.
- LTvns — Vein systems, includes stockworks, sets, crackle veins of of quartz, chlorite, carbonate and sulphide. Late Triassic early to Jurassic.
- LTHfqp — Feldspar-Quartz Porphyry, related to Hickman batholith, late phase. Late Triassic to early Jurassic.
- LTHdr — Diorite, related to Hickman Pluton, outer margin. Late Triassic to early Jurassic.
- LTHgr — Hickman batholith, suite of intrusive rocks,monzonite, quartz monzonite, granodiorite. Late Triassic to early Jurassic.
- LTSvs — Volcanoclastics, includes, tuff, lapilli tuff, breccia and derived sediments. Stuhini Group, lateTriassic.
- LTSav — Andesite volcanics, Stuhini Group, late Triassic.
- LTSap — Augite Porphyry, lower Stuhini Group, late Triassic.

Breccia Inclusion Lithology

- Andesite - Stuhini Group
- Felsic Intrusive - Hickman Suite
- Feldspar Quartz Porphyry - Hickman Suite

Alteration

- Chlorite Alteration - moderate to strong
- Epidote Alteration - moderate to strong
- Hematite Alteration - moderate to strong
- Malachite Staining - minor to moderate
- Gossan - strong rusting, oxidation

Structure

- Fault Zone-Shear Zone (dip)
- Fault (dip)
- Intense Fracturing

Symbols

- Outcrop with indicated dominant lithology
- Primary Trails
- River Channels
- Lakes
- Swamps
- NAD 83 UTM Grid
- Buildings
- Runway

Grid Legend

UTM 9V, NAD 83, 200 METER GRID

0 50 100 150 200 meters

SCALE 1:5000

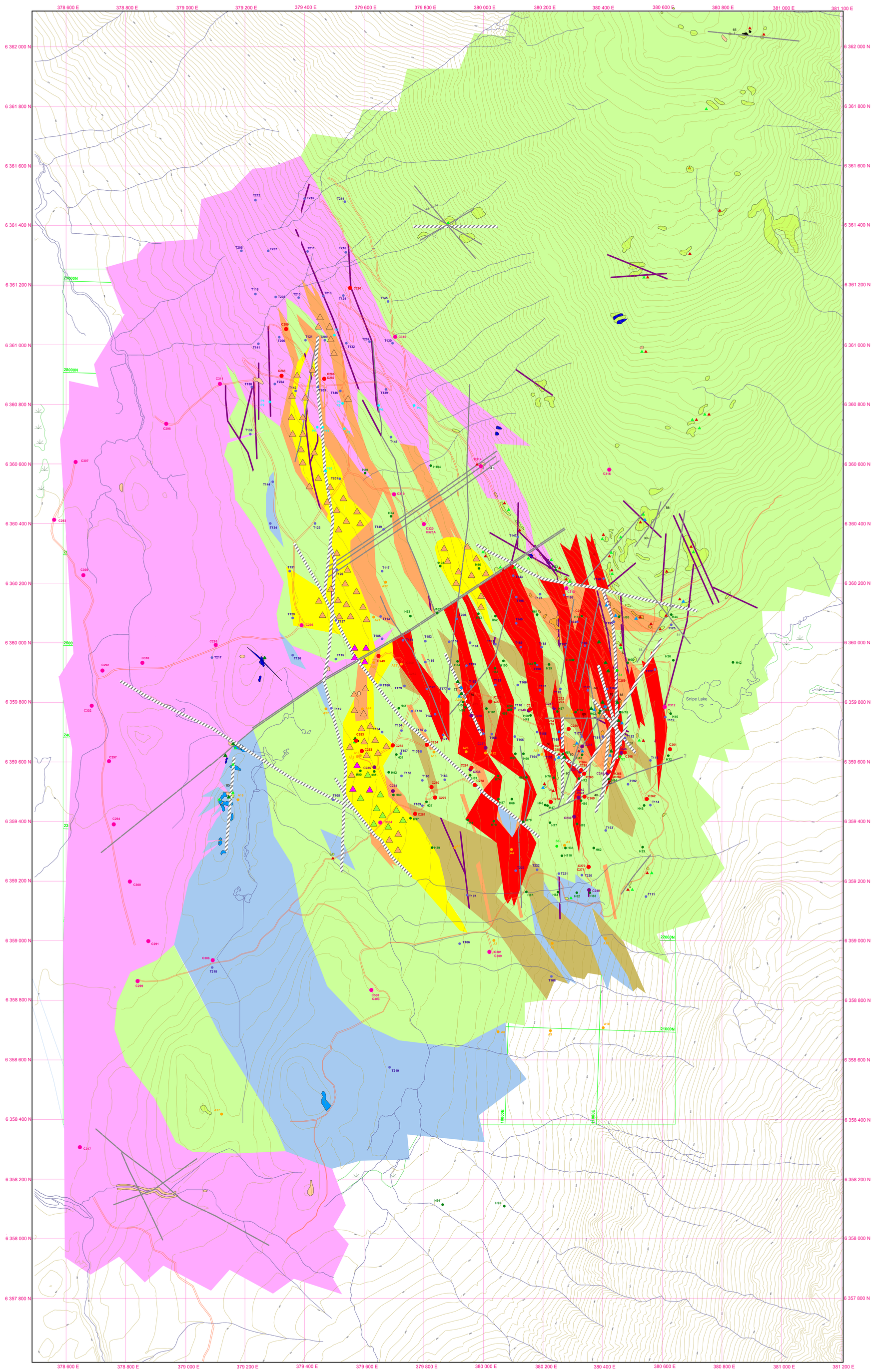
Topographic Contour Spacing: 5m

Copper Fox Metals Inc.

SCHAFT CREEK DEPOSIT

Geological Plan
Bedrock

NTS 104 G/6 & 7	57- 22 N lat / 131-00 W long
Mapping by: W.Hanych and S.Ewanchuk	Scale 1:5000
Comp and CAD by: W.Hanych and S.Ewanchuk	October 2007
	Figure D-1



copper FOX metals inc.

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- Swamps
- NAD 83 UTM Grid
- Buildings
- Runway

Grid Legend

UTM 9V, NAD 83, 200 METER GRID

0 50 100 150 200 meters

SCALE 1:5000

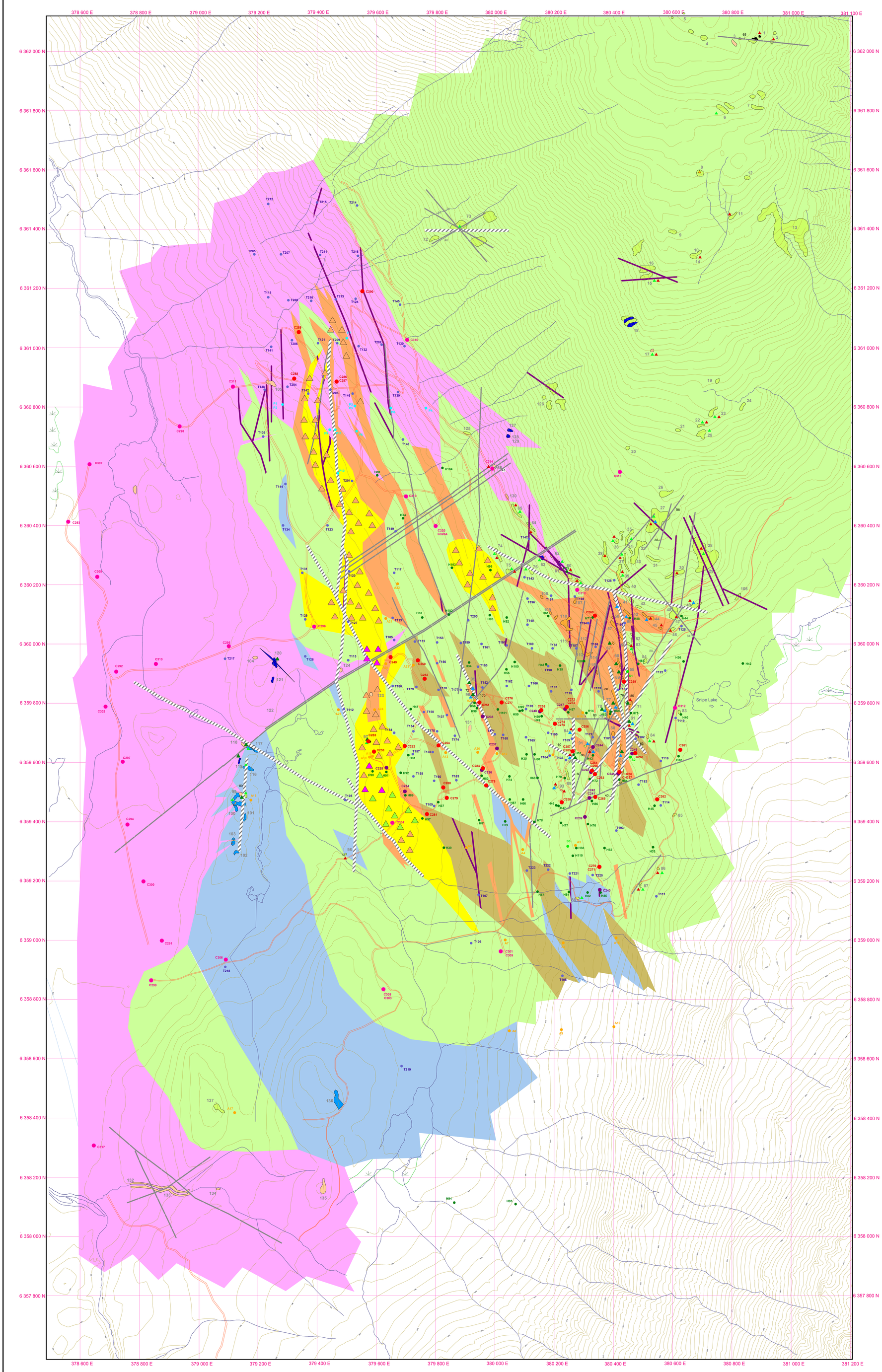
Topographic Contour Spacing: 5m

Copper Fox Metals Inc.

SCHAFT CREEK DEPOSIT

Geological Plan and Projection to Bedrock of Vein Systems

NTS 104 G/6 & 7	57- 22 N lat / 131-00 W long
Mapping by: W.Hanych and S.Ewanchuk	Scale 1:5000
Comp and CAD by: W.Hanych and S.Ewanchuk	October 2007
	Figure D-2



copper FOX metals inc.

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- LTHdr — Diorite, related to Hickman Pluton, outer margin. Late Triassic to early Jurassic.
- LTHgr — Hickman batholith, suite of intrusive rocks,monzonite, quartz monzonite, granodiorite. Late Triassic to early Jurassic.
- LTSvs — Volcanoclastics, includes, tuff, lapilli tuff, breccia and derived sediments. Stuhini Group, lateTriassic.
- LTSav — Andesite volcanics, Stuhini Group, late Triassic.
- LTSap — Augite Porphyry, lower Stuhini Group, late Triassic.

Breccia Inclusion Lithology

- Andesite - Stuhini Group
- Felsic Intrusive - Hickman Suite
- Feldspar Quartz Porphyry - Hickman Suite

Alteration

- Chlorite Alteration - moderate to strong
- Epidote Alteration - moderate to strong
- Hematite Alteration - moderate to strong
- Malachite Staining - minor to moderate
- Gossan - strong rusting, oxidation

Structure

- Fault Zone-Shear Zone (dip)
- Fault (dip)
- Intense Fracturing

Symbols

- Outcrop with indicated dominant lithology and ID
- Primary Trails
- River Channels
- Lakes
- Swamps
- NAD 83 UTM Grid
- Buildings
- Runway

Grid Legend

UTM 9V, NAD 83, 200 METER GRID

0 50 100 150 200 meters

SCALE 1:5000

Topographic Contour Spacing: 5m

Copper Fox Metals Inc.

SCHAFT CREEK DEPOSIT

Geological Plan
Bedrock

NTS 104 G/6 & 7	57- 22 N lat / 131-00 W long
Mapping by: W.Hanych and S.Ewanchuk	Scale 1:5000
Comp and CAD by: W.Hanych and S.Ewanchuk	October 2007
	Figure D-3

APPENDIX C

SCHAFT CREEK DATAMINE MACRO MAY 2012

```
#####################################################################
#
#     Tetra Tech Wardrop
#     Toronto, Ontario
#
#     Block Model Resource Estimation
#     For
#     Copper Fox Resources Limited
#
#############################################################
#
#     Version 1:  April 4, 2012
#     Version 2:  April 20, 2012 - addition of alteration domains
#     Version 3:  May 01, 2012 - changing indicator wireframes...
#
#####################################################################

#     By
#     Robert Morrison
#
#####################################################################

#     This macro creates the
#     (1) desurveyed drill hole file,
#     (2) block model, and then does an
#     (3) estimate with the block model.
#
#     Estimates Cu, Mo, Au and Ag grade into the cells.
#
#_____________________________________________________________________
#
#     Files In:
#     ---------
#     Drill hole data - collar, survey, assay and litho
#
#     Wireframes are listed in the NI43-101 resource report.
#
#     Files Out:
#     ----------
#     holes1-d - raw drill holes
#     ore1_tc-d - raw drill holes with top cuts applied
#     ore1_tc-c - composited drill holes with top cuts applied
#     waste-m (waste model)
#     ore-m (pre-mineralized block model with sub-cells)
#
#
#####################################################################



#############################################################
#
#     CREATE DRILLHOLE FILE
#
#############################################################
```

```
!START drill


!HOLES3D  &COLLAR(cf_collar),&SURVEY(cf_survey),
          &SAMPLE1(cf_assay),&SAMPLE2(density),&OUT(holes1-d),
         *BHID(BHID),*XCOLLAR(XCOLLAR),*YCOLLAR(YCOLLAR),
          *ZCOLLAR(ZCOLLAR),*FROM(FROM),*TO(TO),*AT(AT),
          *BRG(AZIMUTH),*DIP(DIP),@SURVSMTH=1.0,@ENDPOINT=0.0,
          @DIPMETH=-1.0

!EXTRA    &IN(holes1-d),&OUT(xxholes1-d),@APPROX=0.0
               Cu_1 = (cu_pct*2.97*22.0462)
               Cu_2 = (mo_pct*0.609*16.80*22.0462)
               Cu_3 = (au_gt*0.706/31.1035*1256.00)
               Cu_4 = (ag_gt*0.434/31.1035*20.38)
               Cu_5 = Cu_1+Cu_2+Cu_3+Cu_4
               cu_eq = (Cu_5/2.97/22.0462)
            erase (Cu_1)
            erase (Cu_2)
            erase (Cu_3)
            erase (Cu_4)
            erase (Cu_5)
                GO

############################################################

!SELWF    &IN(xxholes1-d),&WIRETR(laird_cueq025tr),&WIREPT(laird_cueq025pt),
          &OUT(xx2-d),*X(X),*Y(Y),*Z(Z),@SELECT=3.0,
          @EXCLUDE=0.0,@TOLERANC=0.001

!EXTRA    &IN(xx2-d),&OUT(xx9-d),@APPROX=0.0
      rock=3
      GO

!SORTX    &IN(xx9-d),&OUT(ore3-d),*KEY1(BHID),*KEY2(FROM),
          @BINS=5.0,@ORDER=1.0

############################################################

!SELWF    &IN(xxholes1-d),&WIRETR(para_cueq025tr),&WIREPT(para_cueq025pt),
          &OUT(xx2-d),*X(X),*Y(Y),*Z(Z),@SELECT=3.0,
          @EXCLUDE=0.0,@TOLERANC=0.001

!EXTRA    &IN(xx2-d),&OUT(xx9-d),@APPROX=0.0
      rock=4
      GO

!SORTX    &IN(xx9-d),&OUT(ore4-d),*KEY1(BHID),*KEY2(FROM),
          @BINS=5.0,@ORDER=1.0

#########################################################################

!HOLMER   &IN1(ore3-d),&IN2(ore4-d),&OUT(xx9-d),*BHID(BHID),*FROM(FROM),
          *TO(TO)

!SORTX    &IN(xx9-d),&OUT(ore1-d),*KEY1(BHID),*KEY2(FROM),
          @BINS=5.0,@ORDER=1.0
```

```
############################################################


!EXTRA    &IN(ore1-d),&OUT(ore1_tc-d),@APPROX=0.0
      if(ag_gt>=18)
      ag_gt=18
      end
      if(au_gt>=2)
      au_gt=2
      end
      if(cu_pct>=1.8)
      cu_pct=1.8
      end
      if(mo_pct>=0.25)
      mo_pct=0.25
      end
      if(density>=3.8)
      density=(absent())
      end
      if(density<=1.5)
      density=(absent())
      end
      GO

!COMPDH   &IN(ore1_tc-d),&OUT(xx9-d),*BHID(BHID),*FROM(FROM),
          *TO(TO),*ZONE(rock),@INTERVAL=4.0,@MAXGAP=0.0,
          @START=0.0,@MODE=0.0

!SORTX    &IN(xx9-d),&OUT(ore1_tc-c),*KEY1(BHID),*KEY2(FROM),
          @BINS=5.0,@ORDER=1.0

!LISTDR XX?,&OUT(XX)
!DELETE &IN(XX),@CONFIRM=0.0
!END

################################################################
#
#     CREATE BASIC BLOCK MODEL
#
################################################################

!START block

!PROTOM   &OUT(proto_15-m),@ROTMOD=0.0
      N
      Y
      378400
      6357700
      0
      15
      15
      15
      200
      267
      120
```

```
!TRIFIL   &PROTO(proto_15-m),&WIRETR(topotr),
          &WIREPT(topopt),&MODEL(xx2-m),@MODLTYPE=3.0,
          @MAXDIP=0.0,@SPLITS=0.0,@PLANE='XY  ',@XSUBCELL=3.0,
          @YSUBCELL=3.0,@ZSUBCELL=3.0,@RESOL=5.0

!EXTRA    &IN(xx2-m),&OUT(xx1-m),@APPROX=0.0
      rock=1
      density=2.00
      mstatus=1
      rescat=0
      GO

!SORTX    &IN(xx1-m),&OUT(ovb-m),*KEY1(IJK),@BINS=5.0,@ORDER=1.0

!TRIFIL   &PROTO(proto_15-m),&WIRETR(base_ovbtr),
          &WIREPT(base_ovbpt),&MODEL(xx3-m),@MODLTYPE=3.0,
          @MAXDIP=0.0,@SPLITS=0.0,@PLANE='XY  ',@XSUBCELL=3.0,
          @YSUBCELL=3.0,@ZSUBCELL=3.0,@RESOL=5.0

!EXTRA    &IN(xx3-m),&OUT(xx1-m),@APPROX=0.0
      rock=2
      density=2.69
      mstatus=1
      rescat=0
      GO

!SORTX    &IN(xx1-m),&OUT(fresh-m),*KEY1(IJK),@BINS=5.0,@ORDER=1.0

!ADDMOD   &IN1(ovb-m),&IN2(fresh-m),&OUT(xx1-m),@TOLERNCE=0.001

!SORTX    &IN(xx1-m),&OUT(rock-m),*KEY1(IJK),*KEY2(rock),@BINS=5.0,
          @ORDER=1.0

#####################################################################
#
#     BASIC MODEL COMPLETED WITH OVERBURDEN & FRESH ROCK
#
#     ROCK-M.DM
#
#####################################################################

!START zones

!COPY     &IN(rock-m),&OUT(xx2-m),rock=2.0

!SELWF    &IN(xx2-m),&WIRETR(laird_cueq025tr),&WIREPT(laird_cueq025pt),
          &OUT(xxore2-m),*X(XC),*Y(YC),*Z(ZC),@SELECT=3.0,
          @EXCLUDE=0.0,@TOLERANC=0.001

!EXTRA    &IN(xxore2-m),&OUT(xx3-m),@APPROX=0.0
      rock=3
      GO

!SORTX    &IN(xx3-m),&OUT(ore1-m),*KEY1(IJK),*KEY2(rock),
          @BINS=5.0,@ORDER=1.0
```

```
#####################################################################

!COPY     &IN(rock-m),&OUT(xx2-m),rock=2.0

!SELWF    &IN(xx2-m),&WIRETR(para_cueq025tr),&WIREPT(para_cueq025pt),
          &OUT(xxore2-m),*X(XC),*Y(YC),*Z(ZC),@SELECT=3.0,
          @EXCLUDE=0.0,@TOLERANC=0.001

!EXTRA    &IN(xxore2-m),&OUT(xx3-m),@APPROX=0.0
      rock=4
      GO

!SORTX    &IN(xx3-m),&OUT(ore2-m),*KEY1(IJK),*KEY2(rock),
          @BINS=5.0,@ORDER=1.0

!ADDMOD   &IN1(rock-m),&IN2(ore2-m),&OUT(xx1-m),@TOLERNCE=0.001
!ADDMOD   &IN1(xx1-m),&IN2(ore1-m),&OUT(xx2-m),@TOLERNCE=0.001

!SORTX    &IN(xx2-m),&OUT(orerock-m),*KEY1(IJK),*KEY2(rock),@BINS=5.0,
          @ORDER=1.0

#####################################################################
#
#     Alteration wireframes...  HFLD1tr/pt and HFLD2tr/pt

!SELWF    &IN(orerock-m),&WIRETR(hfld1tr),&WIREPT(hfld1pt),
          &OUT(xxalt1-m),*X(XC),*Y(YC),*Z(ZC),@SELECT=3.0,
          @EXCLUDE=0.0,@TOLERANC=0.001

!SELWF    &IN(orerock-m),&WIRETR(hfld2tr),&WIREPT(hfld2pt),
          &OUT(xxalt2-m),*X(XC),*Y(YC),*Z(ZC),@SELECT=3.0,
          @EXCLUDE=0.0,@TOLERANC=0.001

!EXTRA    &IN(xxalt2-m),&OUT(xx2-m),@APPROX=0.0
      alt=2
      GO

!EXTRA    &IN(xxalt1-m),&OUT(xx1-m),@APPROX=0.0
      alt=1
      GO

!SORTX    &IN(xx2-m),&OUT(xxb-m),*KEY1(IJK),*KEY2(rock),
          @BINS=5.0,@ORDER=1.0

!SORTX    &IN(xx1-m),&OUT(xxa-m),*KEY1(IJK),*KEY2(rock),
          @BINS=5.0,@ORDER=1.0

!ADDMOD   &IN1(xxa-m),&IN2(xxb-m),&OUT(xxalt-m),@TOLERNCE=0.001
!ADDMOD   &IN1(orerock-m),&IN2(xxalt-m),&OUT(total-m),@TOLERNCE=0.001

#####################################################################



#####################################################################
#
```

```
#     BASIC MODEL COMPLETED WITH ORE
#
#     TOTAL-M.DM - HAS ALTERATION (1 & 2) AND ZONE (1 & 2)
#     AND IT ALSO HAS ROCK (1 & 2 & 3 & 4)
#
#####################################################################

!LISTDR XX?,&OUT(XX)
!DELETE &IN(XX),@CONFIRM=0.0
#!END


#########################################################################
#
#     Estimation for Laird Zone (rock = 3)
#
#########################################################################
!START nozon

!COPY     &IN(total-m),&OUT(xxore1-m),rock=3.0


!ESTIMA   &PROTO(xxore1-m),&IN(ore1_tc-c),&SRCPARM(laird1_spar),
          &ESTPARM(laird_epar),&MODEL(xx2-m),&VMODPARM(laird1_vpar),
          *X(X),*Y(Y),*Z(Z),*KEY(BHID),@DISCMETH=1.0,@XPOINTS=3.0,
          @YPOINTS=3.0,@ZPOINTS=3.0,@XDSPACE=1.0,@YDSPACE=1.0,
          @ZDSPACE=1.0,@PARENT=1.0,@MINDISC=1.0,@COPYVAL=0.0,
          @FVALTYPE=1.0,@FSTEP=1.0,@XMIN=378400.0,@XMAX=388390.0,
          @YMIN=6357700.0,@YMAX=6361705.0,@ZMIN=0.0,@ZMAX=1800.0,
          @XSUBCELL=1.0,@YSUBCELL=1.0,@ZSUBCELL=1.0,@LINKMODE=3.0,
          @UCSAMODE=2.0,@UCSBMODE=3.0,@UCSCMODE=2.0,@PLANE=1.0,
          @TOLRNC=0.0,@GRMETHOD=3.0,@PGFIELDS=0.0,@ORDER=3.0

!SORTX    &IN(xx2-m),&OUT(xx3-m),*KEY1(IJK),
          @BINS=5.0,@ORDER=1.0


!EXTRA    &IN(xx3-m),&OUT(rescat-m)
            BV=1-F
            KE=(BV-KV)/BV*100
            ZZ=(BV-KV+abs(LG))/(BV-KV+2*abs(LG))
            GO

!EXTRA    &IN(rescat-m),&OUT(xx8-m)
            rescat=3
            if(ZZ>=0.25)
            rescat=2
            end
            if(ZZ>=0.95)
            rescat=1
            end
            GO

!EXTRA    &IN(xx8-m),&OUT(xx7-m)
            if(density==absent())
            density=2.69
            end
```

```
            if(cu_ok==absent())
            cu_ok=0
            end
            if(mo_ok==absent())
            mo_ok=0
            end
            if(au_ok==absent())
            au_ok=0
            end
            if(ag_ok==absent())
            ag_ok=0
            end
            if(cu_ok<0)
            cu_ok=0
            end
            GO

!EXTRA    &IN(xx7-m),&OUT(xx6-m),@APPROX=0.0
                Cu_1 = (cu_ok*2.97*22.0462)
                Cu_2 = (mo_ok*0.609*16.80*22.0462)
                Cu_3 = (au_ok*0.706/31.1035*1256.00)
                Cu_4 = (ag_ok*0.434/31.1035*20.38)
                Cu_5 = Cu_1+Cu_2+Cu_3+Cu_4
                cu_eq = (Cu_5/2.97/22.0462)
            erase (Cu_1)
            erase (Cu_2)
            erase (Cu_3)
            erase (Cu_4)
            erase (Cu_5)
                GO


!SORTX    &IN(xx6-m),&OUT(cf_rock3-m),*KEY1(IJK),*KEY2(zone),
          @BINS=5.0,@ORDER=1.0


###########################################################################
#
#     Estimation for Paramount Zone (rock = 4)
#
###########################################################################

!COPY     &IN(total-m),&OUT(xxore2-m),rock=4.0

!ESTIMA   &PROTO(xxore2-m),&IN(ore1_tc-c),&SRCPARM(para1_spar),
          &ESTPARM(para_epar),&MODEL(xx2-m),&VMODPARM(para1_vpar),
          *X(X),*Y(Y),*Z(Z),*KEY(BHID),@DISCMETH=1.0,@XPOINTS=3.0,
          @YPOINTS=3.0,@ZPOINTS=3.0,@XDSPACE=1.0,@YDSPACE=1.0,
          @ZDSPACE=1.0,@PARENT=1.0,@MINDISC=1.0,@COPYVAL=0.0,
          @FVALTYPE=1.0,@FSTEP=1.0,@XMIN=378400.0,@XMAX=388390.0,
          @YMIN=6357700.0,@YMAX=6361705.0,@ZMIN=0.0,@ZMAX=1800.0,
          @XSUBCELL=1.0,@YSUBCELL=1.0,@ZSUBCELL=1.0,@LINKMODE=3.0,
          @UCSAMODE=2.0,@UCSBMODE=3.0,@UCSCMODE=2.0,@PLANE=1.0,
          @TOLRNC=0.0,@GRMETHOD=3.0,@PGFIELDS=0.0,@ORDER=3.0

!SORTX    &IN(xx2-m),&OUT(xx3-m),*KEY1(IJK),
          @BINS=5.0,@ORDER=1.0
```

```
!EXTRA    &IN(xx3-m),&OUT(rescat-m)
            BV=1-F
            KE=(BV-KV)/BV*100
            ZZ=(BV-KV+abs(LG))/(BV-KV+2*abs(LG))
            GO

!EXTRA    &IN(rescat-m),&OUT(xx8-m)
            rescat=3
            if(ZZ>=0.25)
            rescat=2
            end
            if(ZZ>=0.95)
            rescat=1
            end
            GO

!EXTRA    &IN(xx8-m),&OUT(xx7-m)
            if(density==absent())
            density=2.69
            end
            if(cu_ok==absent())
            cu_ok=0
            end
            if(mo_ok==absent())
            mo_ok=0
            end
            if(au_ok==absent())
            au_ok=0
            end
            if(ag_ok==absent())
            ag_ok=0
            end
            if(cu_ok<0)
            cu_ok=0
            end
            GO

!EXTRA    &IN(xx7-m),&OUT(xx6-m),@APPROX=0.0
                Cu_1 = (cu_ok*2.97*22.0462)
                Cu_2 = (mo_ok*0.609*16.80*22.0462)
                Cu_3 = (au_ok*0.706/31.1035*1256.00)
                Cu_4 = (ag_ok*0.434/31.1035*20.38)
                Cu_5 = Cu_1+Cu_2+Cu_3+Cu_4
                cu_eq = (Cu_5/2.97/22.0462)
            erase (Cu_1)
            erase (Cu_2)
            erase (Cu_3)
            erase (Cu_4)
            erase (Cu_5)
                GO


!SORTX    &IN(xx6-m),&OUT(cf_rock4-m),*KEY1(IJK),*KEY2(zone),
          @BINS=5.0,@ORDER=1.0
```

```
##############################################################################

!ADDMOD   &IN1(cf_rock3-m),&IN2(cf_rock4-m),
          &OUT(xx1-m),@TOLERNCE=0.001

!SORTX    &IN(xx1-m),&OUT(cf_mike3_2012-
m),*KEY1(IJK),*KEY2(rock),*KEY3(rescat),
          @BINS=5.0,@ORDER=1.0

############################################################

!ADDMOD   &IN1(total-m),&IN2(cf_mike3_2012-m),
          &OUT(xx3-m),@TOLERNCE=0.001

!SORTX    &IN(xx3-m),&OUT(cf_may_2012_final-m),*KEY1(IJK),*KEY2(rock),
          *KEY3(rescat),@BINS=5.0,@ORDER=1.0

!LISTDR XX?,&OUT(XX)
!DELETE &IN(XX),@CONFIRM=0.0
!END

##############################################################################

!START nnid

#
#     Nearest Neighbour AND Inverse Distance Squared _ Laird Zone (Rock = 3)
#     ____________________________________________

!COPY     &IN(cf_mike3_2012-m),&OUT(xxore1-m),rock=3.0


!ESTIMA   &PROTO(xxore1-m),&IN(ore1_tc-c),&SRCPARM(laird1_spar),
          &ESTPARM(laird_idnn_epar),&MODEL(xx2-m),&VMODPARM(laird1_vpar),
          *X(X),*Y(Y),*Z(Z),*KEY(BHID),@DISCMETH=1.0,@XPOINTS=3.0,
          @YPOINTS=3.0,@ZPOINTS=3.0,@XDSPACE=1.0,@YDSPACE=1.0,
          @ZDSPACE=1.0,@PARENT=1.0,@MINDISC=1.0,@COPYVAL=0.0,
          @FVALTYPE=1.0,@FSTEP=1.0,@XMIN=378400.0,@XMAX=388390.0,
          @YMIN=6357700.0,@YMAX=6361705.0,@ZMIN=0.0,@ZMAX=1800.0,
          @XSUBCELL=1.0,@YSUBCELL=1.0,@ZSUBCELL=1.0,@LINKMODE=3.0,
          @UCSAMODE=2.0,@UCSBMODE=3.0,@UCSCMODE=2.0,@PLANE=1.0,
          @TOLRNC=0.0,@GRMETHOD=3.0,@PGFIELDS=0.0,@ORDER=3.0

!SORTX    &IN(xx2-m),&OUT(xxidnn1-m),*KEY1(IJK),
          @BINS=5.0,@ORDER=1.0

##############################################################################
####

#     Nearest Neighbour AND Inverse Distance Squared _ Paramount Zone (Rock =
4)
#     ____________________________________________


!COPY     &IN(cf_mike3_2012-m),&OUT(xxore2-m),rock=4.0
```

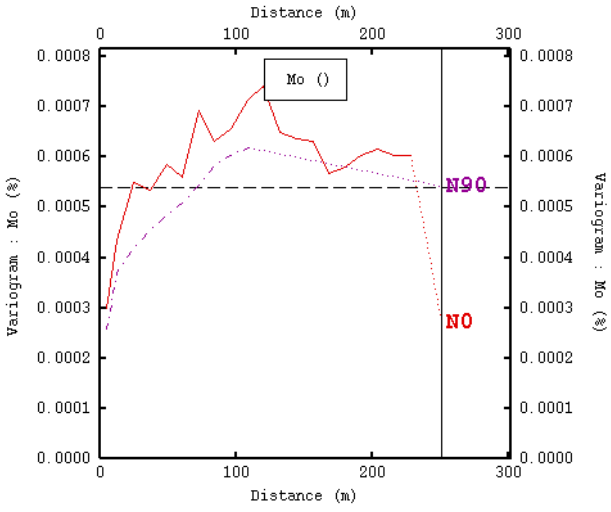
```
!ESTIMA   &PROTO(xxore2-m),&IN(ore1_tc-c),&SRCPARM(para1_spar),
          &ESTPARM(para_idnn_epar),&MODEL(xx2-m),&VMODPARM(para1_vpar),
          *X(X),*Y(Y),*Z(Z),*KEY(BHID),@DISCMETH=1.0,@XPOINTS=3.0,
          @YPOINTS=3.0,@ZPOINTS=3.0,@XDSPACE=1.0,@YDSPACE=1.0,
          @ZDSPACE=1.0,@PARENT=1.0,@MINDISC=1.0,@COPYVAL=0.0,
          @FVALTYPE=1.0,@FSTEP=1.0,@XMIN=378400.0,@XMAX=388390.0,
          @YMIN=6357700.0,@YMAX=6361705.0,@ZMIN=0.0,@ZMAX=1800.0,
          @XSUBCELL=1.0,@YSUBCELL=1.0,@ZSUBCELL=1.0,@LINKMODE=3.0,
          @UCSAMODE=2.0,@UCSBMODE=3.0,@UCSCMODE=2.0,@PLANE=1.0,
          @TOLRNC=0.0,@GRMETHOD=3.0,@PGFIELDS=0.0,@ORDER=3.0

!SORTX    &IN(xx2-m),&OUT(xxidnn2-m),*KEY1(IJK),
          @BINS=5.0,@ORDER=1.0

!ADDMOD   &IN1(xxidnn1-m),&IN2(xxidnn2-m),&OUT(xx7-m),@TOLERNCE=0.001

!SORTX    &IN(xx7-m),&OUT(xx6-m),*KEY1(IJK),
          @BINS=5.0,@ORDER=1.0

!EXTRA    &IN(xx6-m),&OUT(xx9-m)
            if(sg_nn==absent())
            density=2.69
            end
            if(cu_nn==absent())
            cu_nn=0
            end
            if(mo_nn==absent())
            mo_nn=0
            end
            if(au_nn==absent())
            au_nn=0
            end
            if(ag_nn==absent())
            ag_nn=0
            end
            if(cu_id==absent())
            cu_id=0
            end
            if(mo_id==absent())
            mo_id=0
            end
            if(au_id==absent())
            au_id=0
            end
            if(ag_id==absent())
            ag_id=0
            end
            if(sg_nn==absent())
            sg_nn=2.69
            end
            GO

!SORTX    &IN(xx9-m),&OUT(cf_idnn_2012-m),*KEY1(IJK),@BINS=5.0,@ORDER=1.0

!ADDMOD   &IN1(total-m),&IN2(cf_idnn_2012-m),
          &OUT(xx3-m),@TOLERNCE=0.001
```

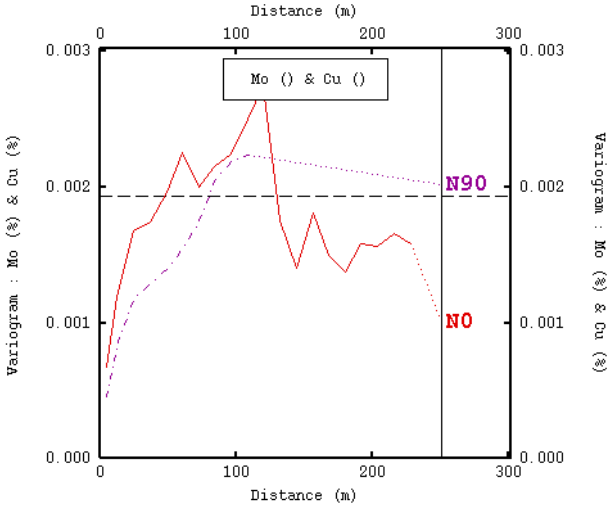
```
!SORTX    &IN(xx3-m),&OUT(cf_idnn_final-m),*KEY1(IJK),*KEY2(rock),
          *KEY3(rescat),@BINS=5.0,@ORDER=1.0

!LISTDR XX?,&OUT(XX)
!DELETE &IN(XX),@CONFIRM=0.0


############################################################
!START TONS

!COPY     &IN(cf_mike3_2012-m),&OUT(xxore2-m),rock=4.0

!TONGRAD  &IN(xxore2-m),&OUT(xx1),&CSVOUT(PARA3_25_95),*KEY1(rescat),
          *DENSITY(density),*F1(cu_eq),*F2(cu_ok),*F3(mo_ok),
          *F4(au_ok),*F5(ag_ok),@FACTOR=1.0,@DENSITY=1.0,
          @COGSTEP=0.05

!COPY     &IN(cf_mike3_2012-m),&OUT(xxore1-m),rock=3.0

!TONGRAD  &IN(xxore1-m),&OUT(xx1),&CSVOUT(LIARD3_25_95),*KEY1(rescat),
          *DENSITY(density),*F1(cu_eq),*F2(cu_ok),*F3(mo_ok),
          *F4(au_ok),*F5(ag_ok),@FACTOR=1.0,@DENSITY=1.0,
          @COGSTEP=0.05

!TONGRAD  &IN(cf_mike3_2012-m),&OUT(xx1),&CSVOUT(MIKE3_25_95),*KEY1(rescat),
          *DENSITY(density),*F1(cu_eq),*F2(cu_ok),*F3(mo_ok),
          *F4(au_ok),*F5(ag_ok),@FACTOR=1.0,@DENSITY=1.0,
          @COGSTEP=0.05

!START TONS1

!COPY     &IN(cf_mike3_2012-m),&OUT(xx2-m),rock=4.0
!COPY     &IN(xx2-m),&OUT(xxore2-m),rescat<2.5

!TONGRAD  &IN(xxore2-m),&OUT(xx1),&CSVOUT(PARA3_MI),
          *DENSITY(density),*F1(cu_eq),*F2(cu_ok),*F3(mo_ok),
          *F4(au_ok),*F5(ag_ok),@FACTOR=1.0,@DENSITY=1.0,
          @COGSTEP=0.05

!COPY     &IN(cf_mike3_2012-m),&OUT(xx1-m),rock=3.0
!COPY     &IN(xx1-m),&OUT(xxore1-m),rescat<2.5

!TONGRAD  &IN(xxore1-m),&OUT(xx1),&CSVOUT(LIARD3_MI),
          *DENSITY(density),*F1(cu_eq),*F2(cu_ok),*F3(mo_ok),
          *F4(au_ok),*F5(ag_ok),@FACTOR=1.0,@DENSITY=1.0,
          @COGSTEP=0.05

!LISTDR XX?,&OUT(XX)
!DELETE &IN(XX),@CONFIRM=0.0
!END

#########################################################################

!END
```

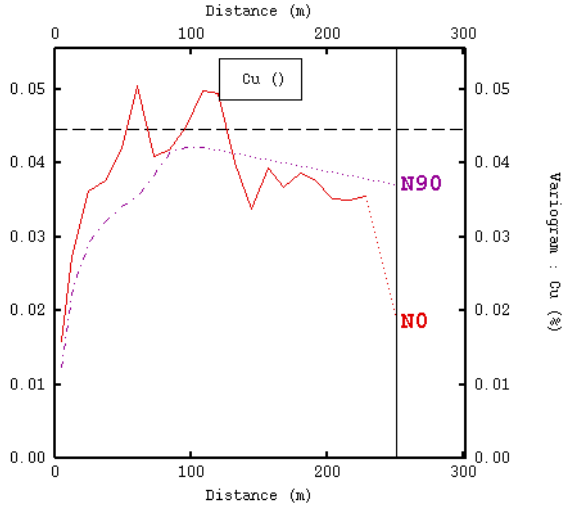
APPENDIX D

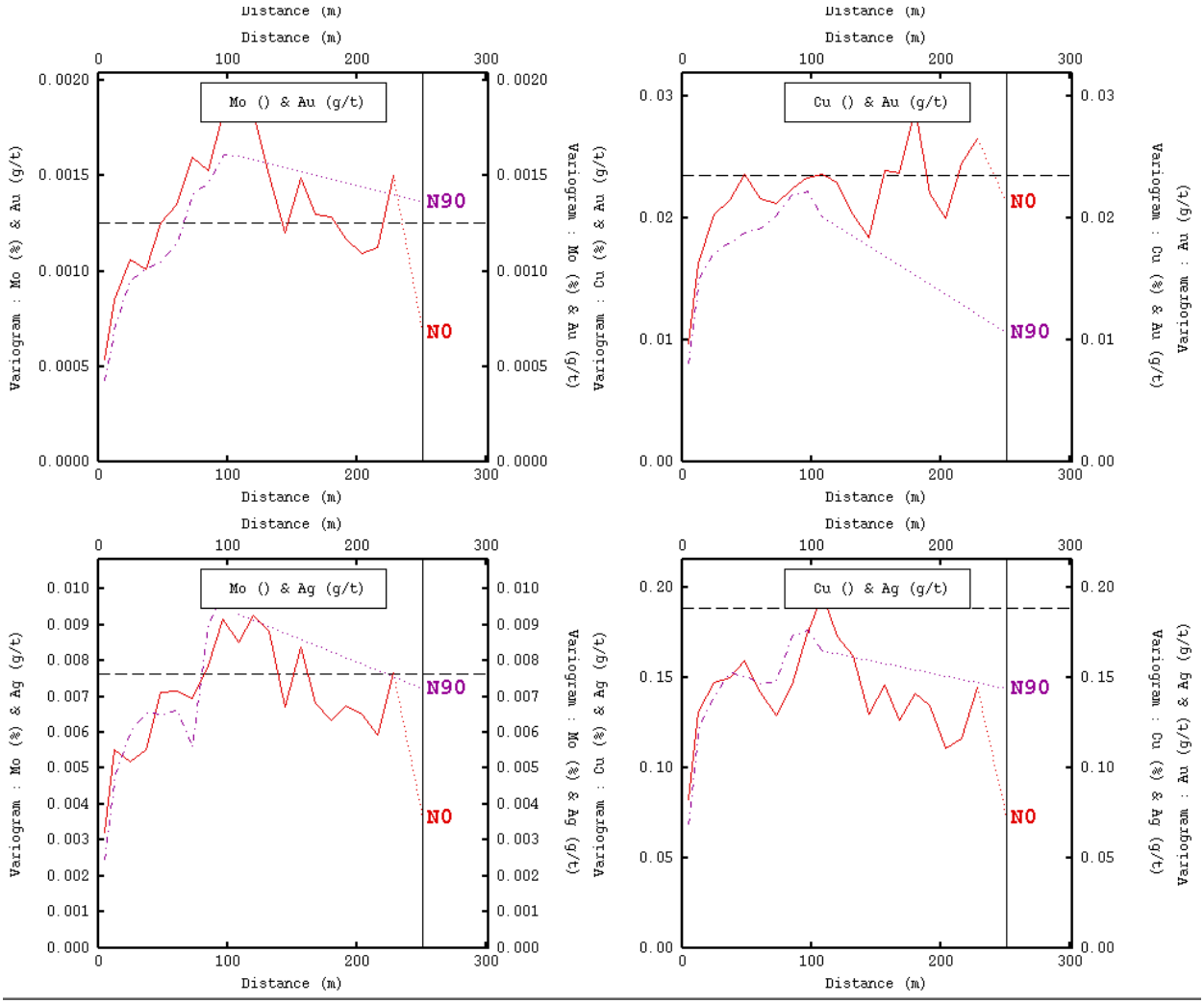
SCHAFT CREEK VARIOGRAPHY

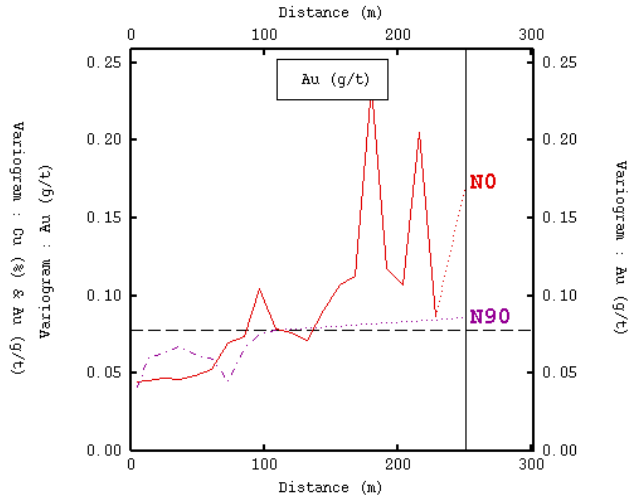
Appendix D – Experimental Variography – Liard Zone

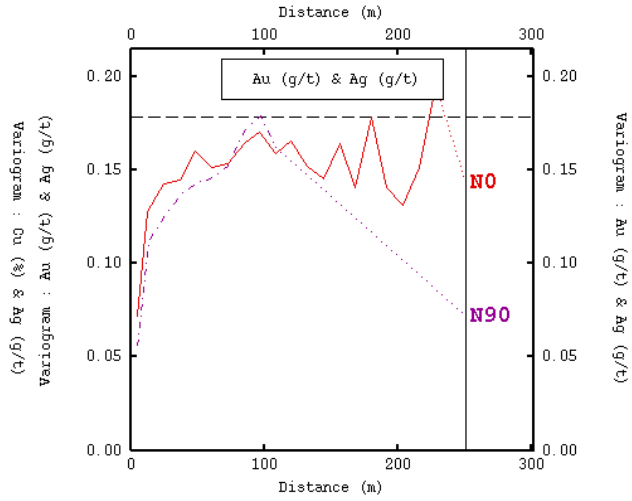


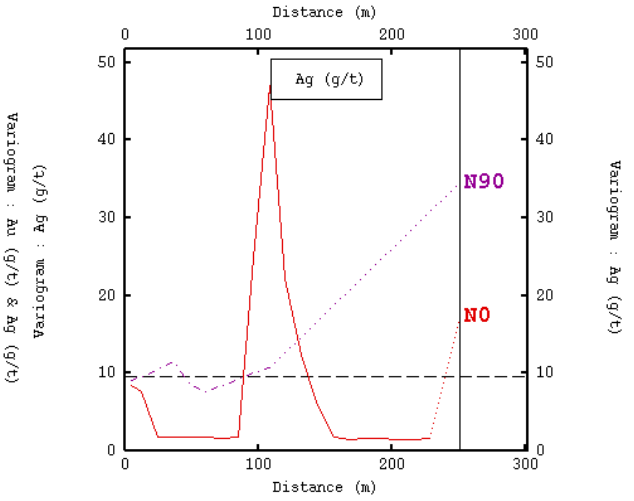




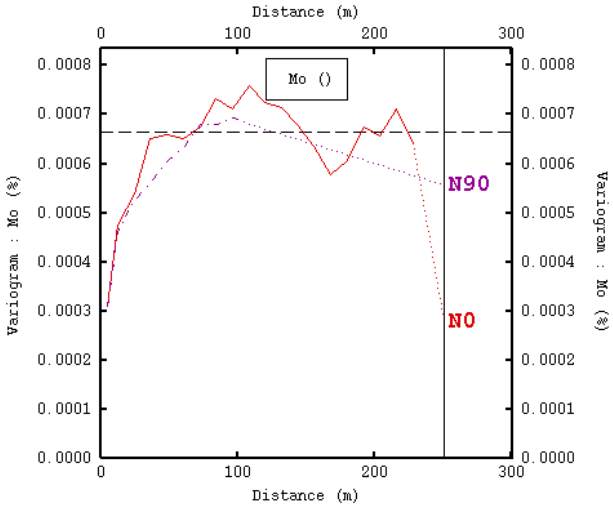

Distance (m)
Distance (m)
Mo () & Au (g/t)
N90
N0
Variogram : Mo (%) & Au (g/t)
Variogram : Mo (%) & Au (g/t)
Distance (m)
Distance (m)
Cu () & Au (g/t)
N0
N90
Variogram : Cu (%) & Au (g/t)
Variogram : Cu (%) & Au (g/t)
Distance (m)
Distance (m)
Mo () & Ag (g/t)
N90
N0
Variogram : Mo (%) & Ag (g/t)
Variogram : Mo (%) & Ag (g/t)
Distance (m)
Distance (m)
Cu () & Ag (g/t)
N90
N0
Variogram : Cu (%) & Ag (g/t)
Variogram : Cu (%) & Ag (g/t)
Distance (m)

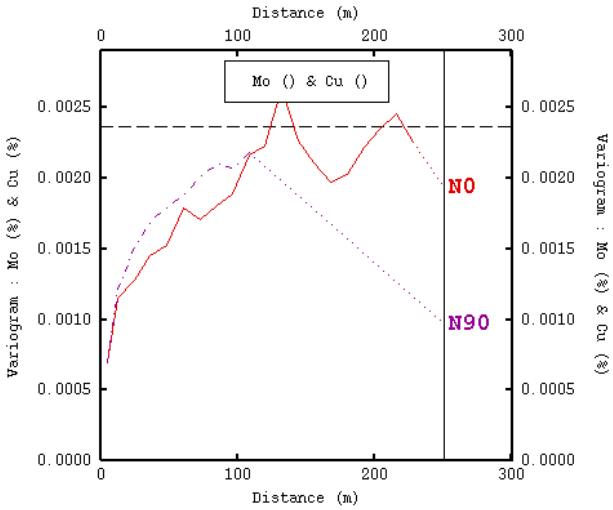

Distance (m)
Au (g/t)
N0
N90
Variogram : Au (g/t)
Variogram : Cu (%) & Au (g/t)
Variogram : Au (g/t)

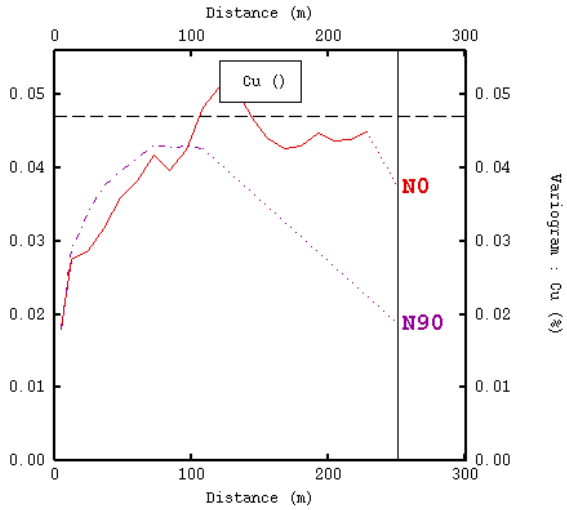

Distance (m)
Au (g/t) & Ag (g/t)
N0
N90
Variogram : Au (g/t) & Ag (g/t)
Variogram : Cu (%) & Ag (g/t)
Variogram : Au (g/t) & Ag (g/t)

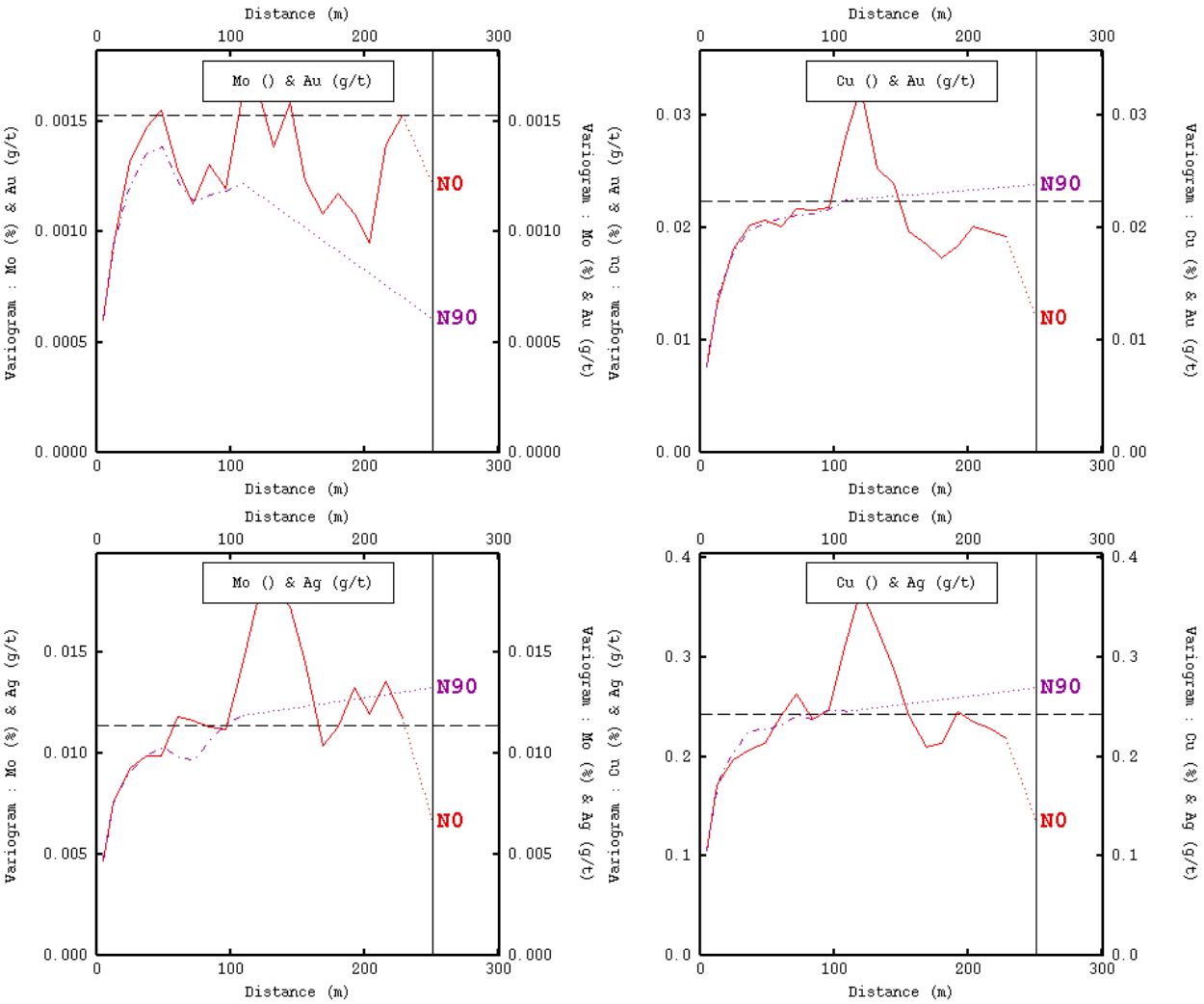

Distance (m)
Ag (g/t)
N90
N0
Variogram : Ag (g/t)
Variogram : Au (g/t) & Ag (g/t)
Variogram : Ag (g/t)

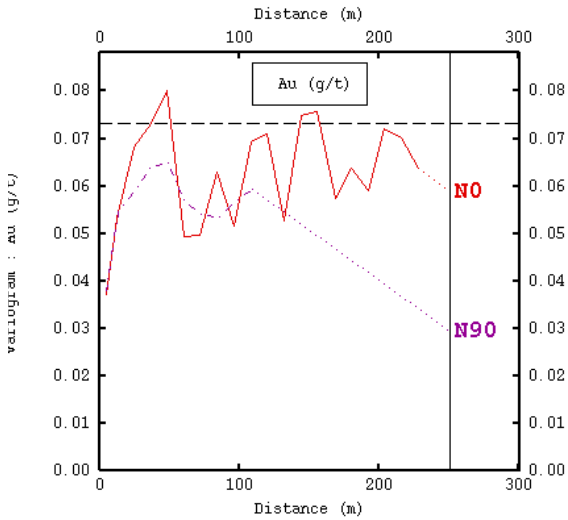
Appendix D – Experimental Variography – Paramount Zone

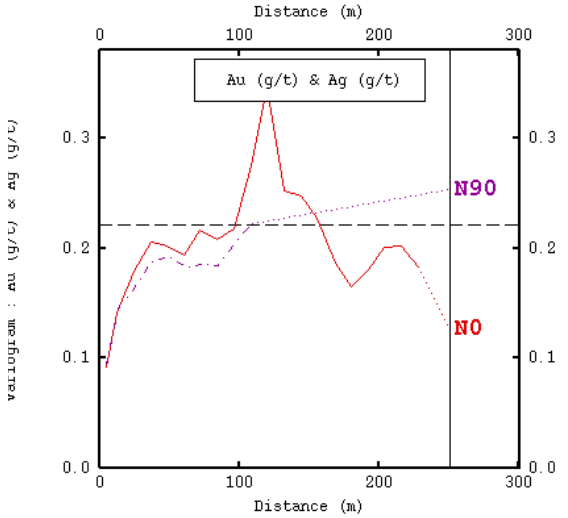


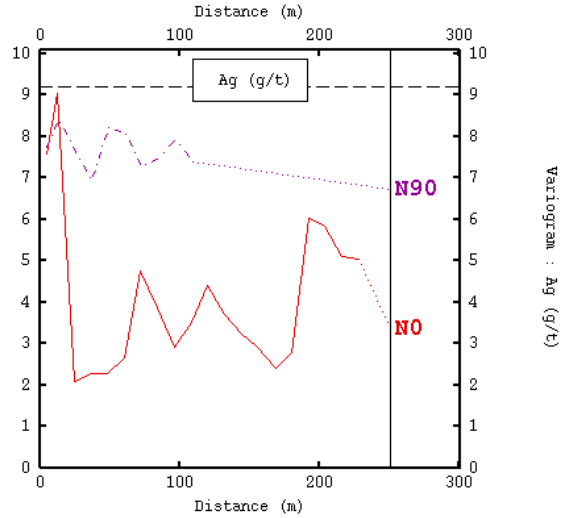





Distance (m)
Mo () & Au (g/t)
Variogram : Mo (%) & Au (g/t)
N0
N90
Distance (m)
Cu () & Au (g/t)
Variogram : Cu (%) & Au (g/t)
N90
N0
Distance (m)
Mo () & Ag (g/t)
Variogram : Mo (%) & Ag (g/t)
N90
N0
Distance (m)
Cu () & Ag (g/t)
Variogram : Cu (%) & Ag (g/t)
N90
N0


Distance (m)
Au (g/t)
N0
N90
Variogram : Au (g/t)


Distance (m)
Au (g/t) & Ag (g/t)
N90
N0
Variogram : Au (g/t) & Ag (g/t)

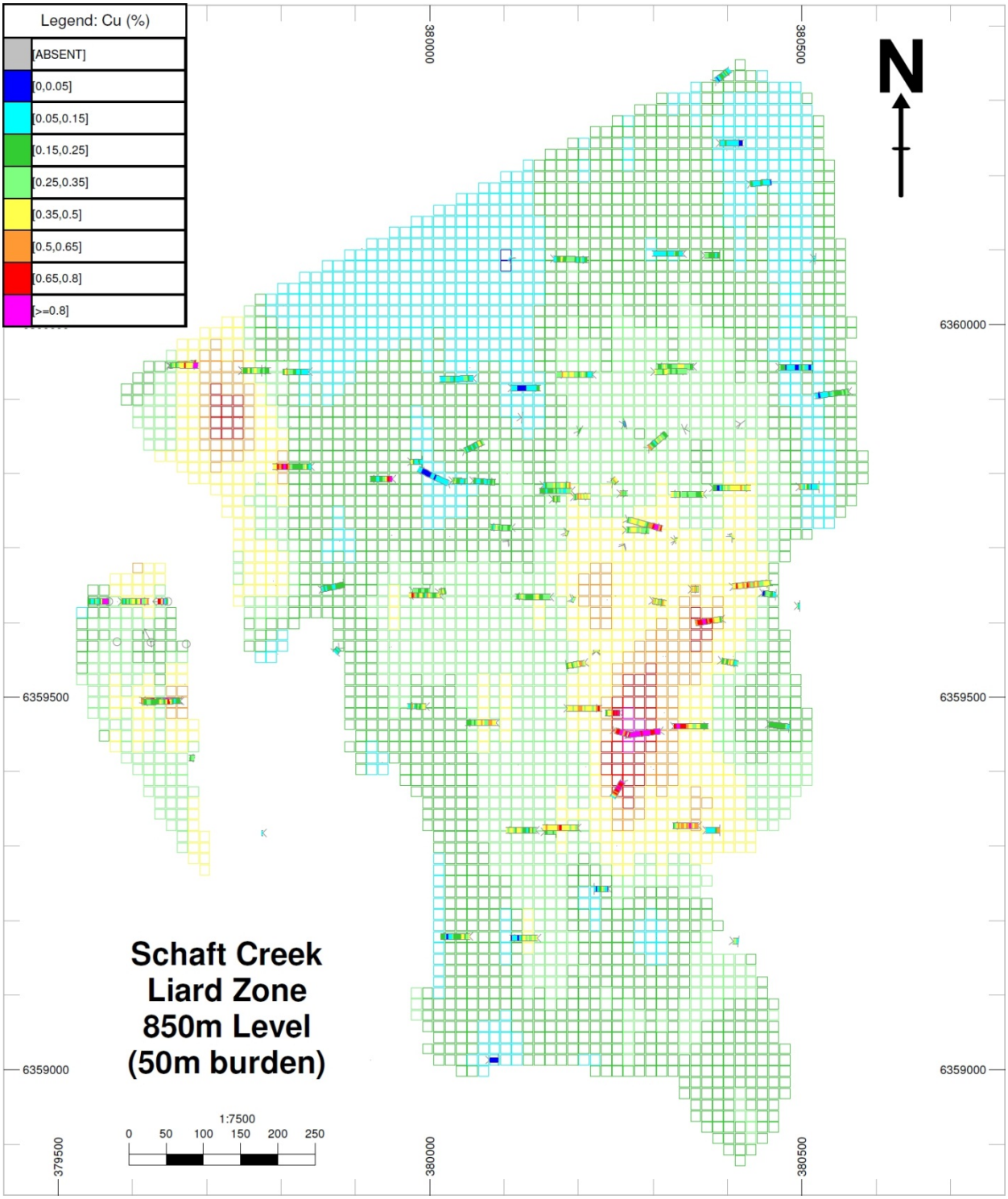

Distance (m)
Ag (g/t)
N90
N0
Variogram : Ag (g/t)

APPENDIX E

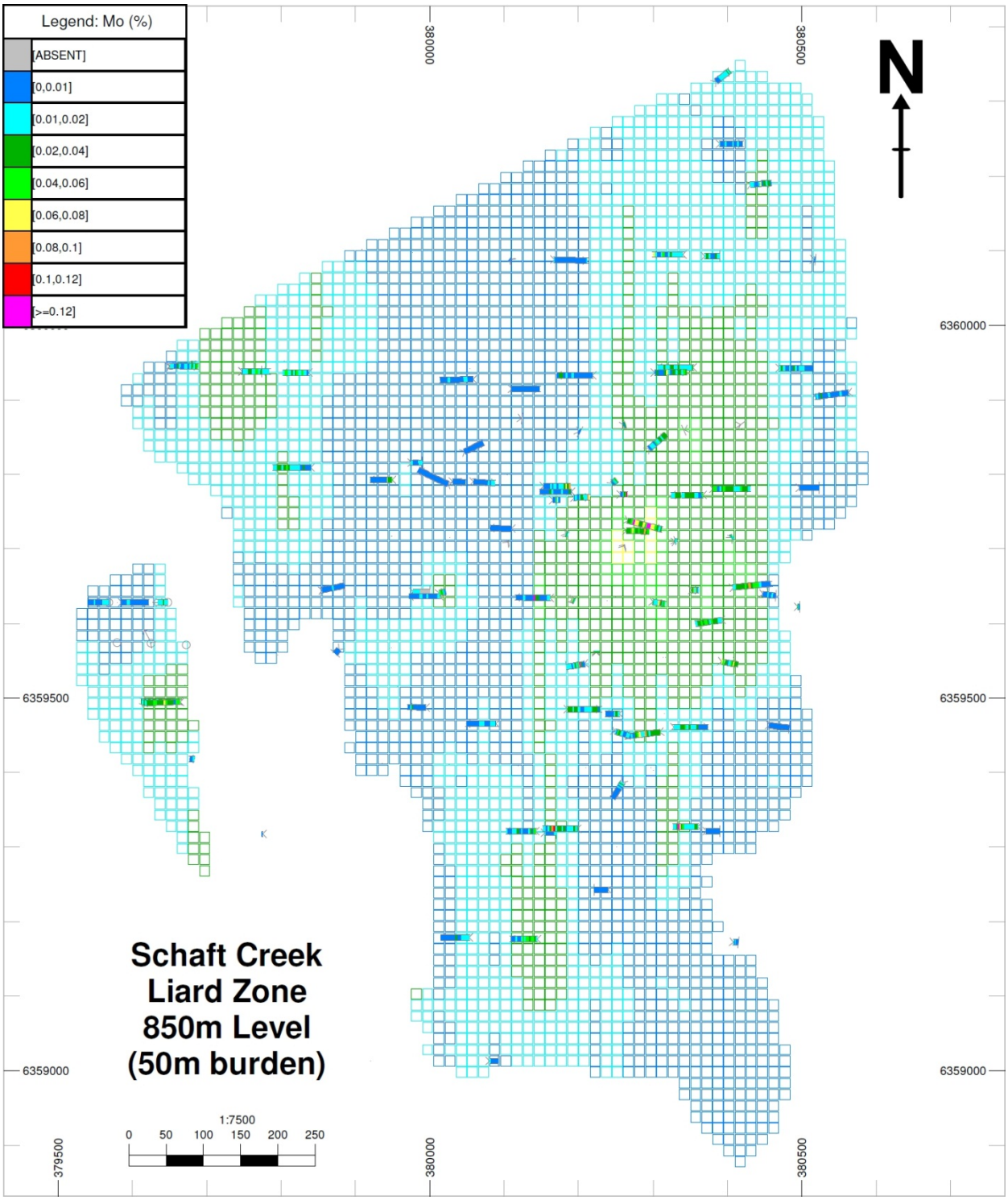
SCHAFT CREEK MODEL PLANS AND SECTIONS

Block Model Validation – Liard Zone – Plans

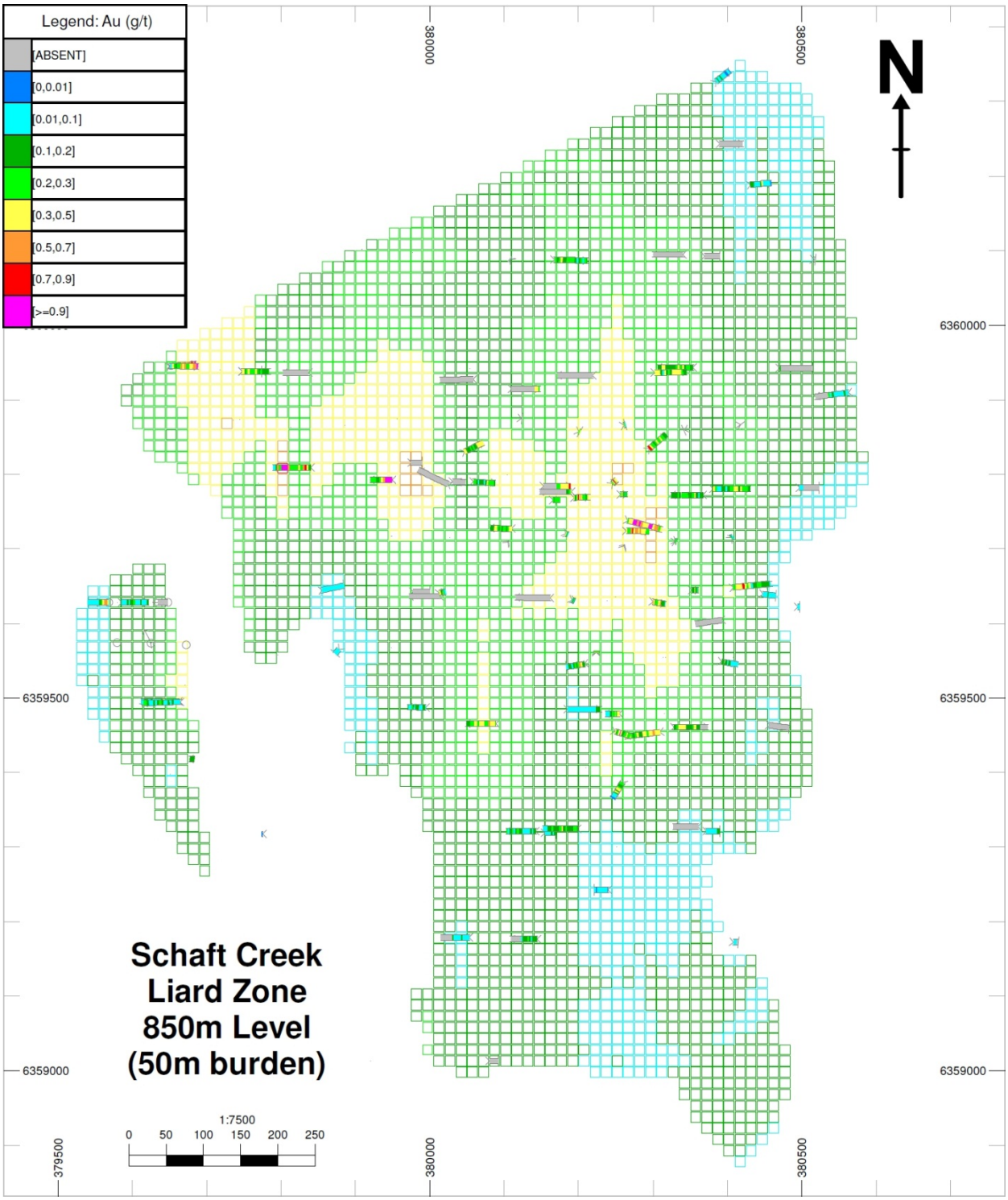
850 m ASL – Cu Grades



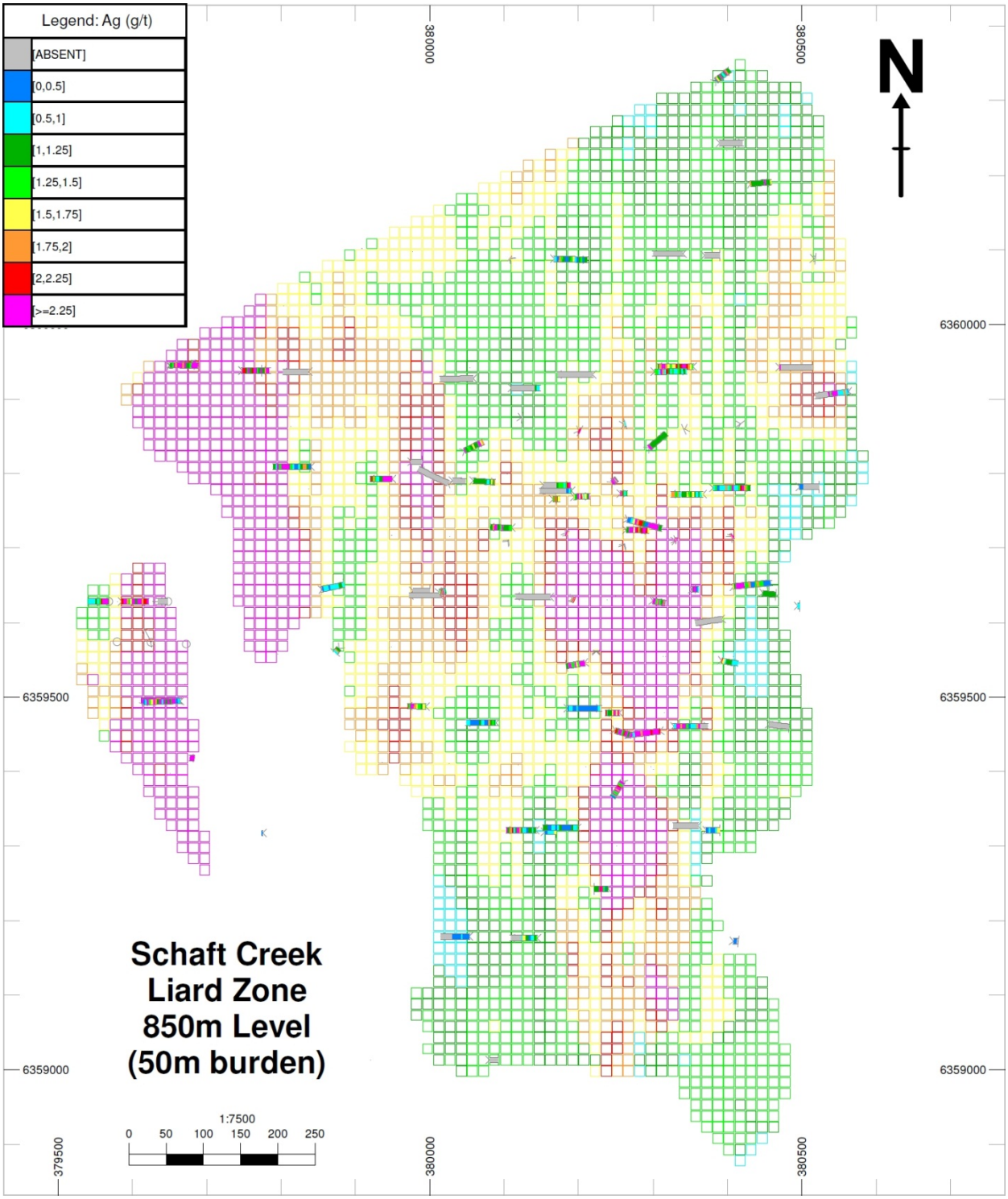
850 m ASL – Mo Grades



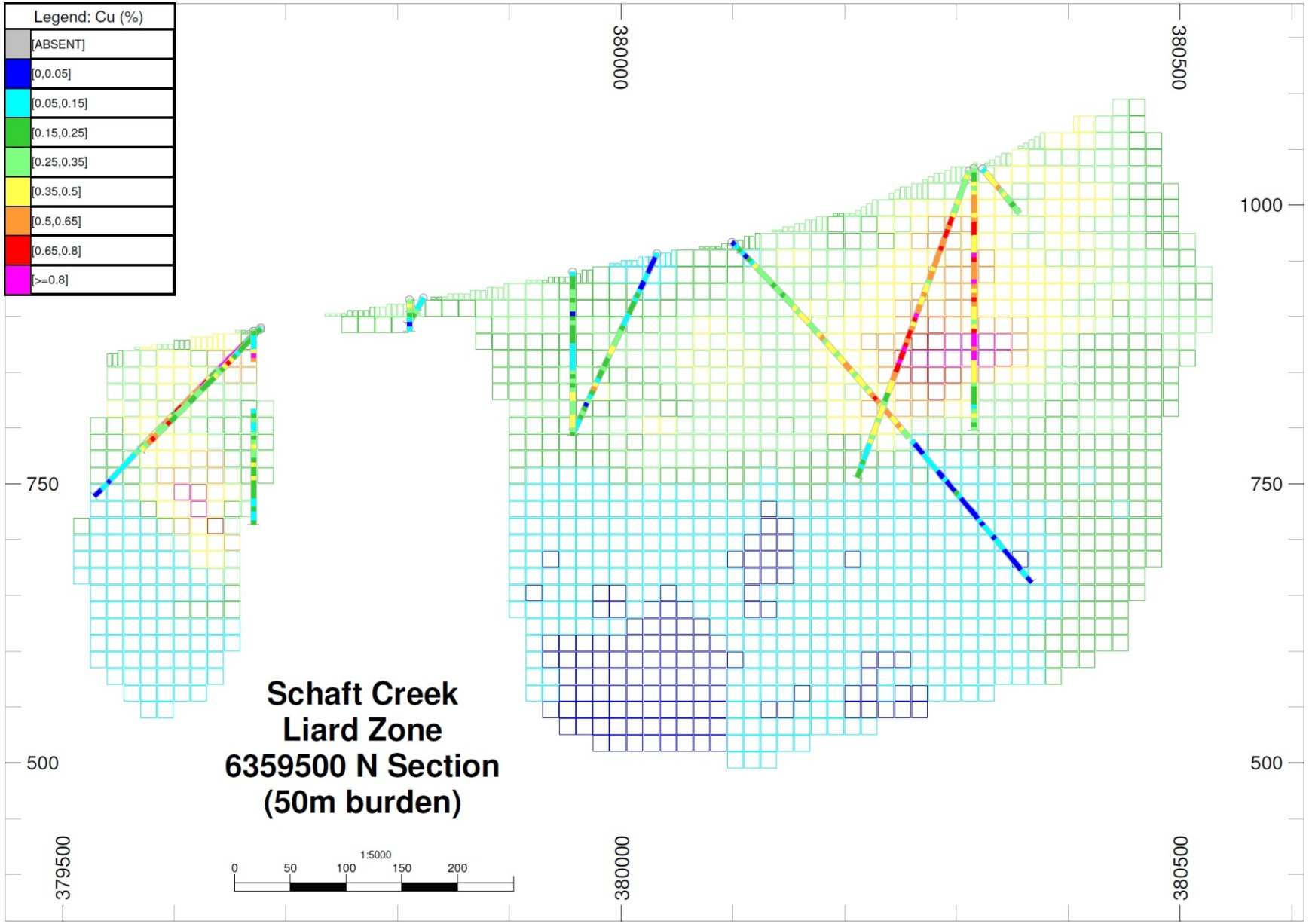
850 m ASL – Au Grades



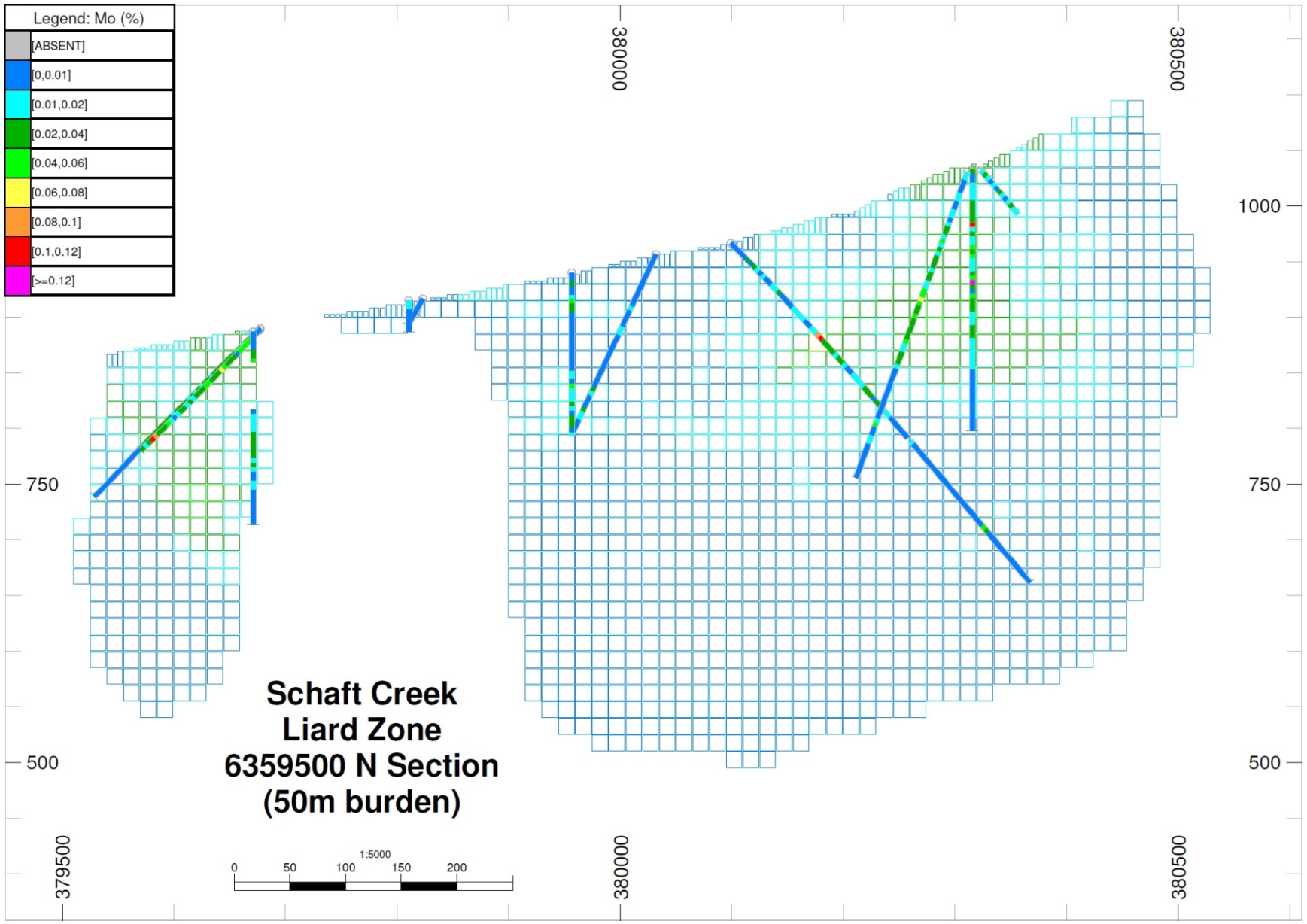
850 m ASL – Ag Grades



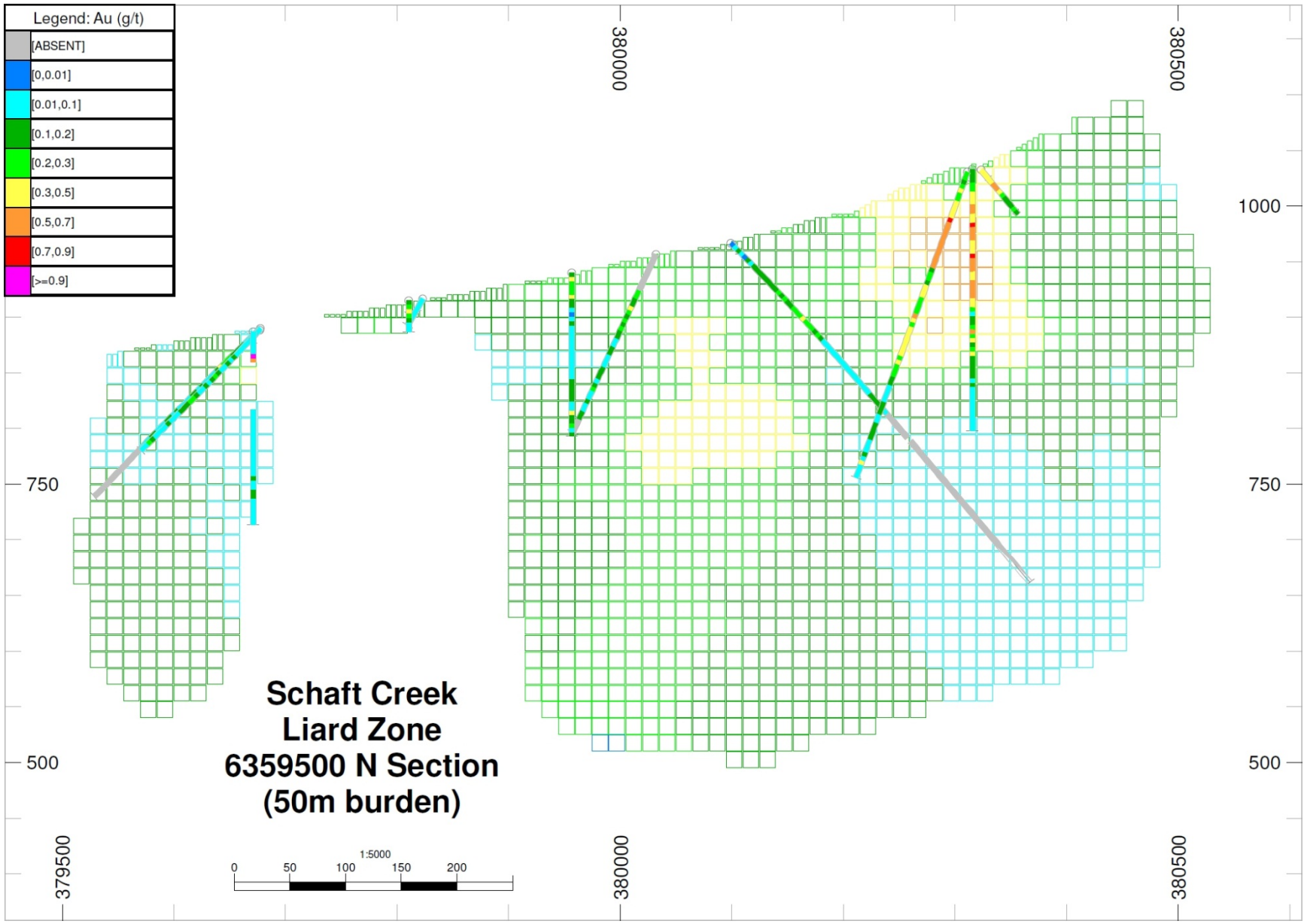
6359500 N – Cu Grades



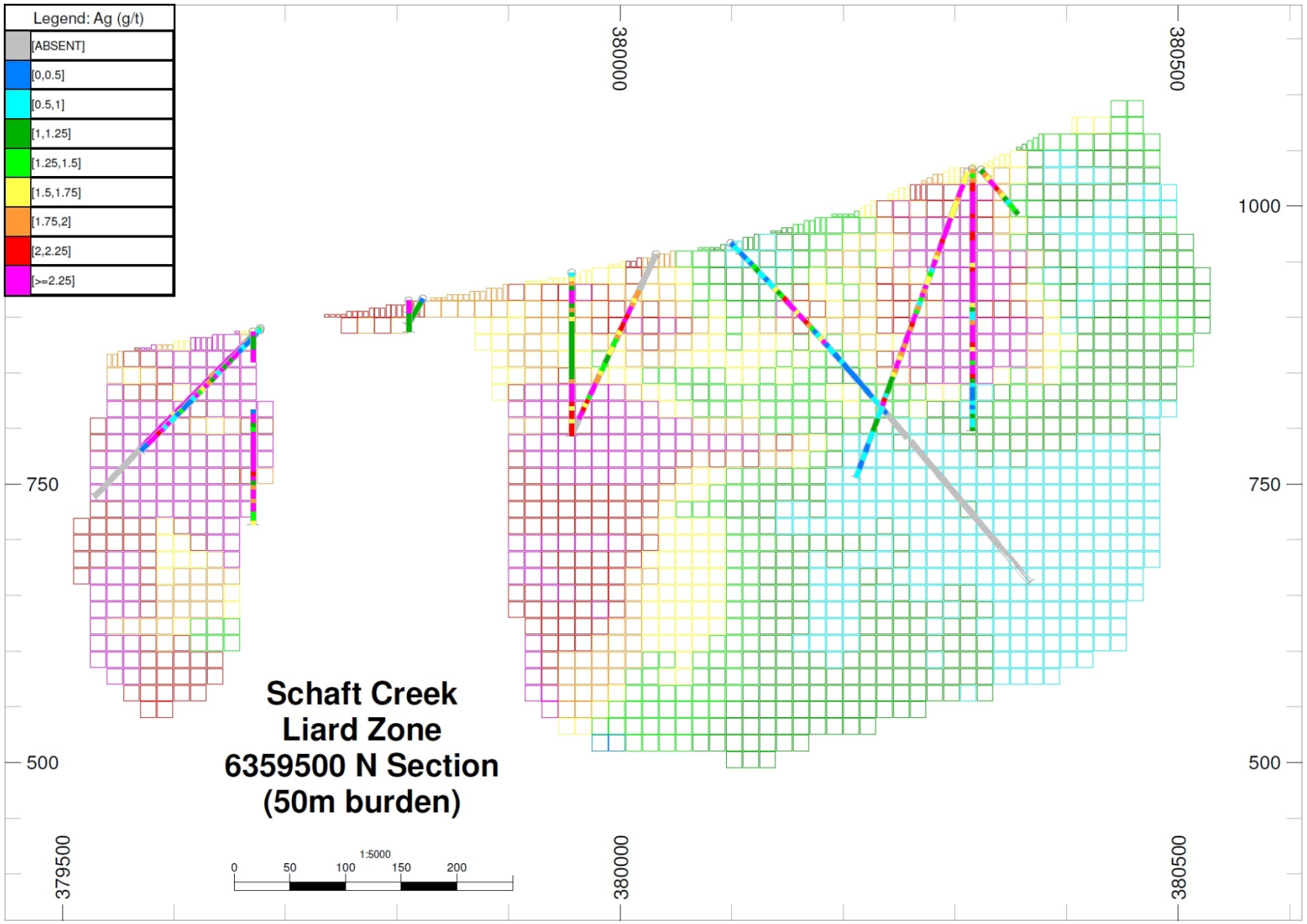
6359500 N – Mo Grades



6359500 N – Au Grades

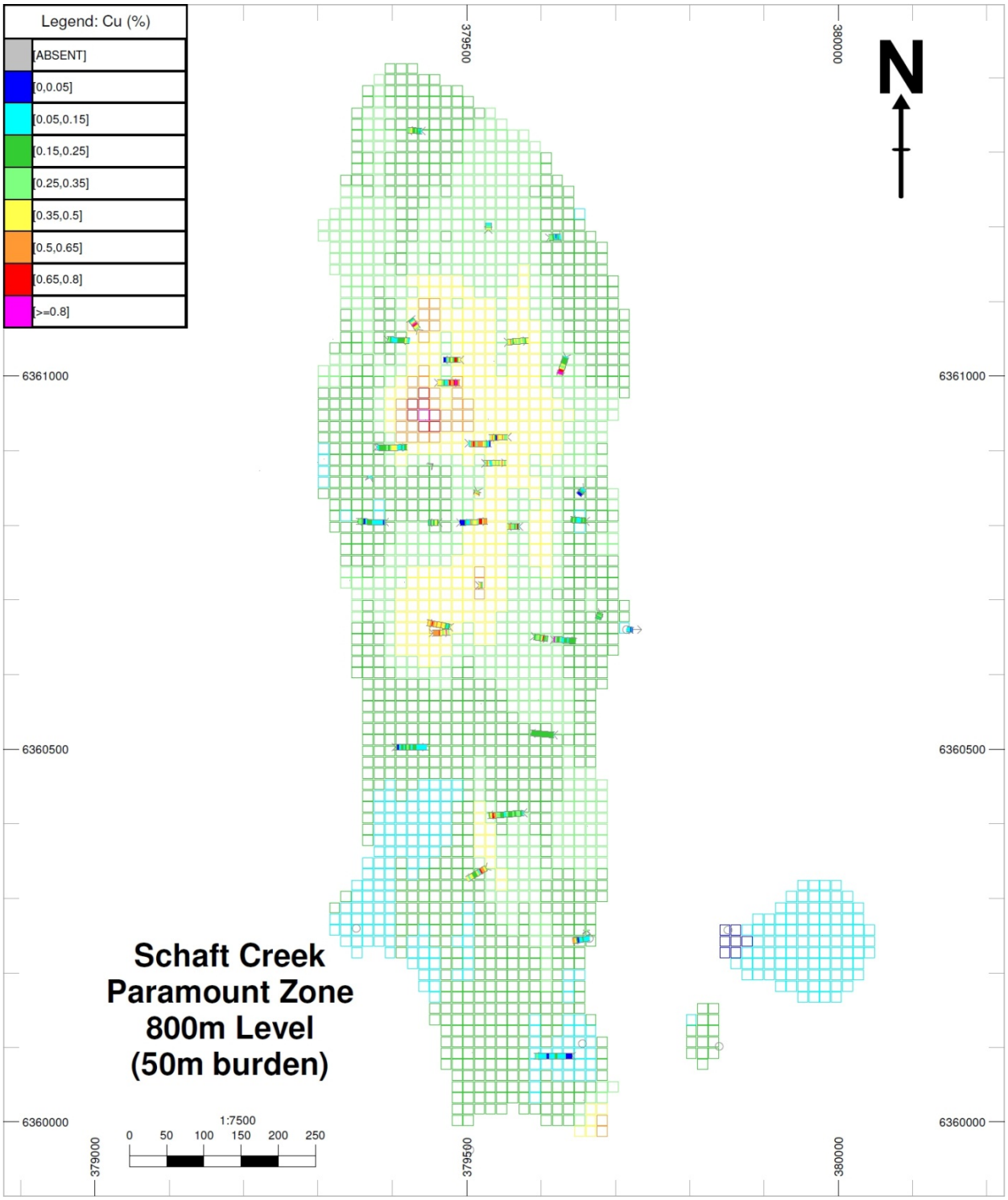


6359500 N – Ag Grades

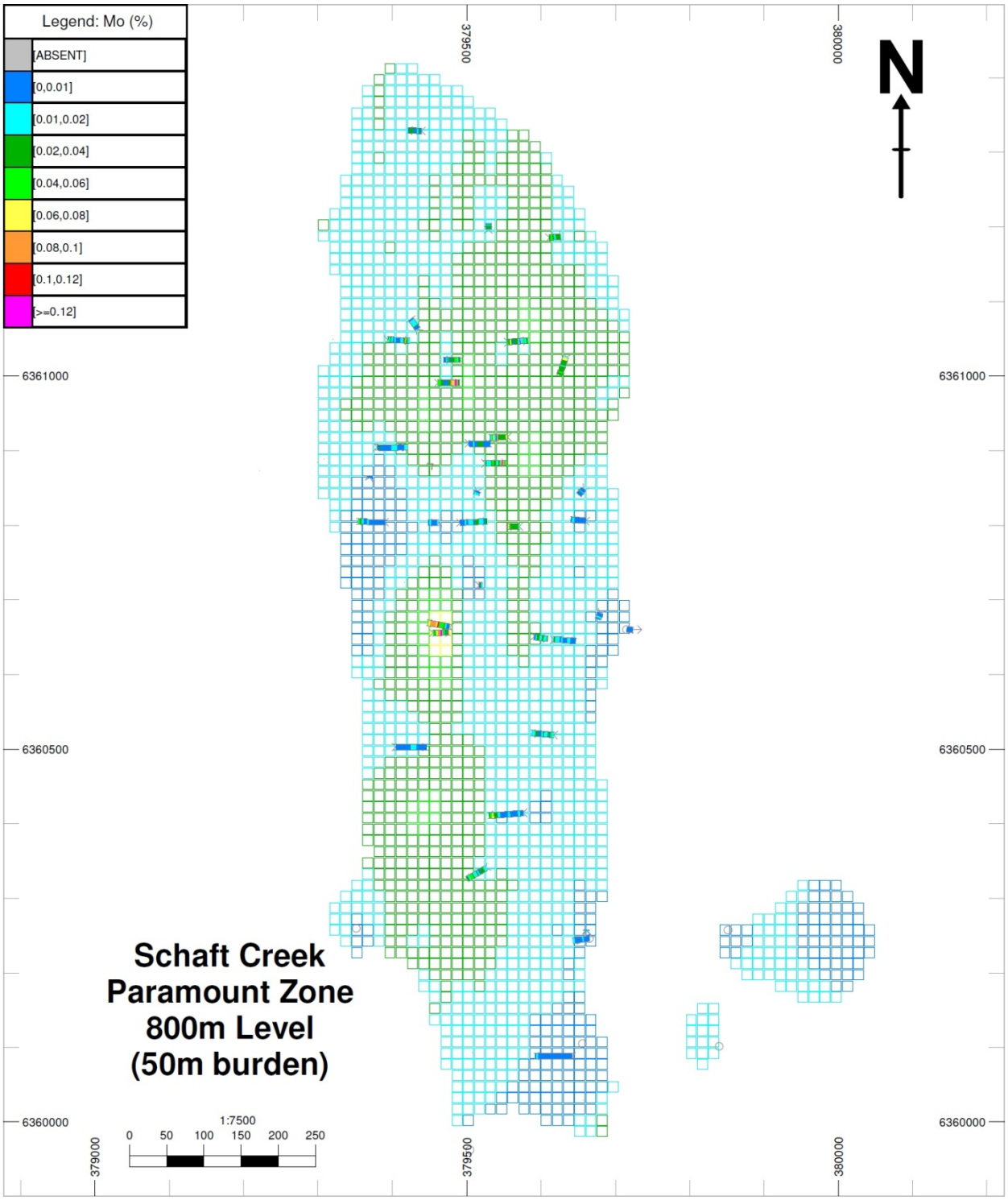


Block Model Validation – Paramount Zone – Plans

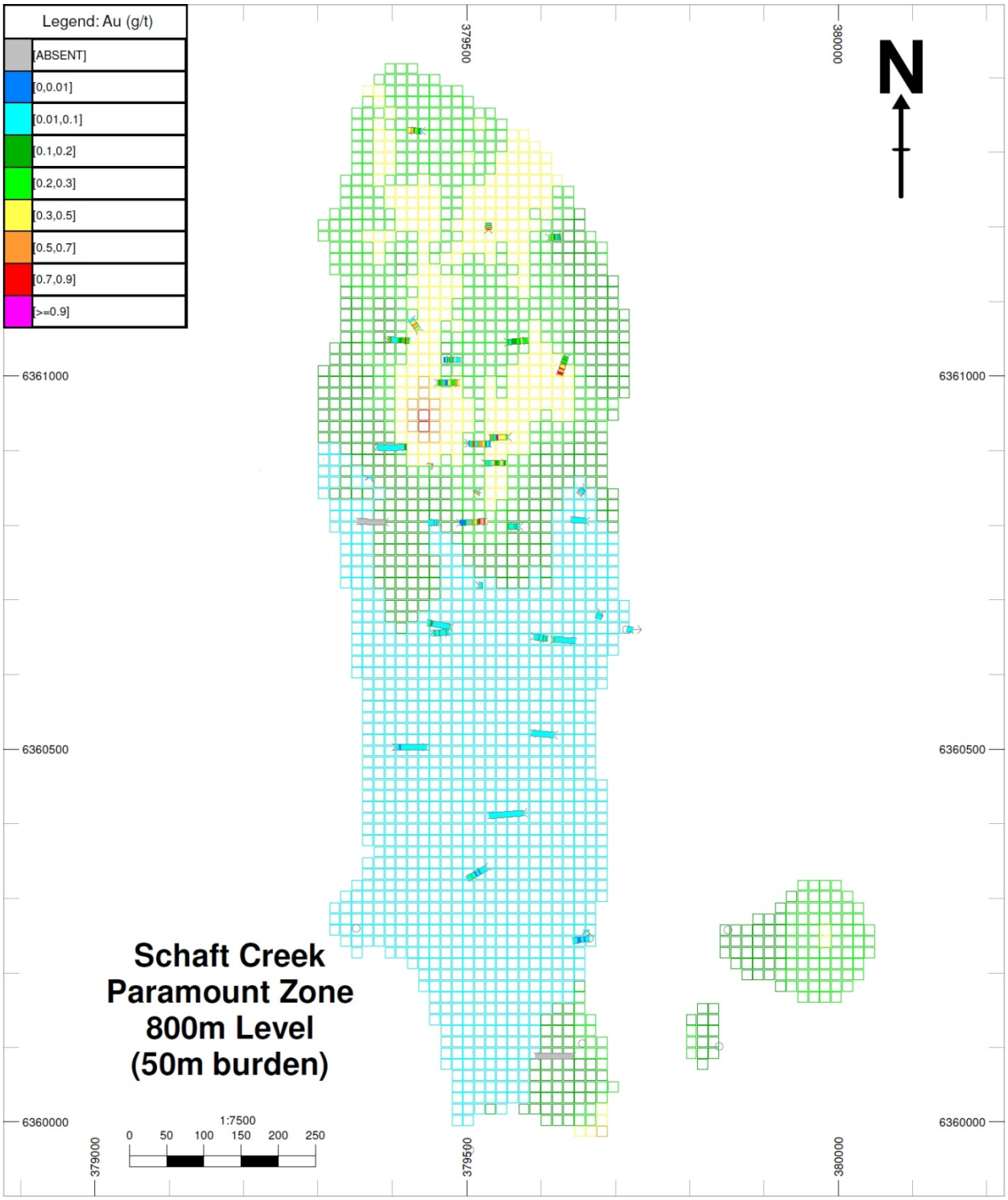
800 m ASL – Cu Grades



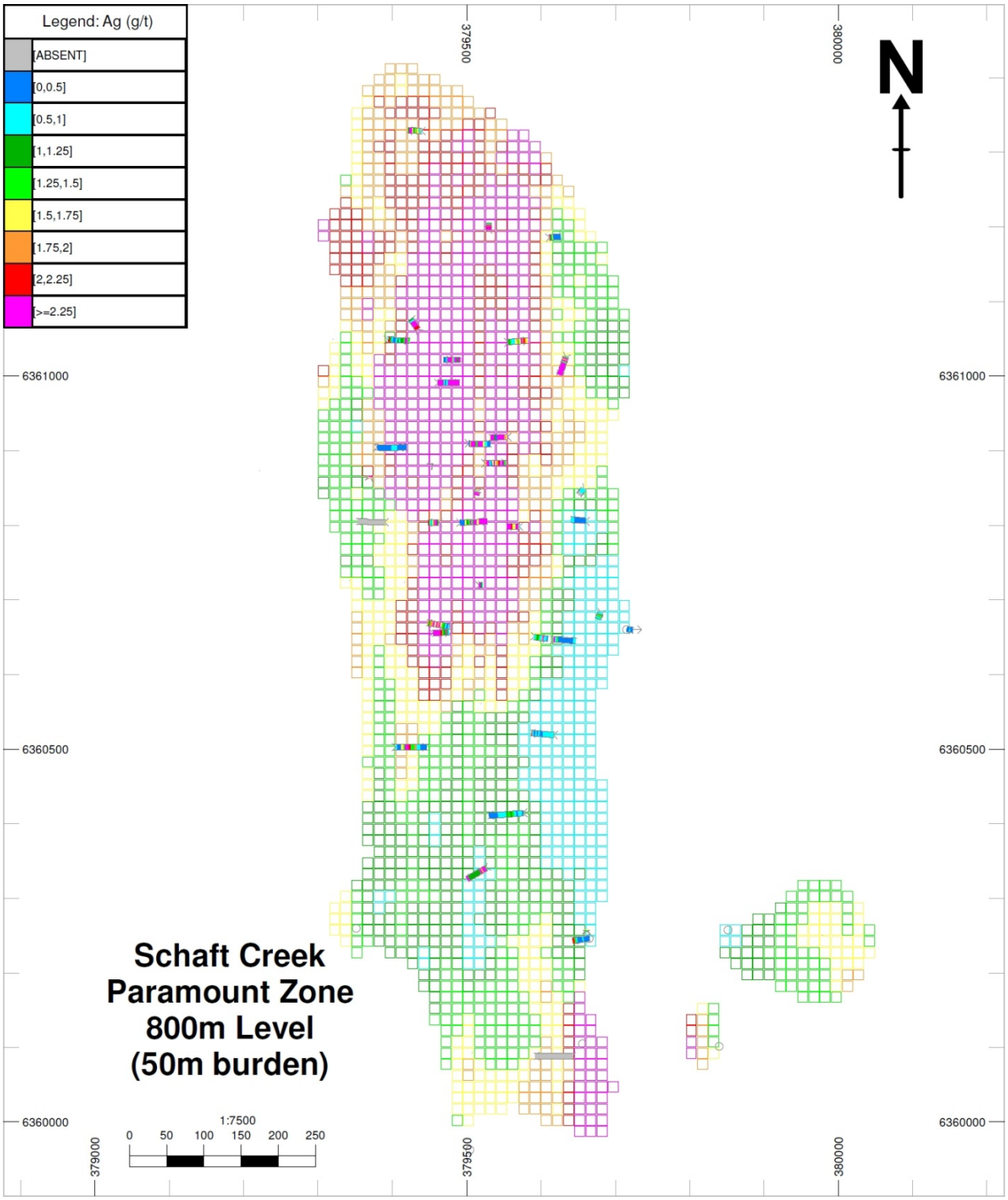
800 m ASL – Mo Grades



800 m ASL – Au Grades

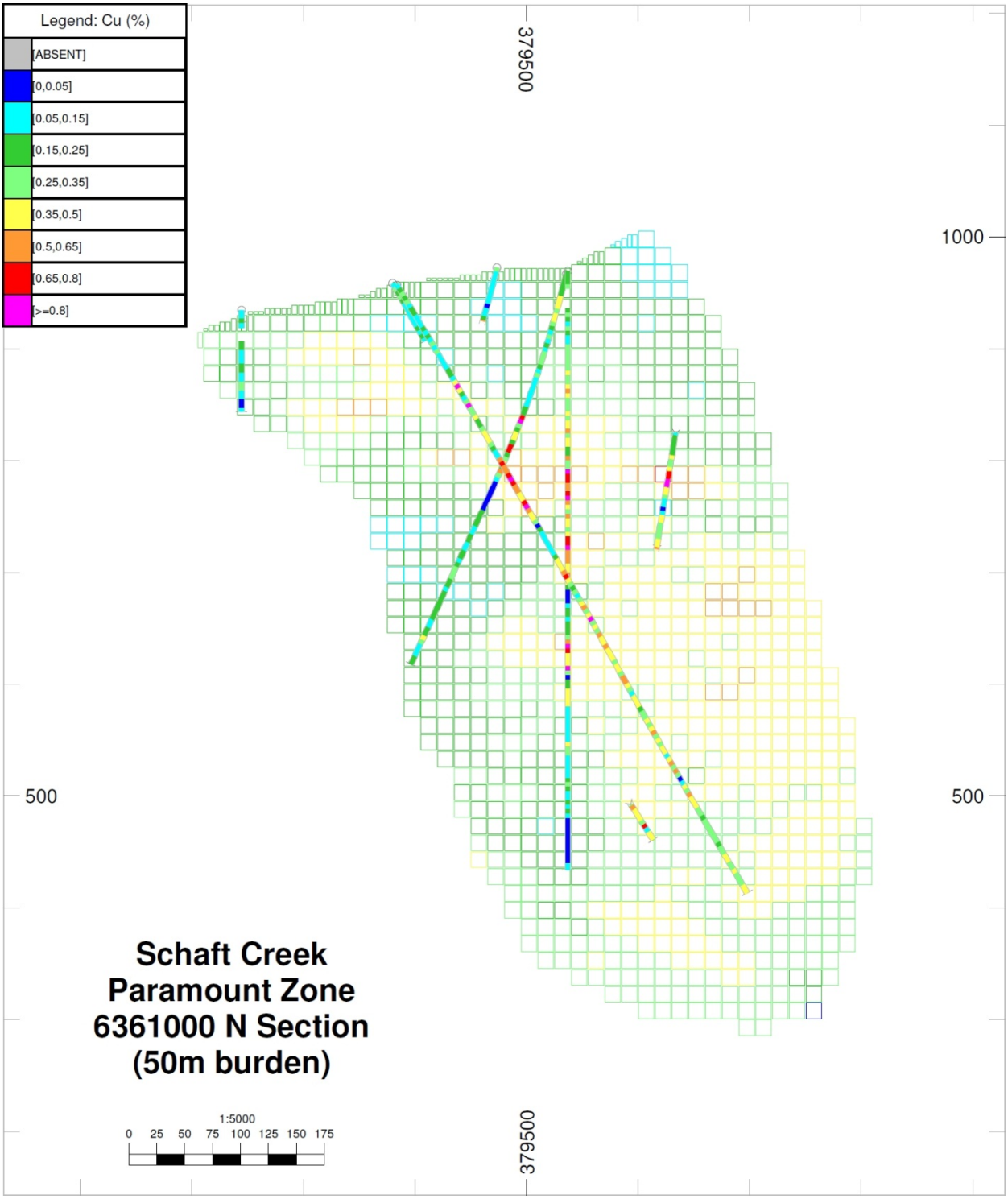


800 m ASL – Ag Grades

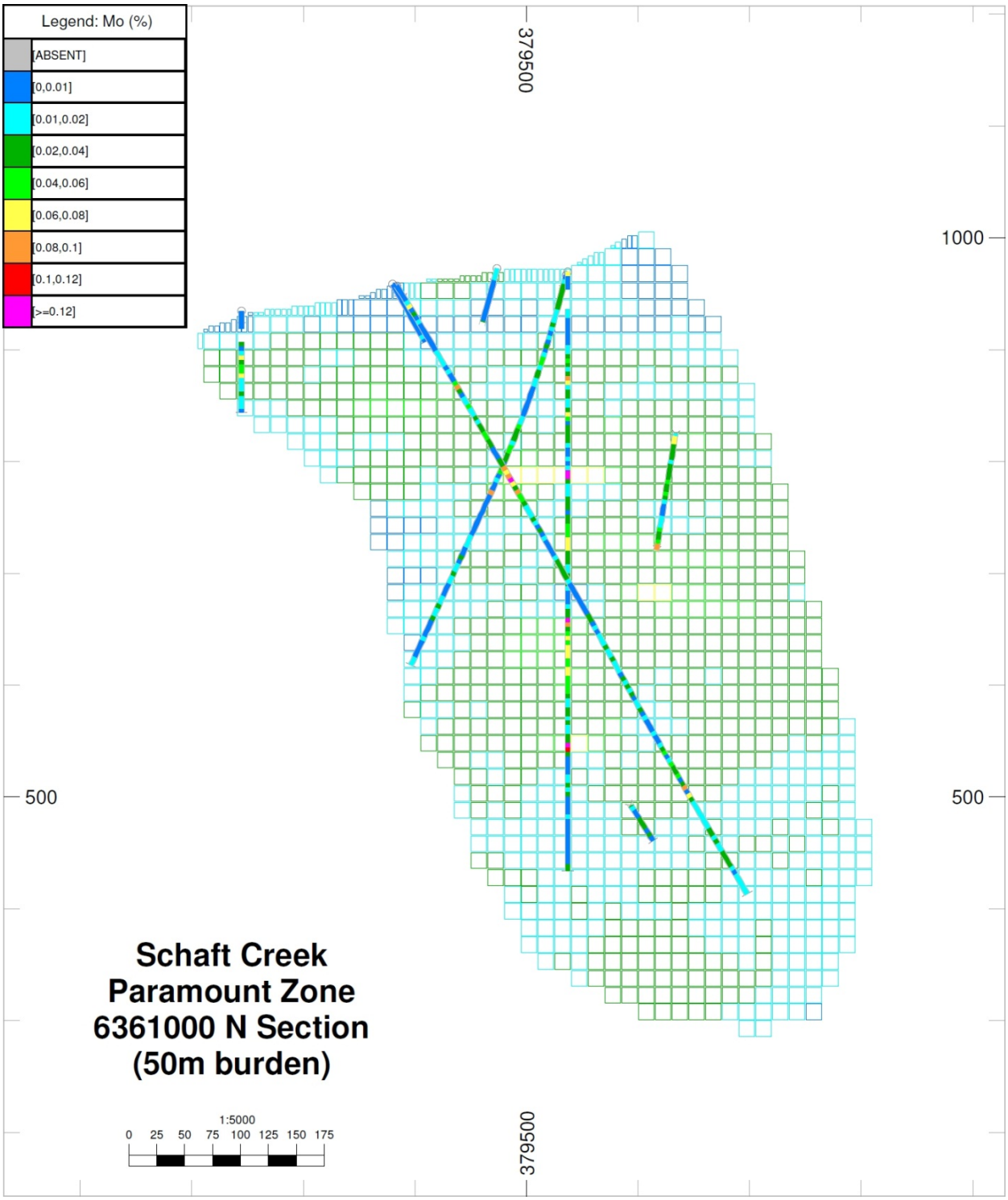


Block Model Validation – Paramount Zone – Sections

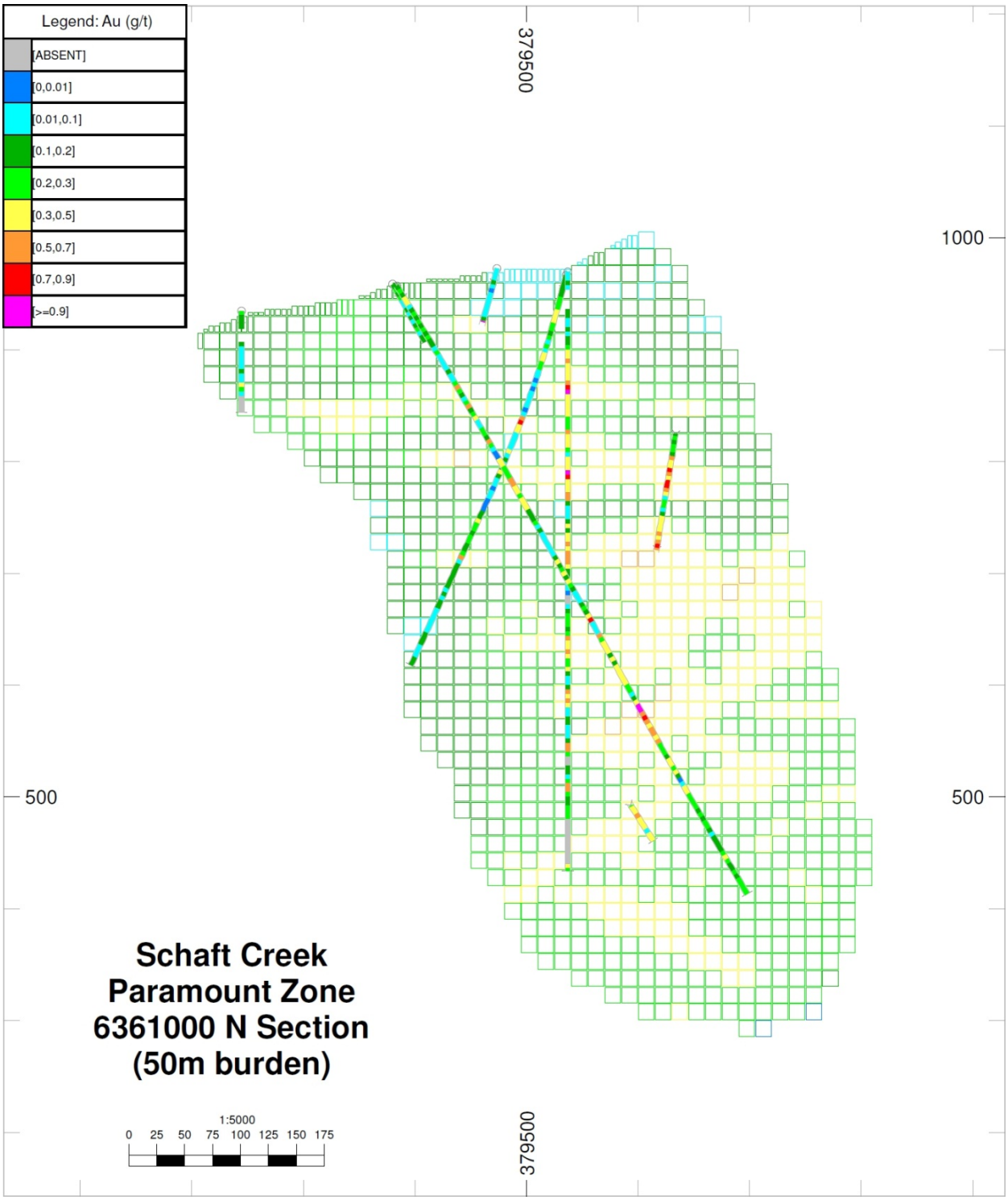
6361000 N – Cu Grades



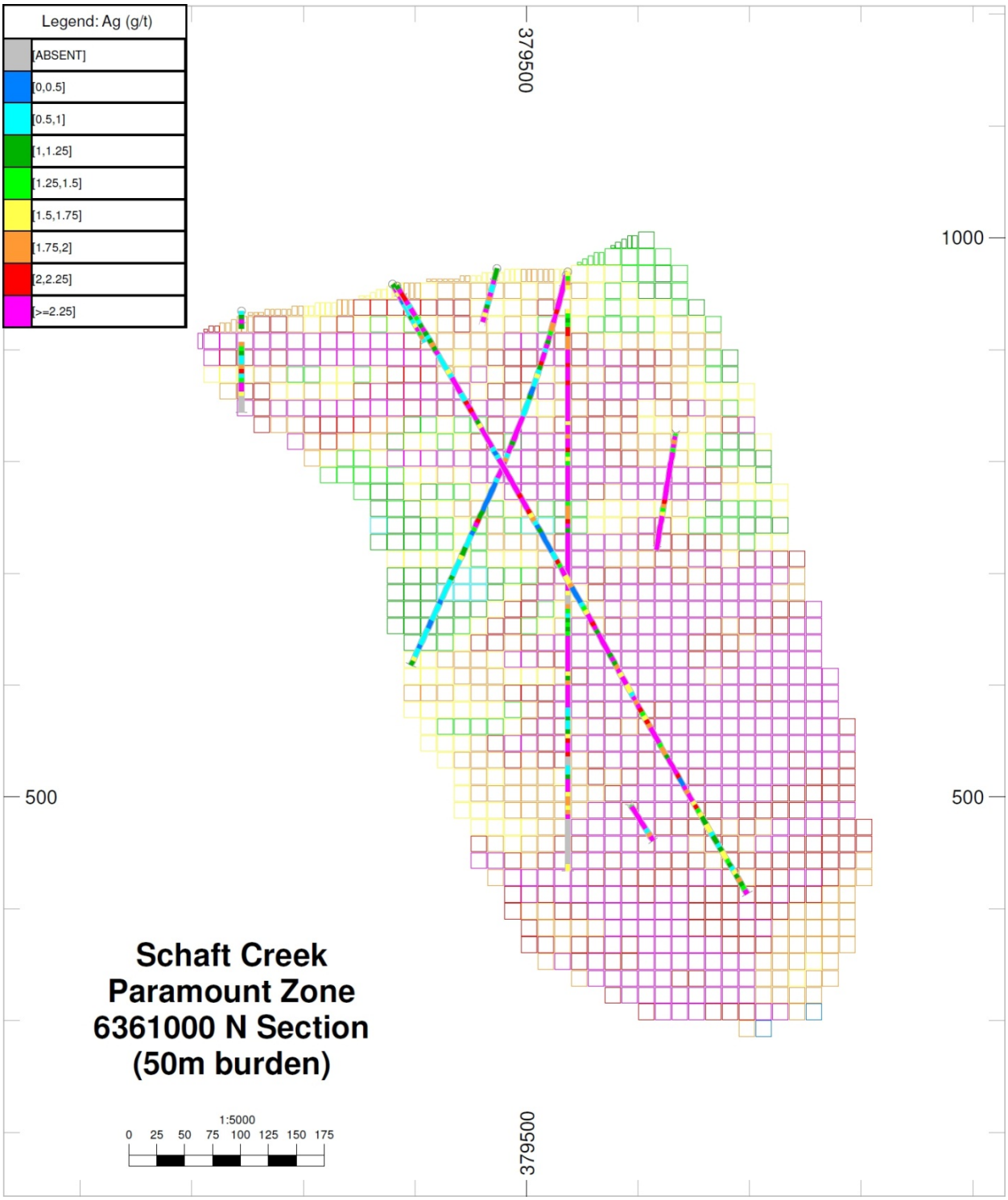
6361000 N – Mo Grades



6361000 N – Au Grades



6361000 N – Ag Grades

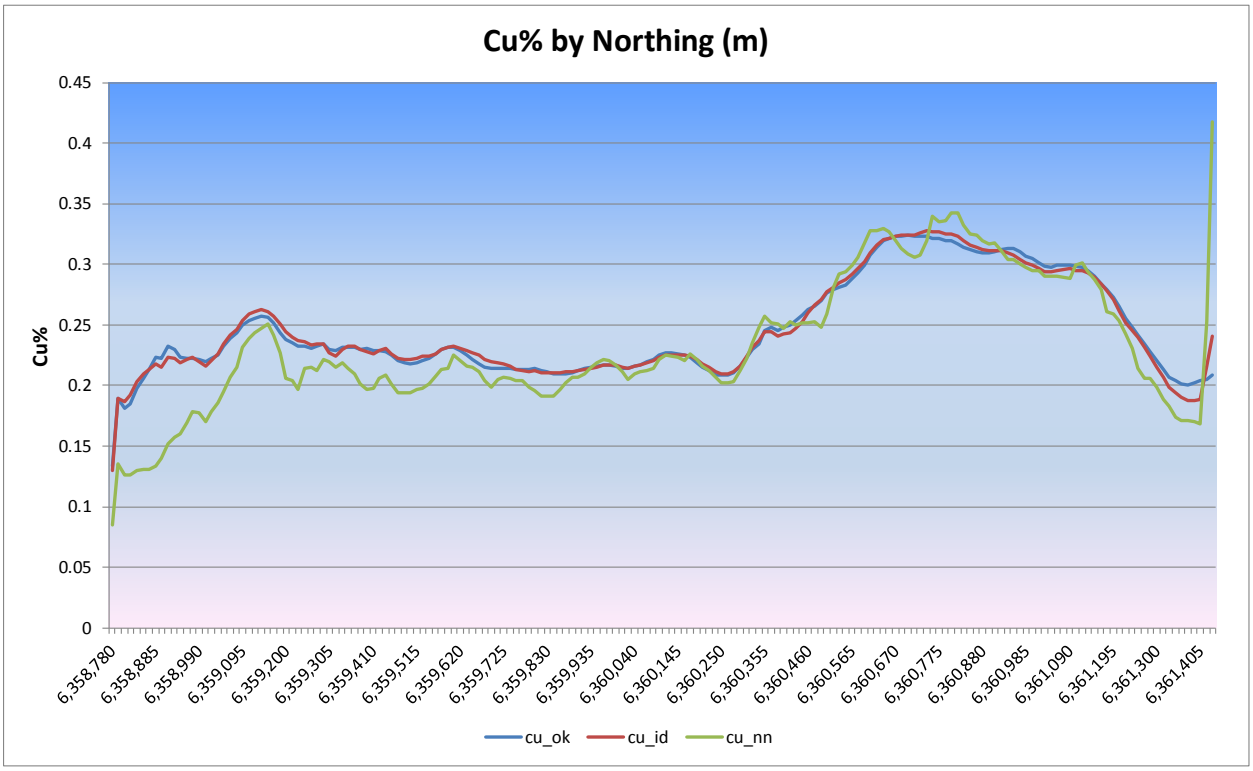


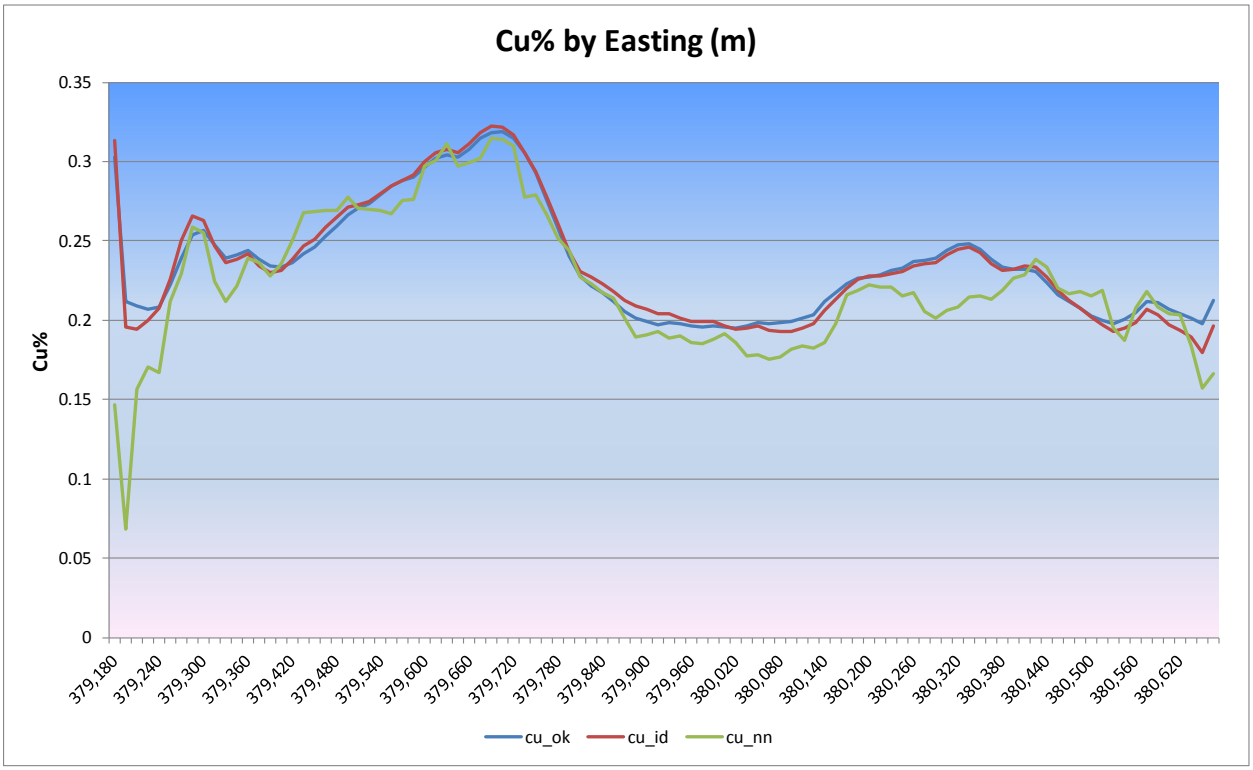
APPENDIX F

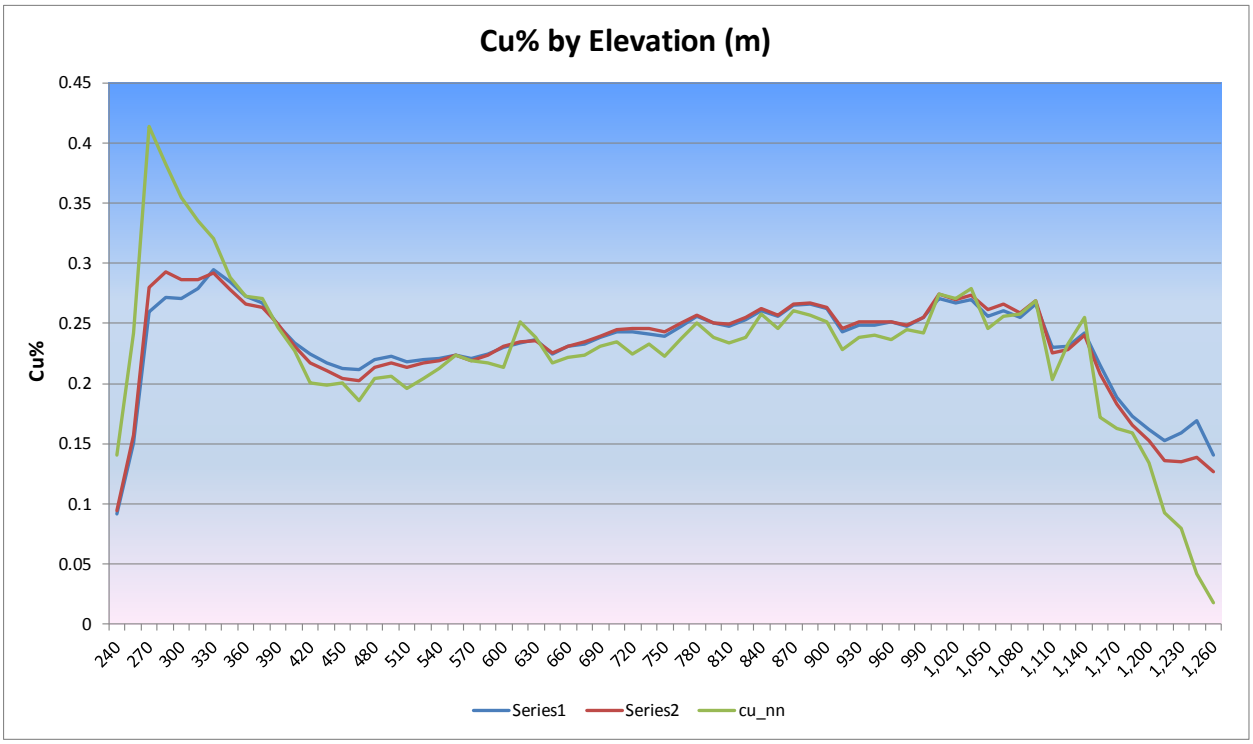
SCHAFT CREEK SWATH PLOTS

Appendix F – Schaft Creek Swath Plots

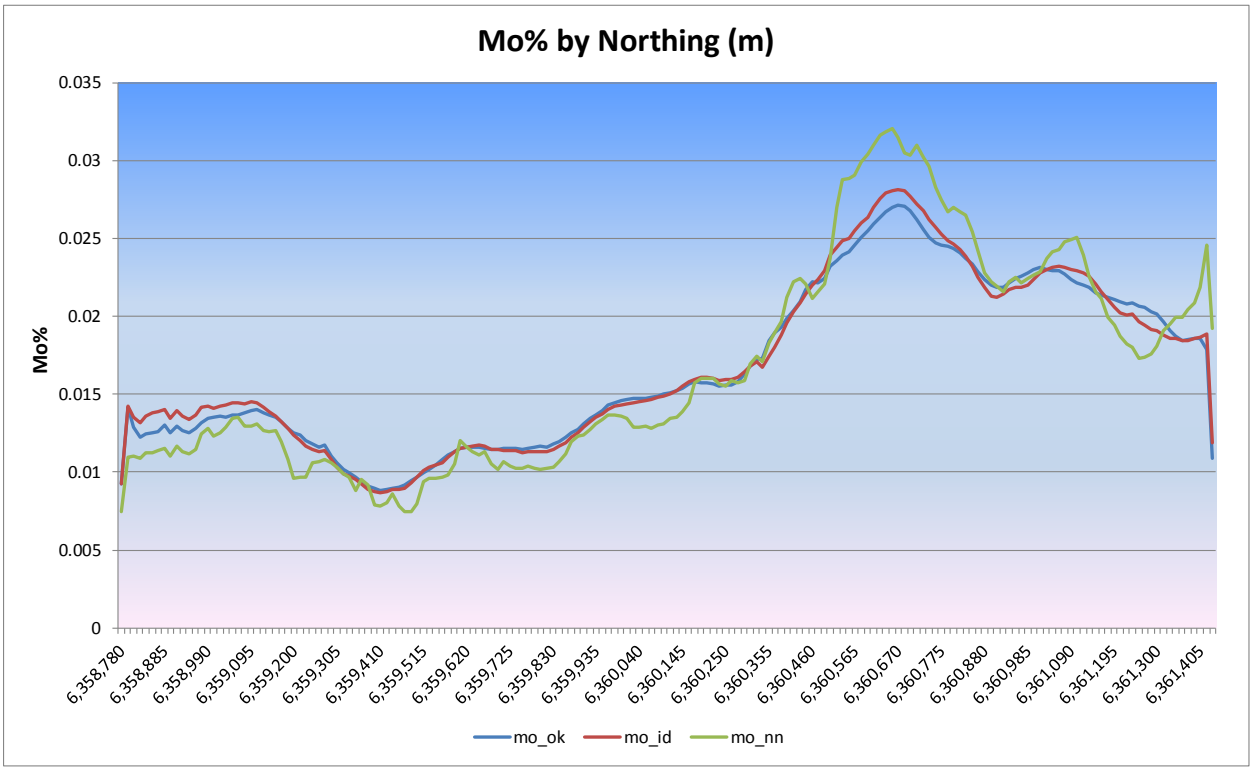
Copper

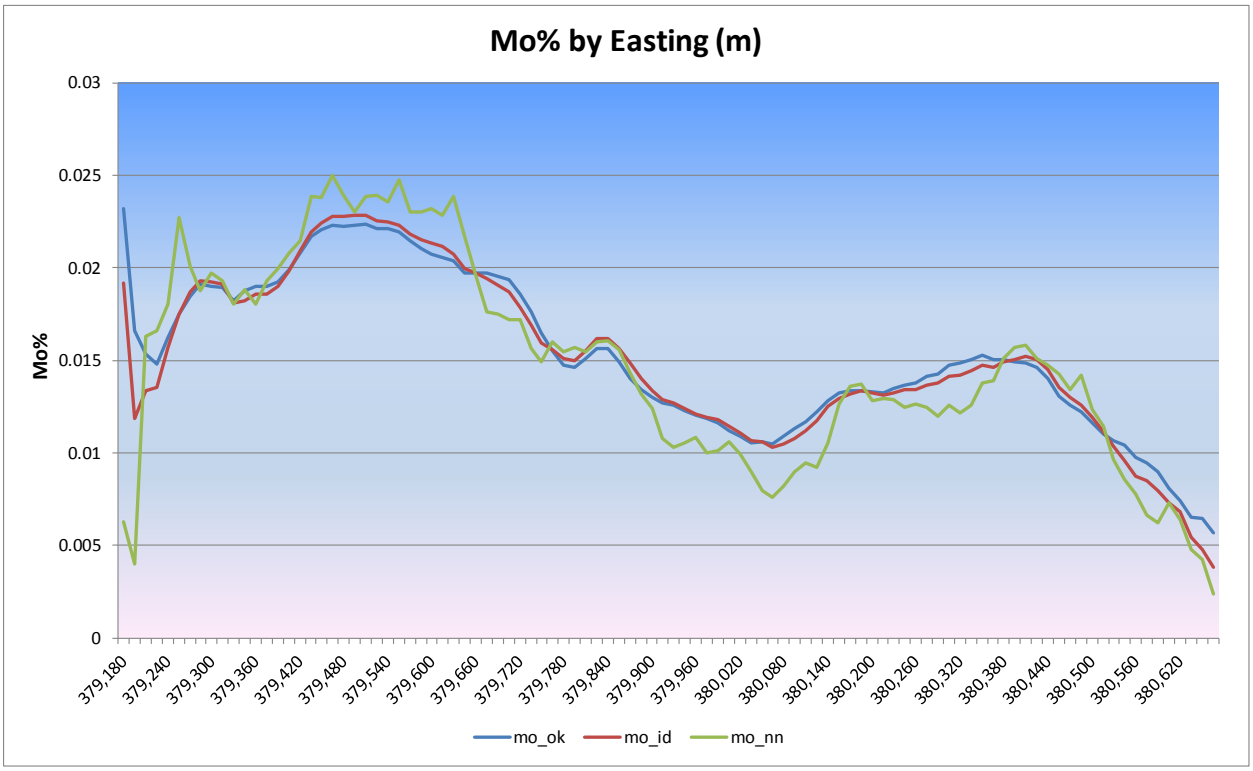






Molybdendum




Mo% by Easting (m)
Mo%
0.03
0.025
0.02
0.015
0.01
0.005
0
379,180
379,240
379,300
379,360
379,420
379,480
379,540
379,600
379,660
379,720
379,780
379,840
379,900
379,960
380,020
380,080
380,140
380,200
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380,320
380,380
380,440
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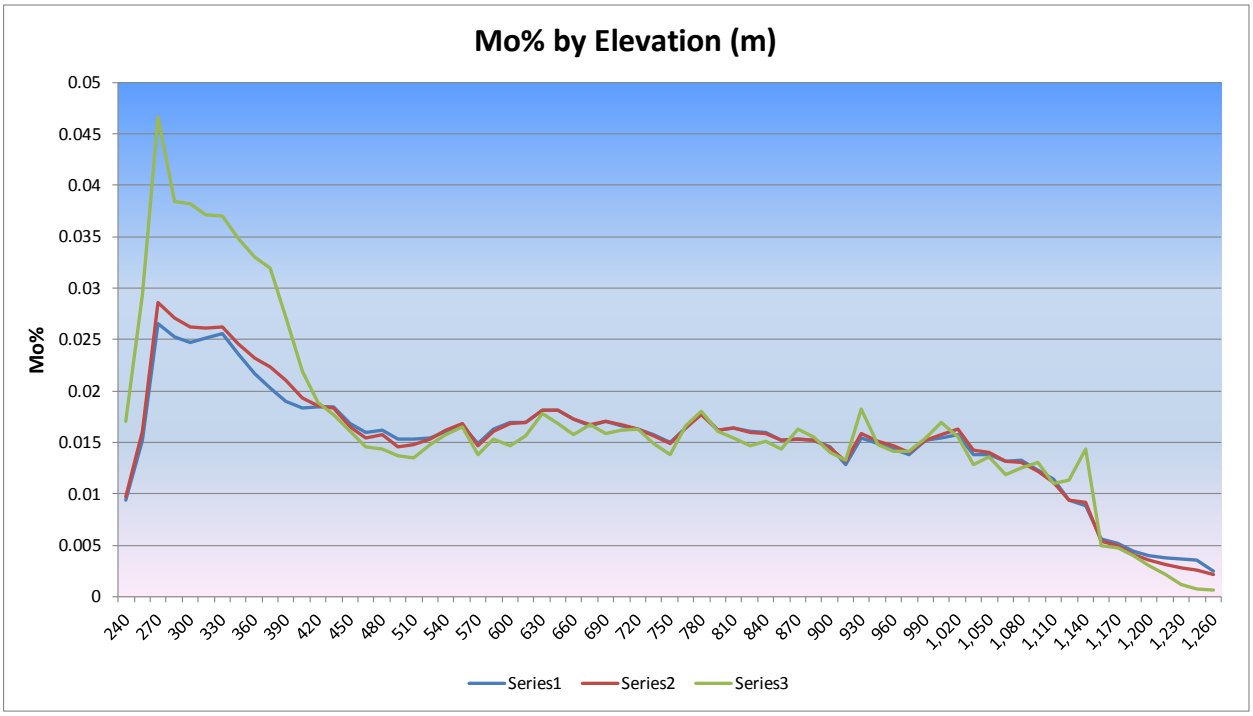
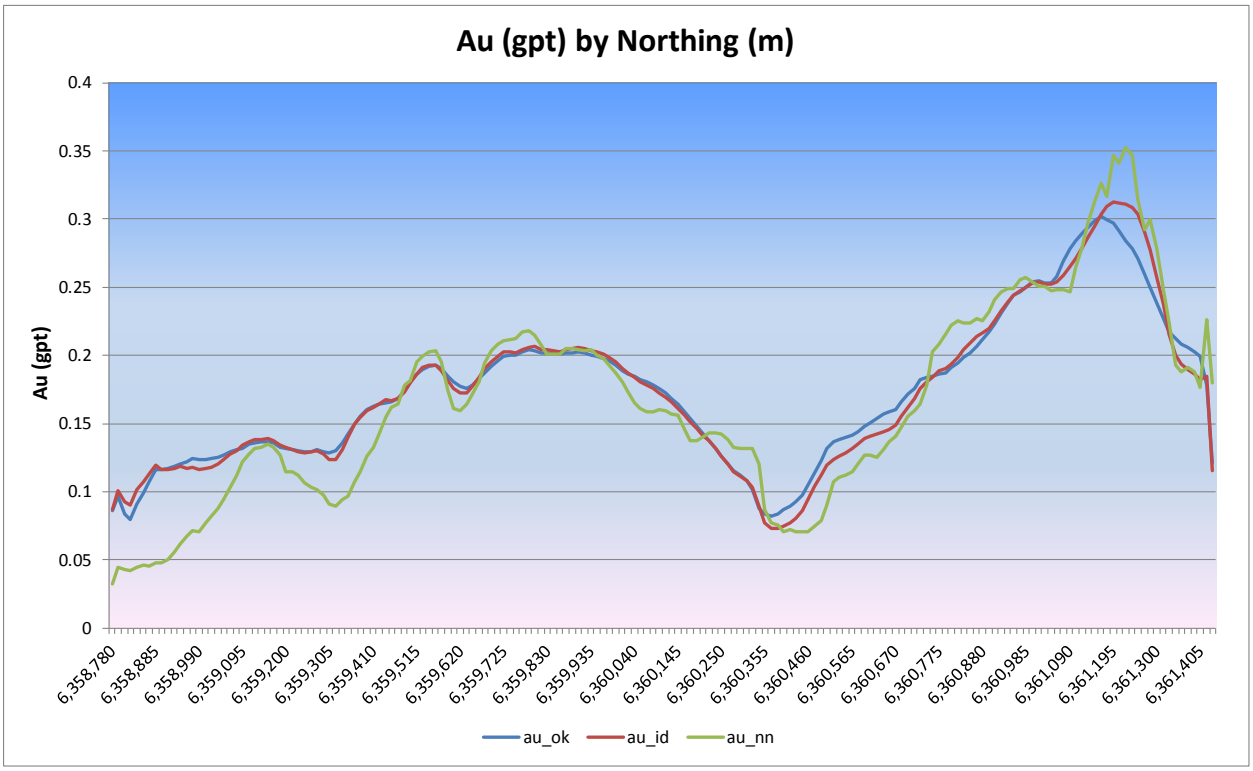
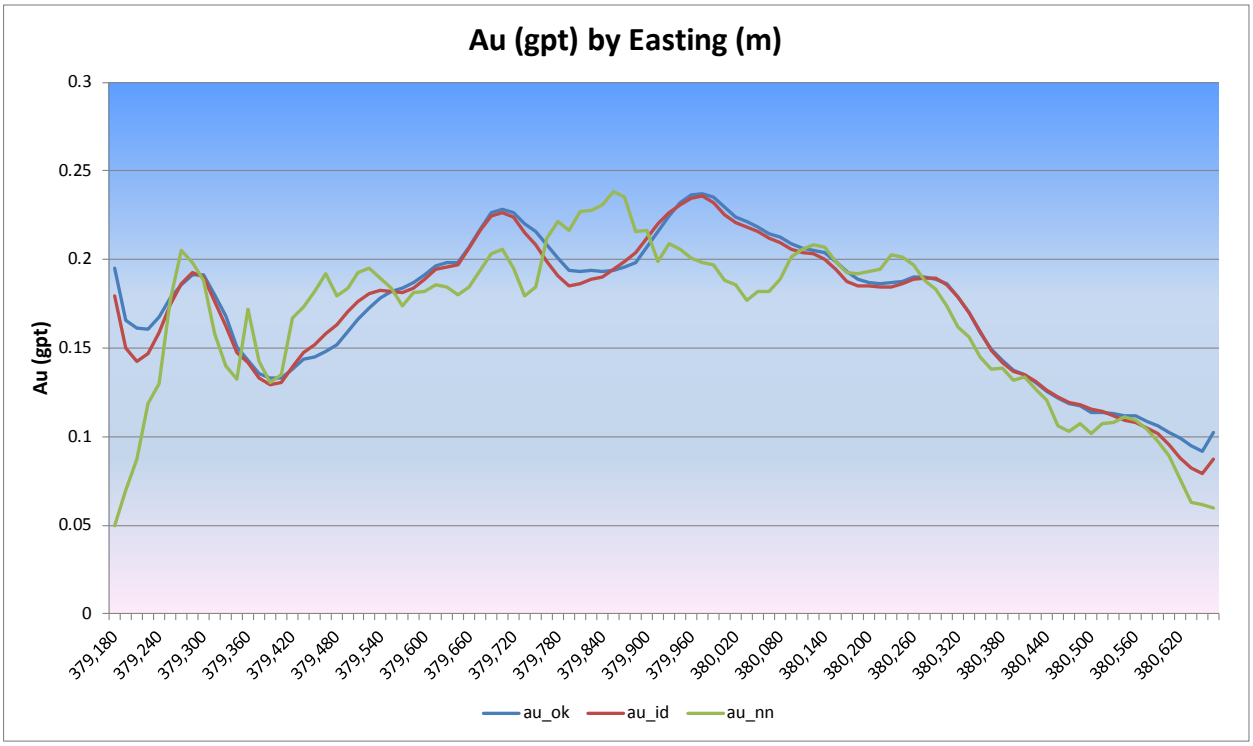
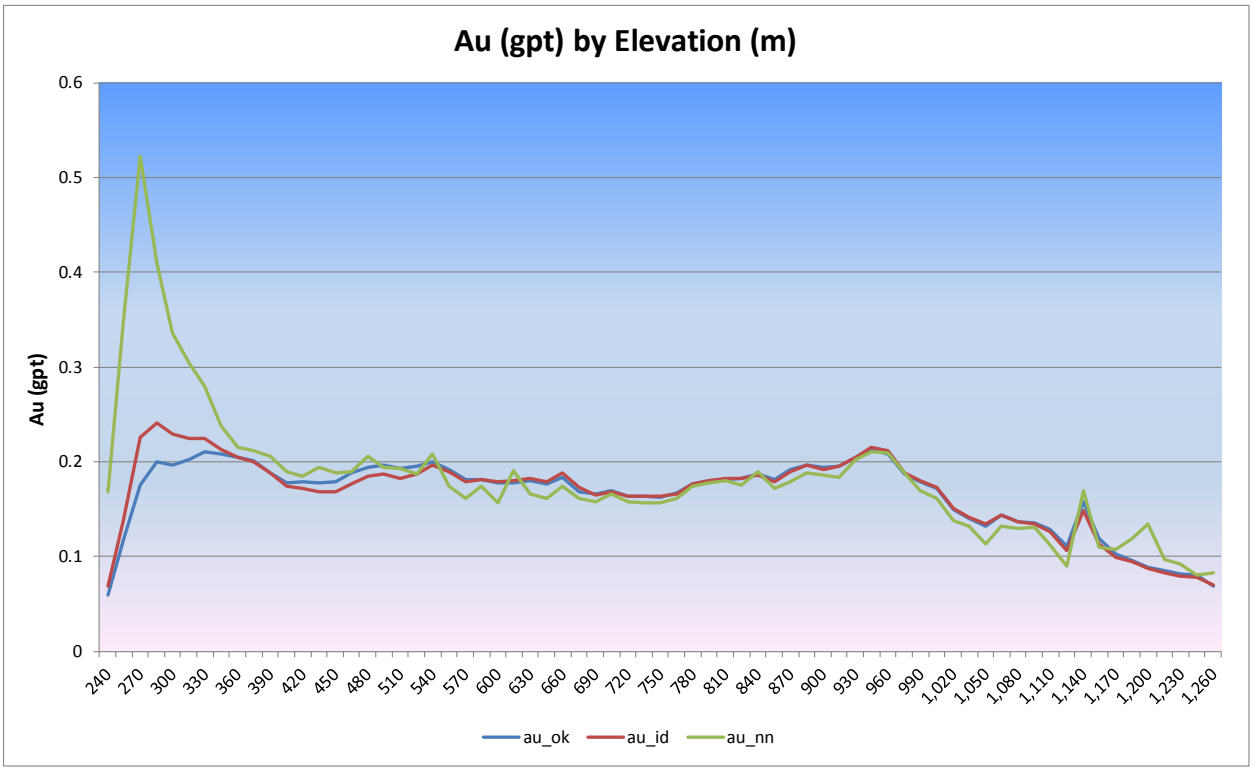
380,560
380,620
mo_ok
mo_id
mo_nn


Mo% by Elevation (m)
Mo%
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
240
270
300
330
360
390
420
450
480
510
540
570
600
630
660
690
720
750
780
810
840
870
900
930
960
990
1,020
1,050
1,080
1,110
1,140
1,170
1,200
1,230
1,260
Series1
Series2
Series3

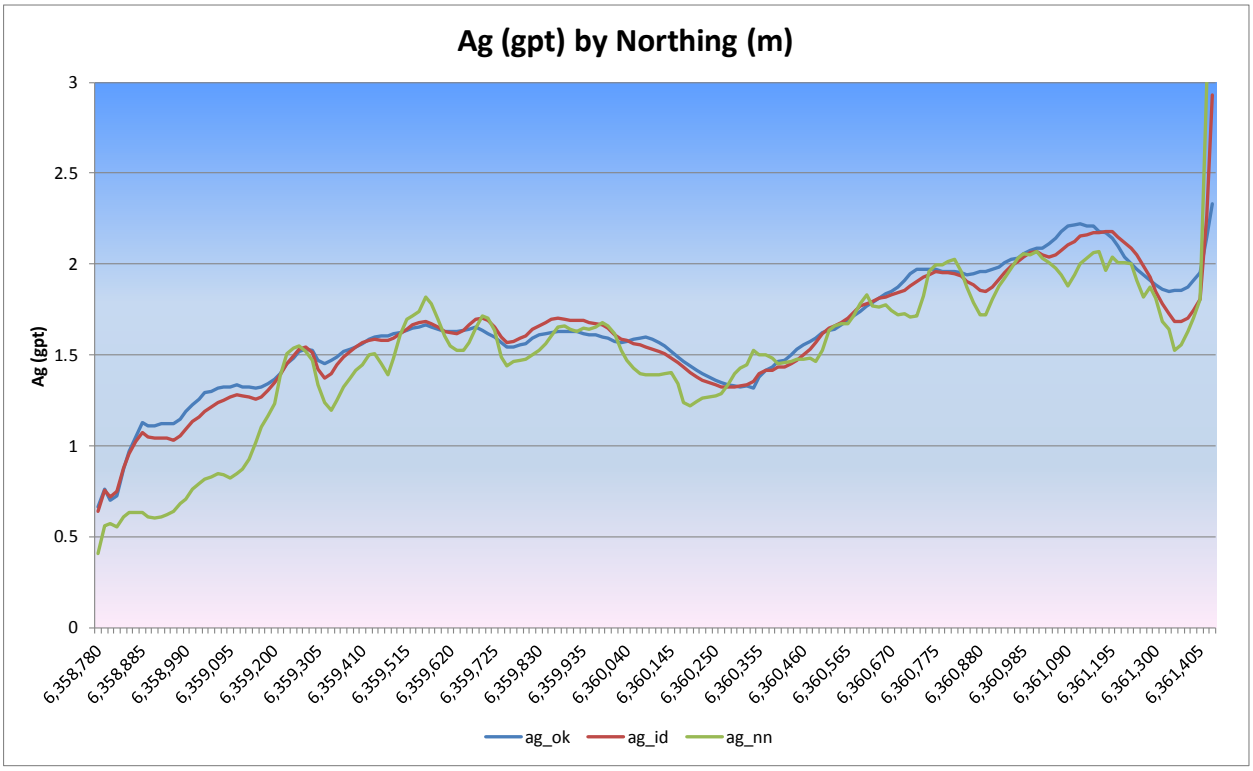
Gold

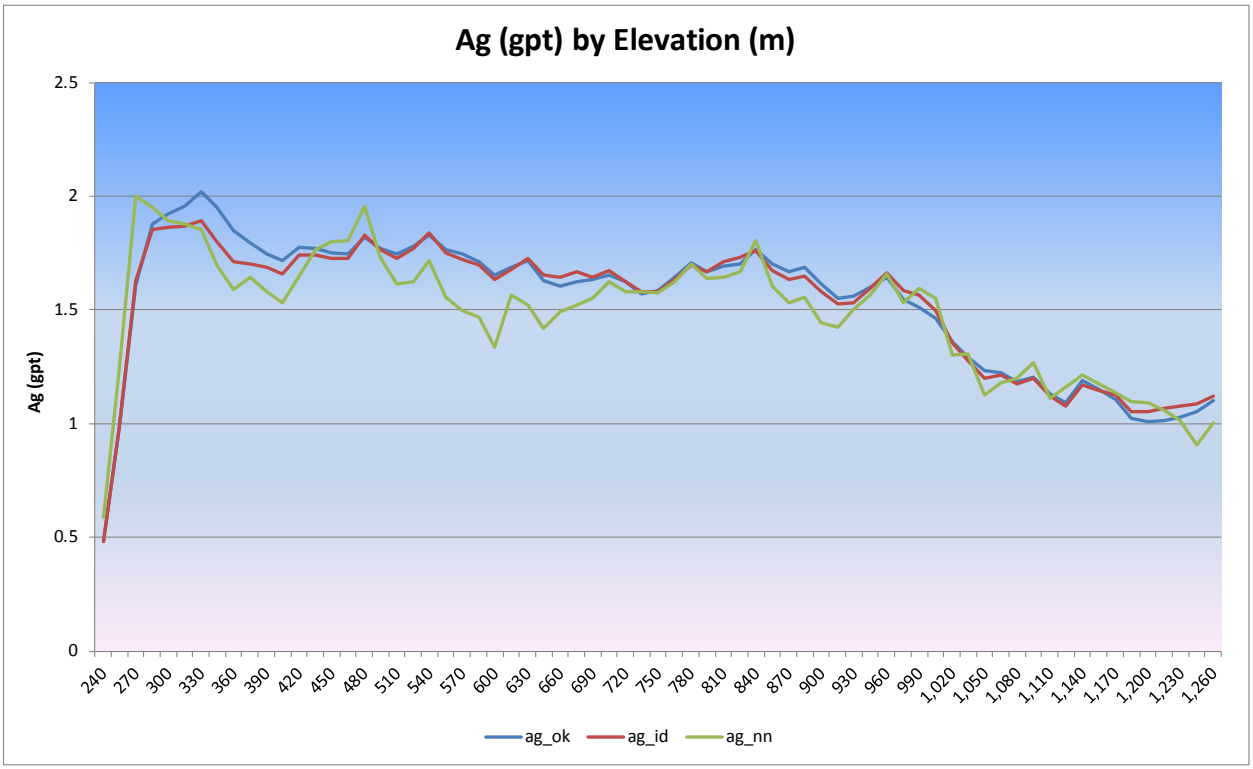

Au (gpt) by Northing (m)
Au (gpt)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
6,358,780
6,358,885
6,358,990
6,359,095
6,359,200
6,359,305
6,359,410
6,359,515
6,359,620
6,359,725
6,359,830
6,359,935
6,360,040
6,360,145
6,360,250
6,360,355
6,360,460
6,360,565
6,360,670
6,360,775
6,360,880
6,360,985
6,361,090
6,361,195
6,361,300
6,361,405
au_ok
au_id
au_nn

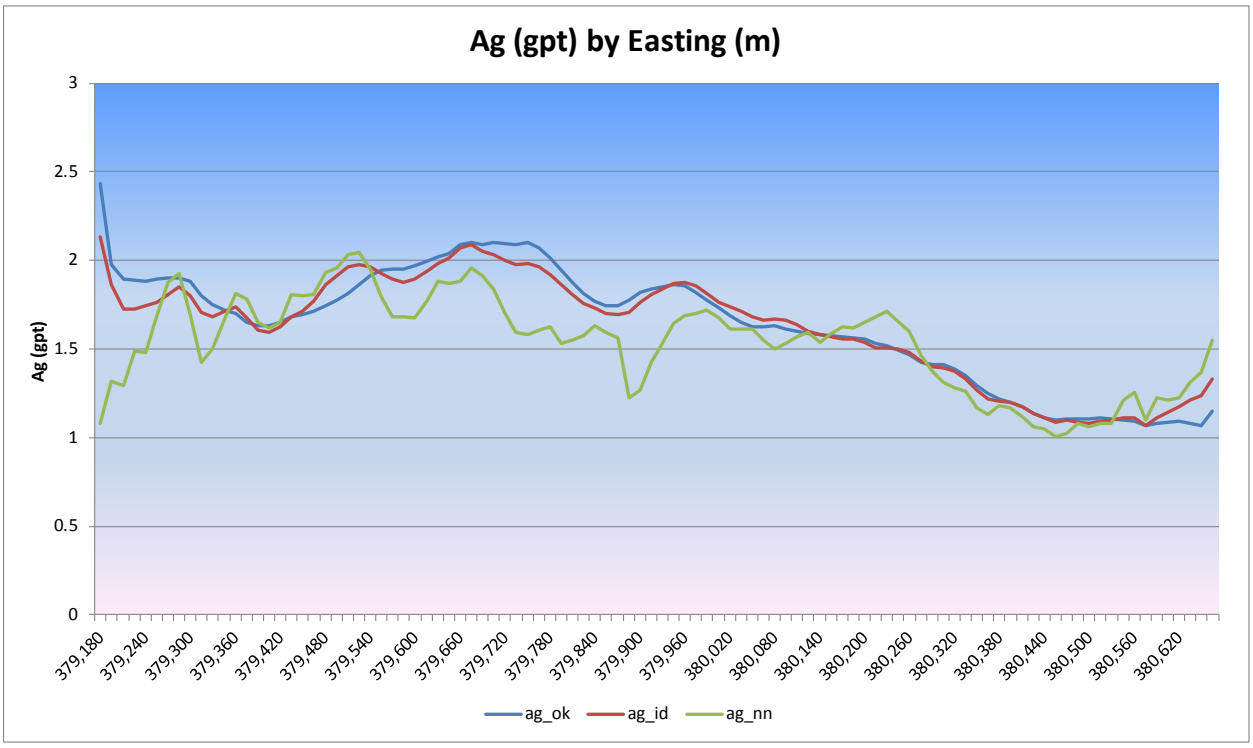

Au (gpt) by Easting (m)
Au (gpt)
0.3
0.25
0.2
0.15
0.1
0.05
0
379,180
379,240
379,300
379,360
379,420
379,480
379,540
379,600
379,660
379,720
379,780
379,840
379,900
379,960
380,020
380,080
380,140
380,200
380,260
380,320
380,380
380,440
380,500
380,560
380,620
au_ok
au_id
au_nn


Au (gpt) by Elevation (m)
Au (gpt)
0.6
0.5
0.4
0.3
0.2
0.1
0
240 270 300 330 360 390 420 450 480 510 540 570 600 630 660 690 720 750 780 810 840 870 900 930 960 990 1,020 1,050 1,080 1,110 1,140 1,170 1,200 1,230 1,260
au_ok
au_id
au_nn

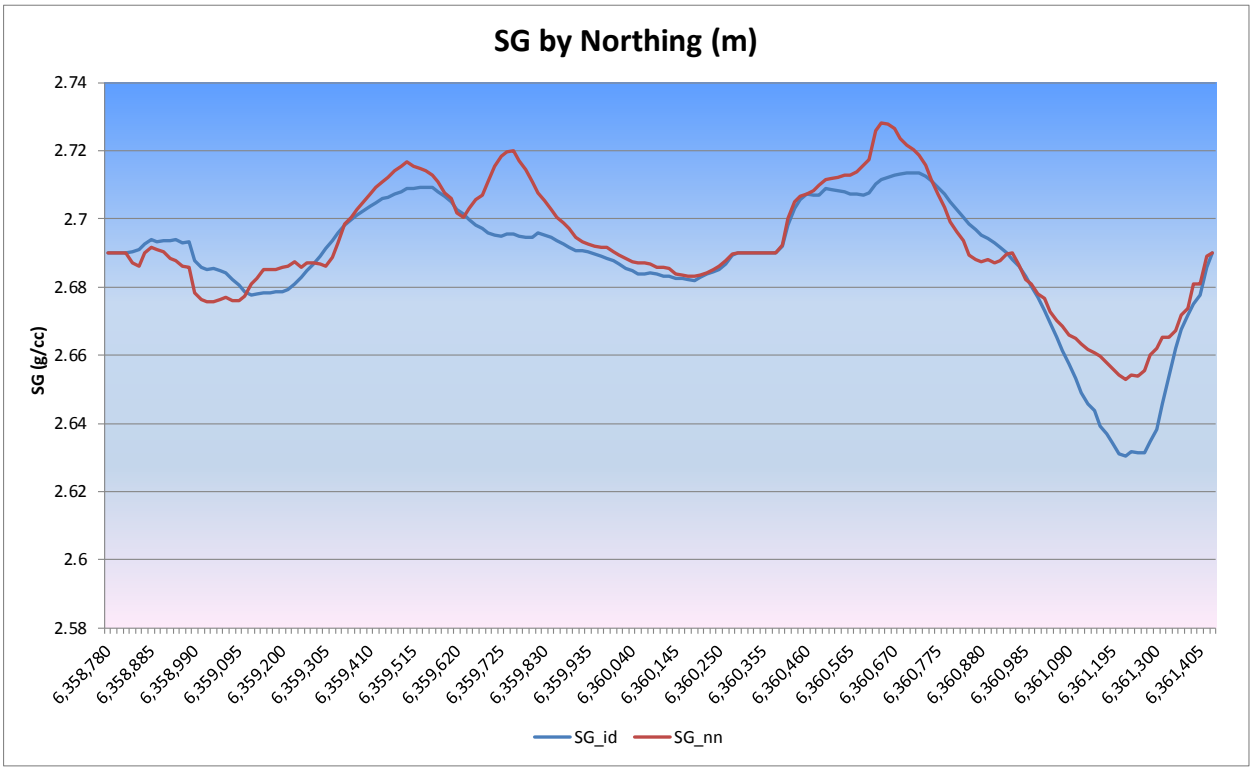
Silver

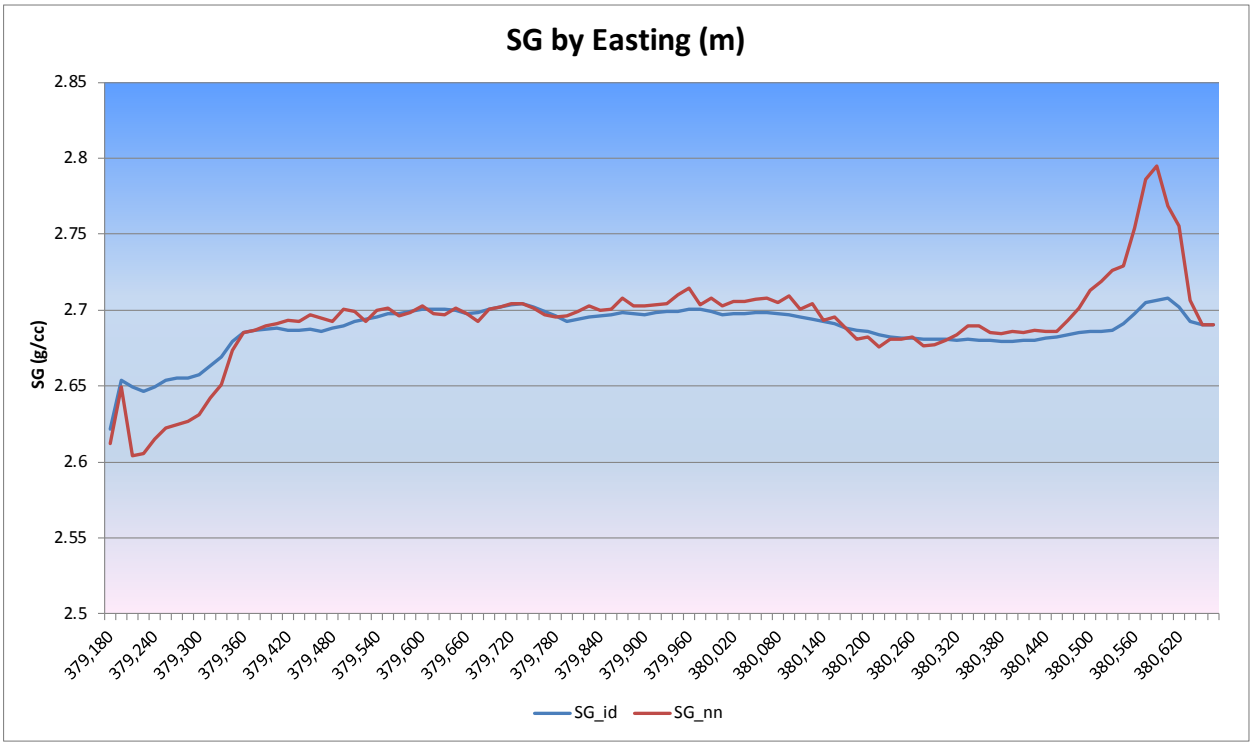

Ag (gpt) by Northing (m)
Ag (gpt)
3
2.5
2
1.5
1
0.5
0
6,358,780 6,358,885 6,358,990 6,359,095 6,359,200 6,359,305 6,359,410 6,359,515 6,359,620 6,359,725 6,359,830 6,359,935 6,360,040 6,360,145 6,360,250 6,360,355 6,360,460 6,360,565 6,360,670 6,360,775 6,360,880 6,360,985 6,361,090 6,361,195 6,361,300 6,361,405
ag_ok
ag_id
ag_nn

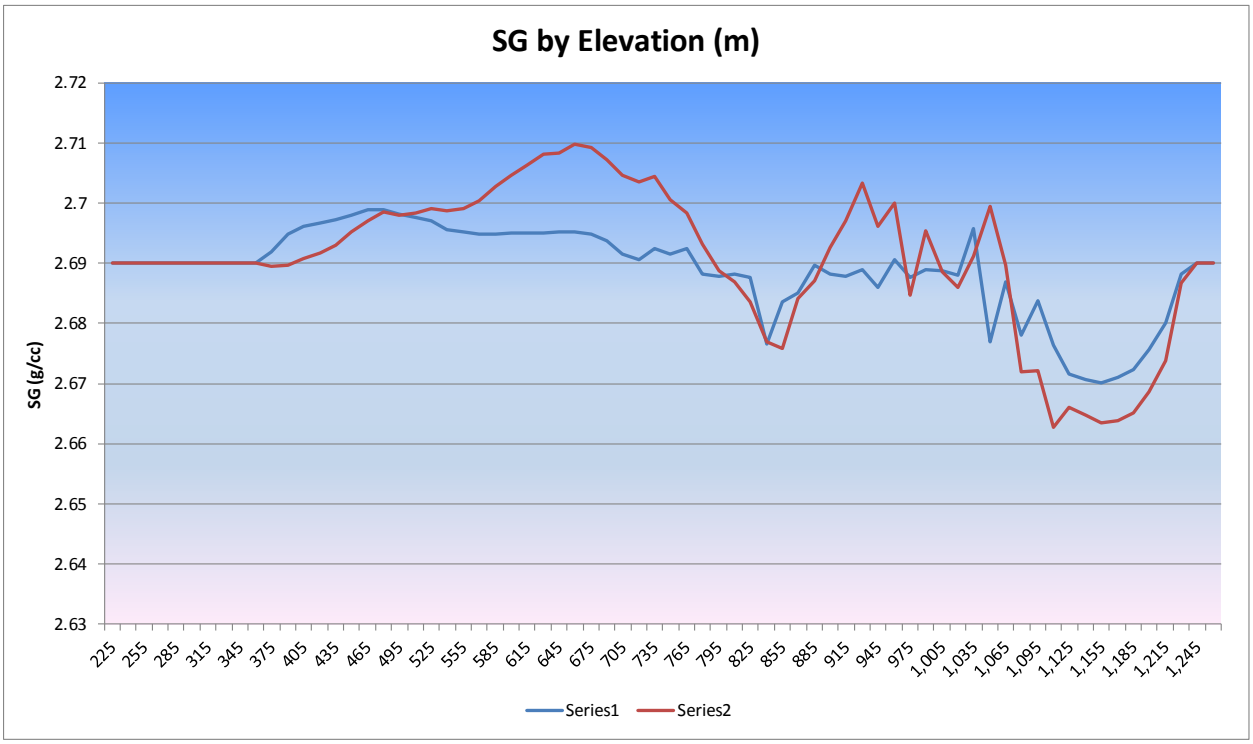

Ag (gpt) by Elevation (m)
Ag (gpt)
2.5
2
1.5
1
0.5
0
240
270
300
330
360
390
420
450
480
510
540
570
600
630
660
690
720
750
780
810
840
870
900
930
960
990
1,020
1,050
1,080
1,110
1,140
1,170
1,200
1,230
1,260
ag_ok
ag_id
ag_nn


Ag (gpt) by Easting (m)
Ag (gpt)
3
2.5
2
1.5
1
0.5
0
379,180
379,240
379,300
379,360
379,420
379,480
379,540
379,600
379,660
379,720
379,780
379,840
379,900
379,960
380,020
380,080
380,140
380,200
380,260
380,320
380,380
380,440
380,500
380,560
380,620
ag_ok
ag_id
ag_nn

Density


SG by Northing (m)
SG (g/cc)
2.74
2.72
2.7
2.68
2.66
2.64
2.62
2.6
2.58
6,358,780
6,358,885
6,358,990
6,359,095
6,359,200
6,359,305
6,359,410
6,359,515
6,359,620
6,359,725
6,359,830
6,359,935
6,360,040
6,360,145
6,360,250
6,360,355
6,360,460
6,360,565
6,360,670
6,360,775
6,360,880
6,360,985
6,361,090
6,361,195
6,361,300
6,361,405
SG_id
SG_nn


SG by Easting (m)
SG (g/cc)
2.85
2.8
2.75
2.7
2.65
2.6
2.55
2.5
379,180
379,240
379,300
379,360
379,420
379,480
379,540
379,600
379,660
379,720
379,780
379,840
379,900
379,960
380,020
380,080
380,140
380,200
380,260
380,320
380,380
380,440
380,500
380,560
380,620
SG_id
SG_nn

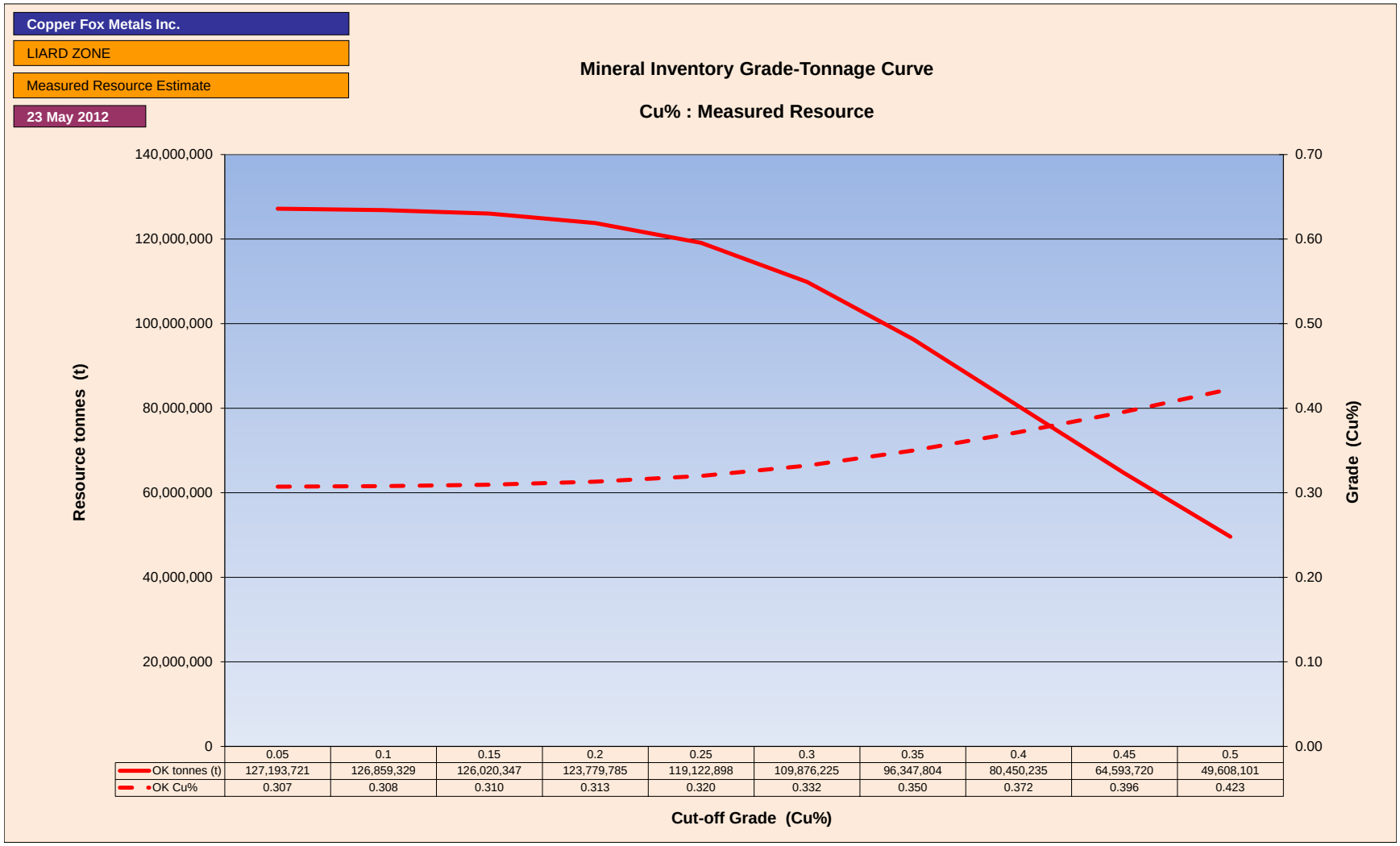

SG by Elevation (m)
SG (g/cc)
2.72
2.71
2.7
2.69
2.68
2.67
2.66
2.65
2.64
2.63
225
255
285
315
345
375
405
435
465
495
525
555
585
615
645
675
705
735
765
795
825
855
885
915
945
975
1,005
1,035
1,065
1,095
1,125
1,155
1,185
1,215
1,245
Series1
Series2

APPENDIX G

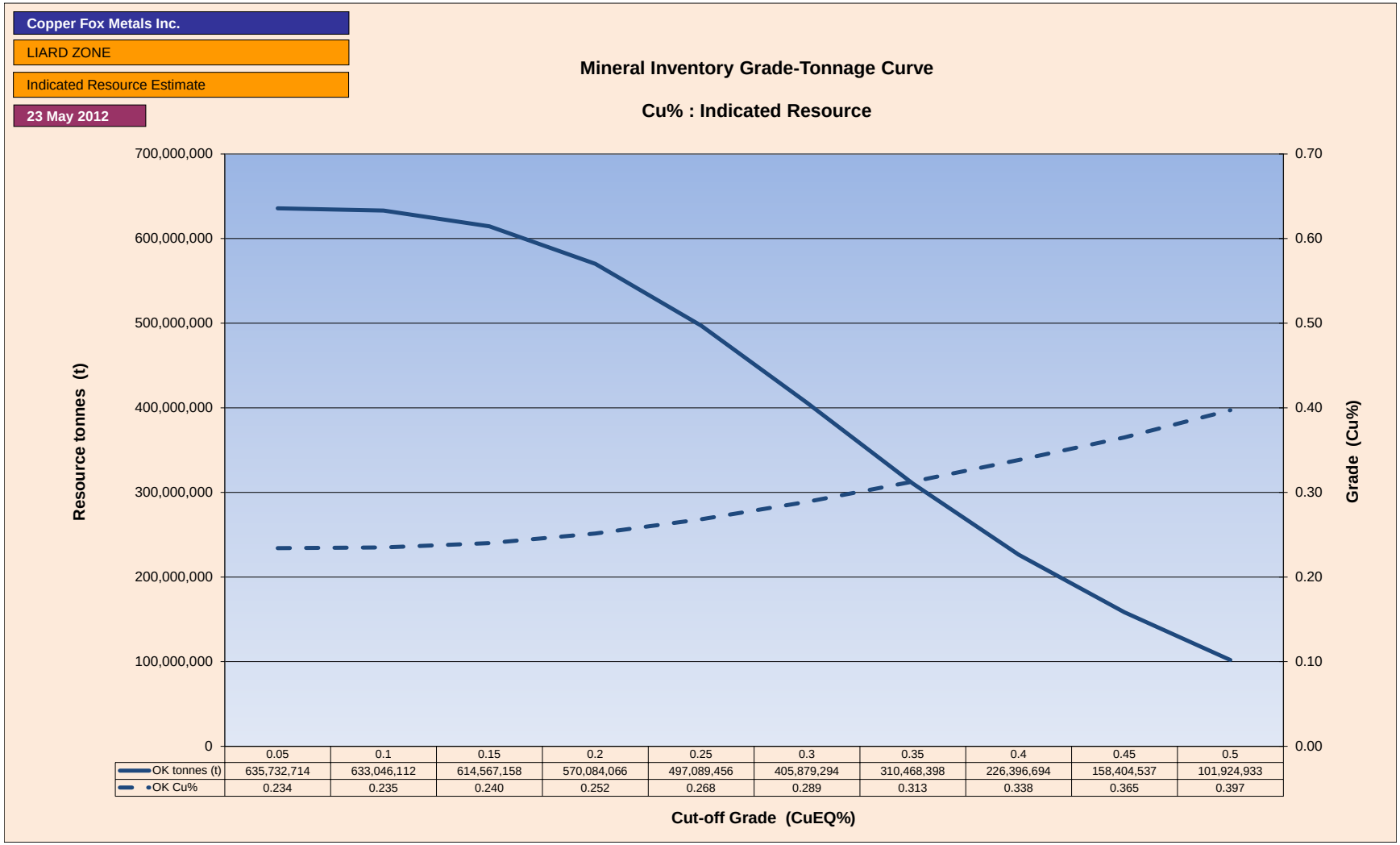
GRADE – TONNAGE CURVES

Grade – Tonnage Curves – Liard Zone

Measured – Cu

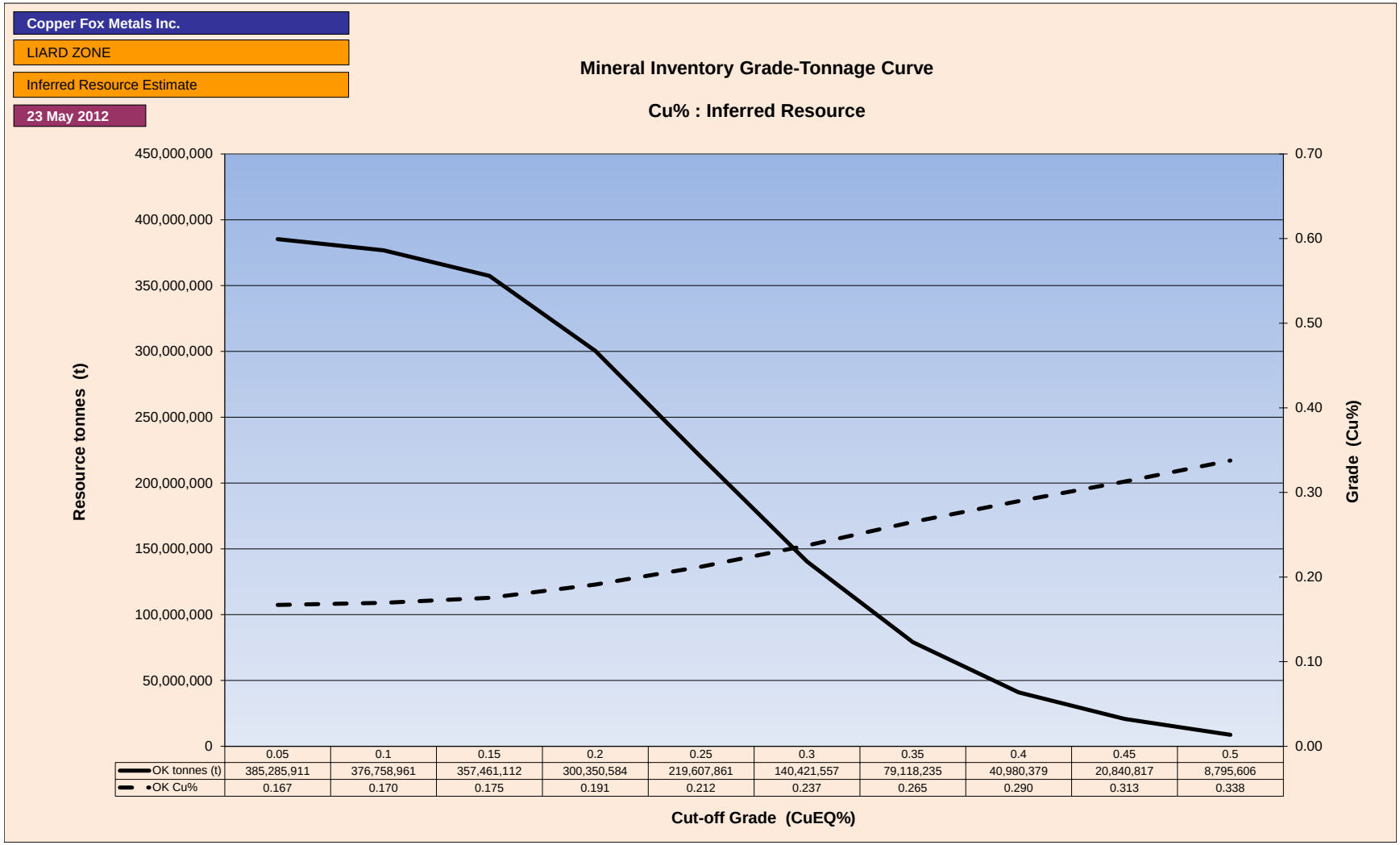


Indicated – Cu



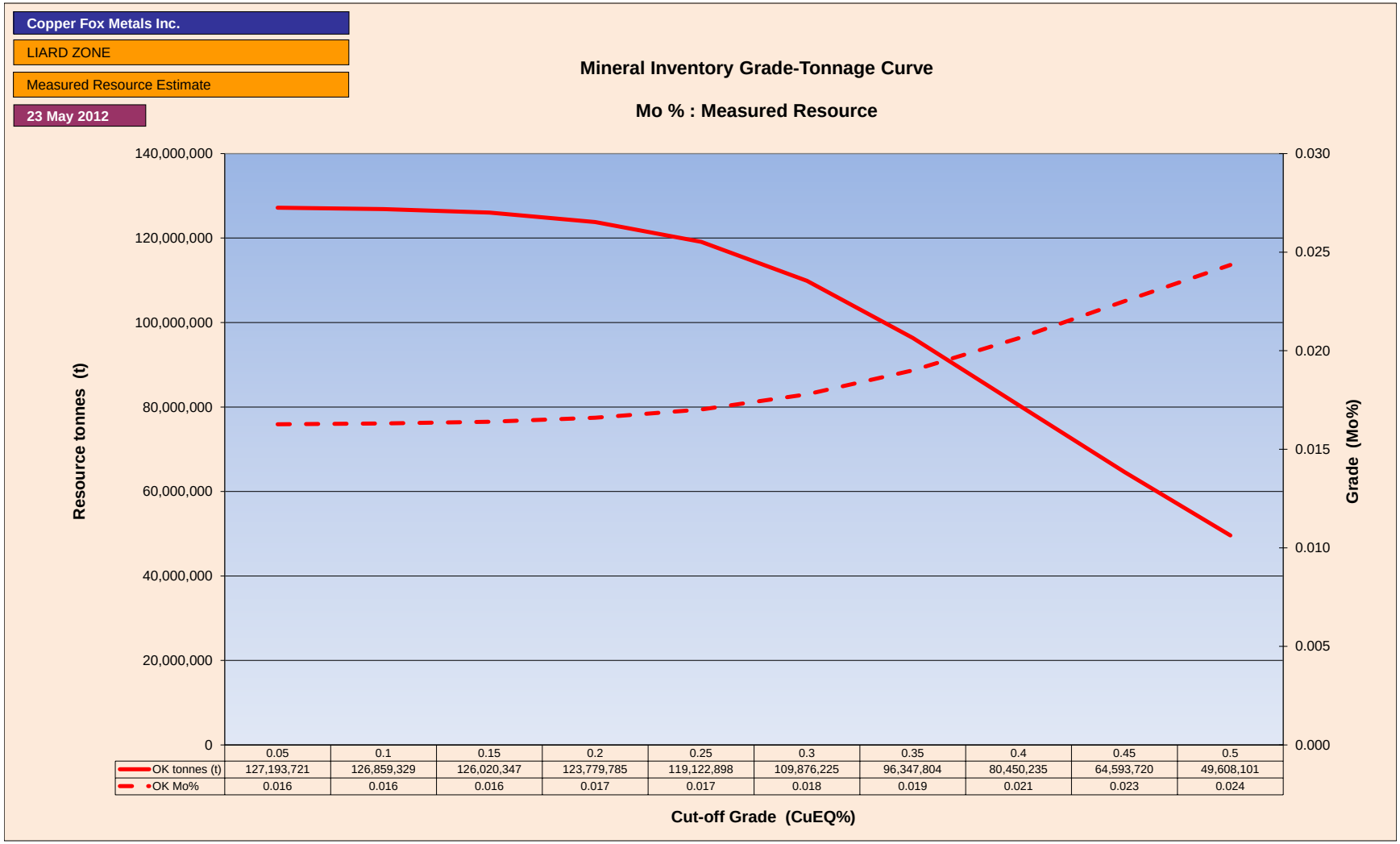
	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
OK tonnes (t)	635,732,714	633,046,112	614,567,158	570,084,066	497,089,456	405,879,294	310,468,398	226,396,694	158,404,537	101,924,933
OK Cu%	0.234	0.235	0.240	0.252	0.268	0.289	0.313	0.338	0.365	0.397

Inferred – Cu

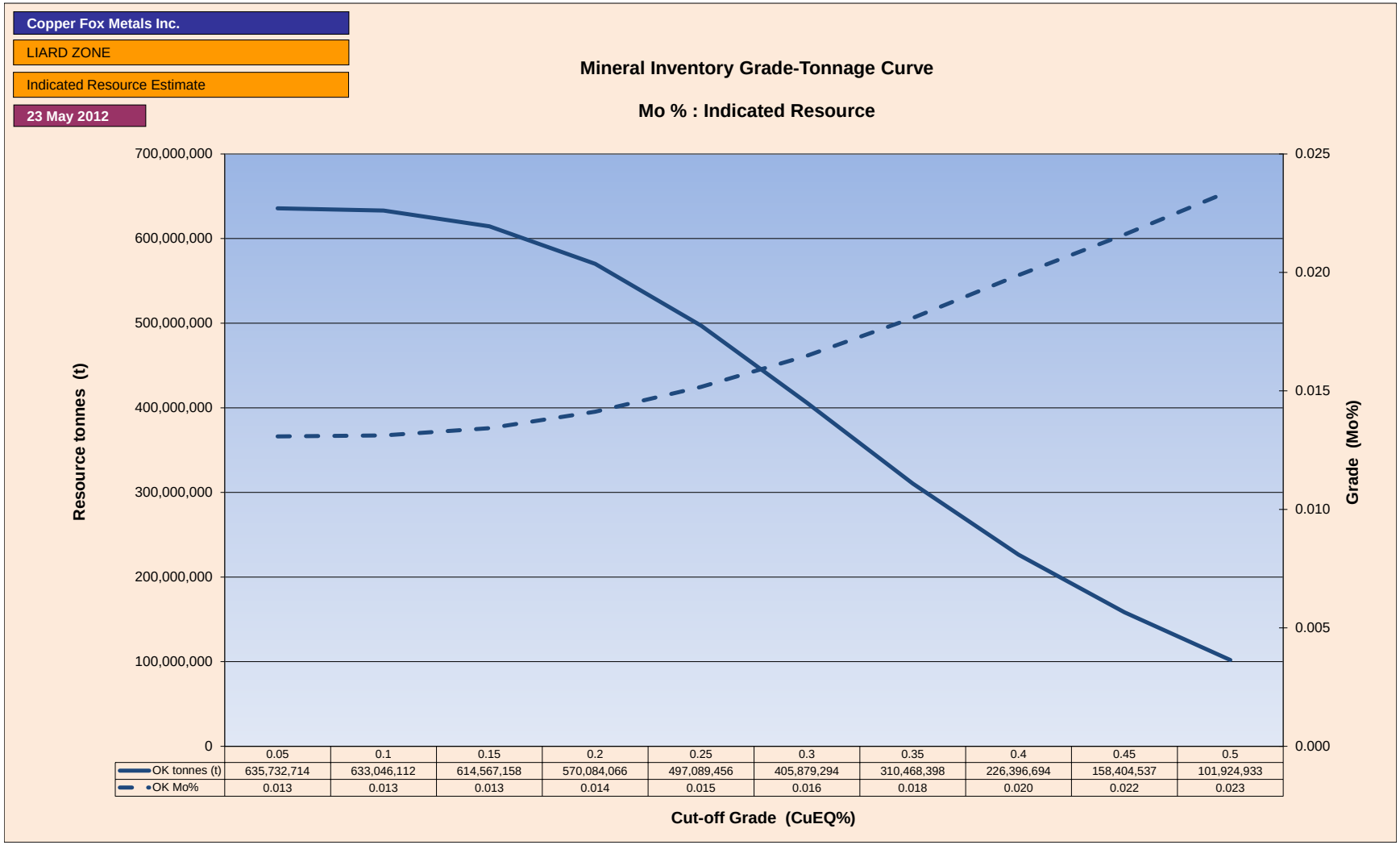


	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
OK tonnes (t)	385,285,911	376,758,961	357,461,112	300,350,584	219,607,861	140,421,557	79,118,235	40,980,379	20,840,817	8,795,606
OK Cu%	0.167	0.170	0.175	0.191	0.212	0.237	0.265	0.290	0.313	0.338

Measured – Mo

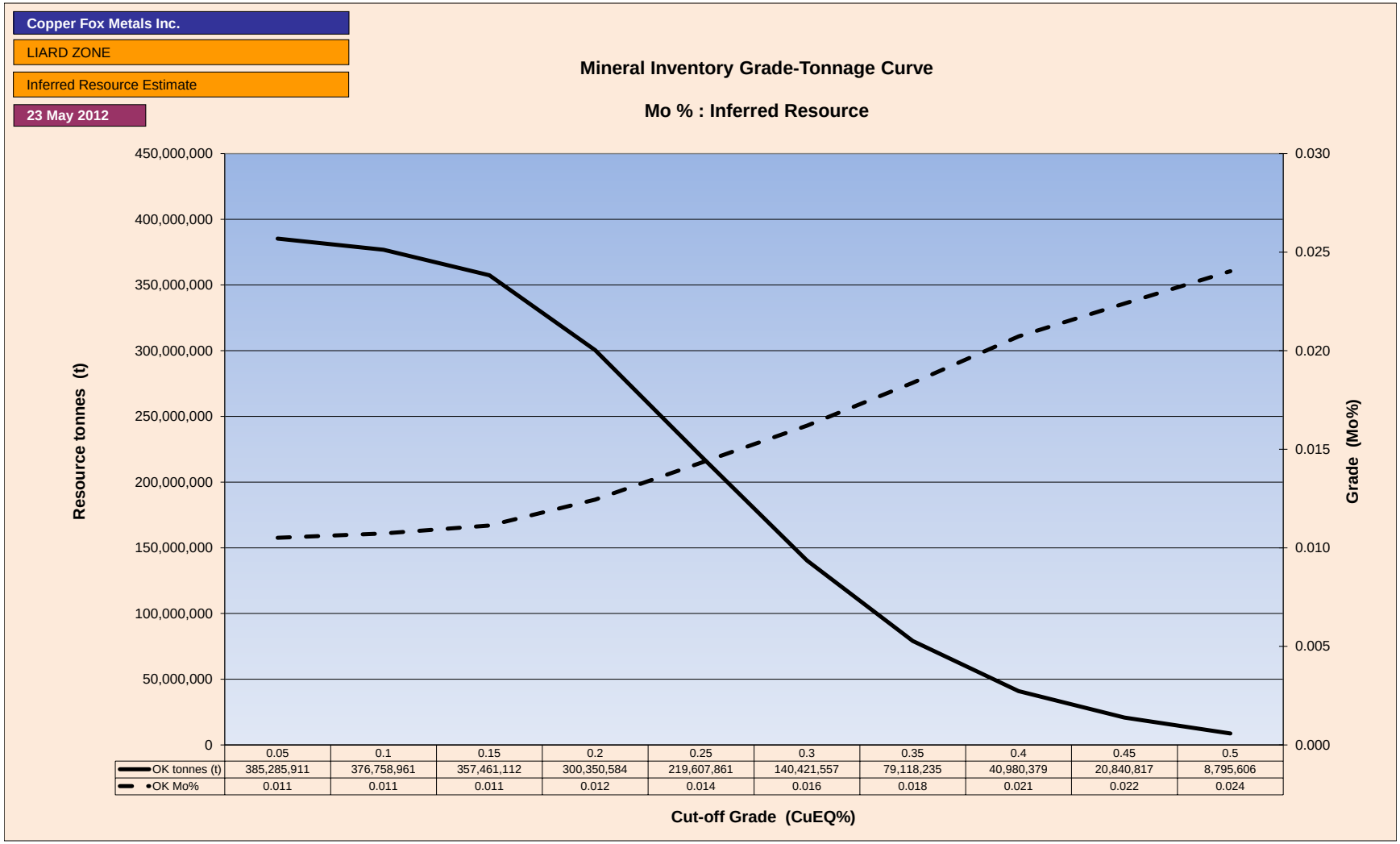

Copper Fox Metals Inc.
LIARD ZONE
Measured Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Mo % : Measured Resource
Resource tonnes (t)
Grade (Mo%)
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
0.030
0.025
0.020
0.015
0.010
0.005
0.000
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5
OK tonnes (t) 127,193,721 126,859,329 126,020,347 123,779,785 119,122,898 109,876,225 96,347,804 80,450,235 64,593,720 49,608,101
OK Mo% 0.016 0.016 0.016 0.017 0.017 0.018 0.019 0.021 0.023 0.024
Cut-off Grade (CuEQ%)

Indicated - Mo

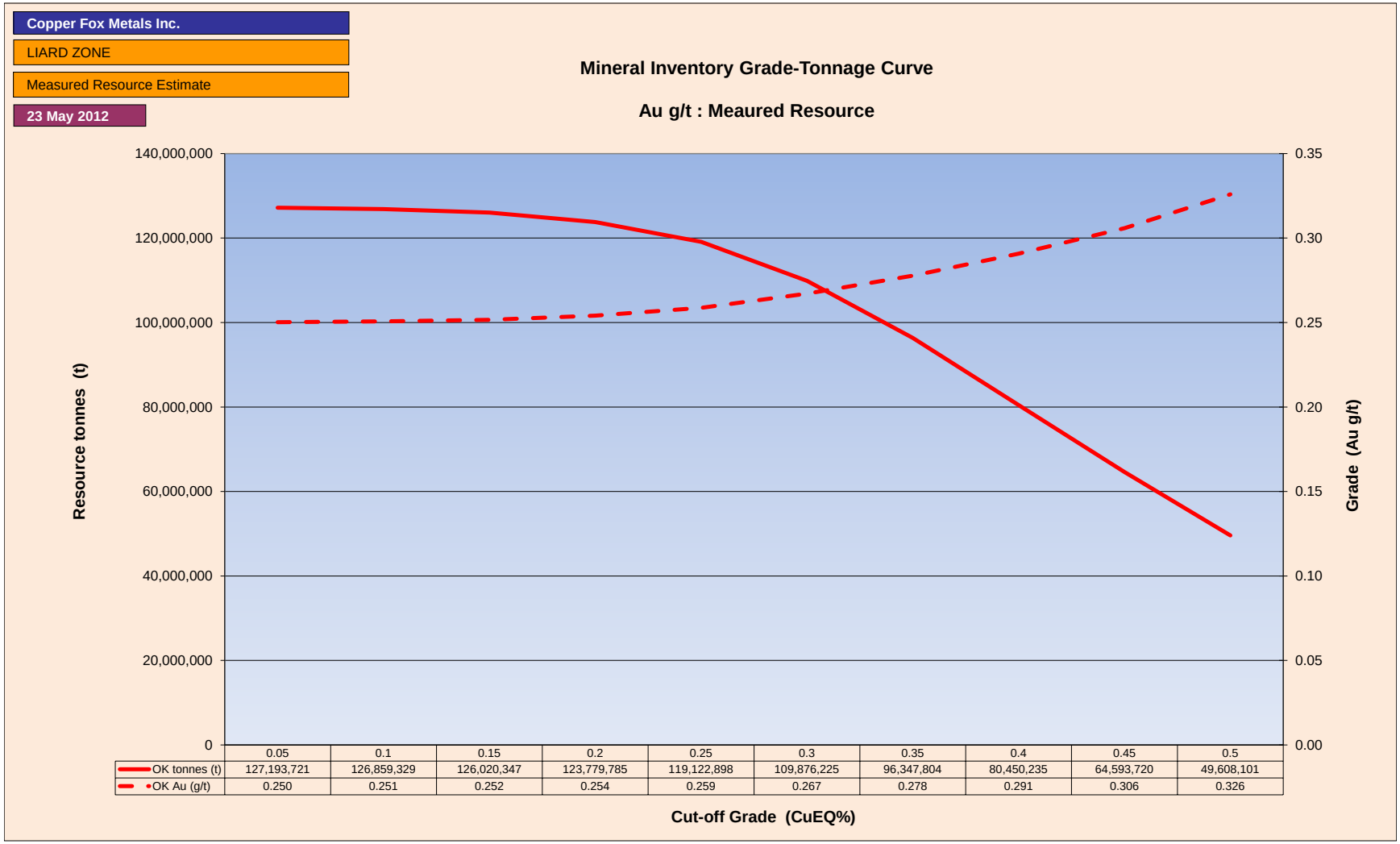


	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
OK tonnes (t)	635,732,714	633,046,112	614,567,158	570,084,066	497,089,456	405,879,294	310,468,398	226,396,694	158,404,537	101,924,933
OK Mo%	0.013	0.013	0.013	0.014	0.015	0.016	0.018	0.020	0.022	0.023

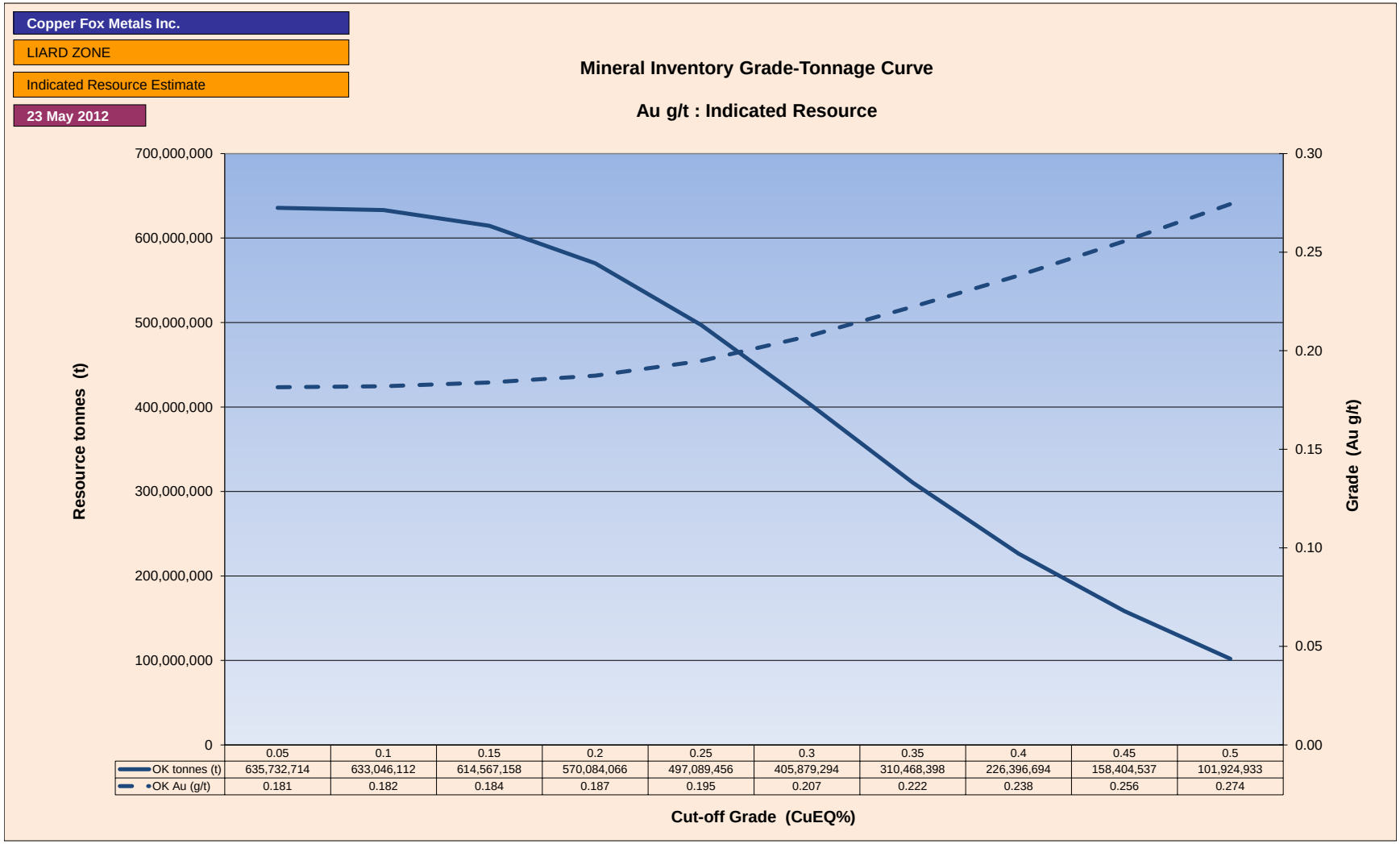
Inferred – Mo


Copper Fox Metals Inc.
LIARD ZONE
Inferred Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Mo % : Inferred Resource
Resource tonnes (t)
Grade (Mo%)
Cut-off Grade (CuEQ%)
450,000,000
400,000,000
350,000,000
300,000,000
250,000,000
200,000,000
150,000,000
100,000,000
50,000,000
0
0.030
0.025
0.020
0.015
0.010
0.005
0.000
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5
OK tonnes (t) 385,285,911 376,758,961 357,461,112 300,350,584 219,607,861 140,421,557 79,118,235 40,980,379 20,840,817 8,795,606
OK Mo% 0.011 0.011 0.011 0.012 0.014 0.016 0.018 0.021 0.022 0.024

Measured – Au

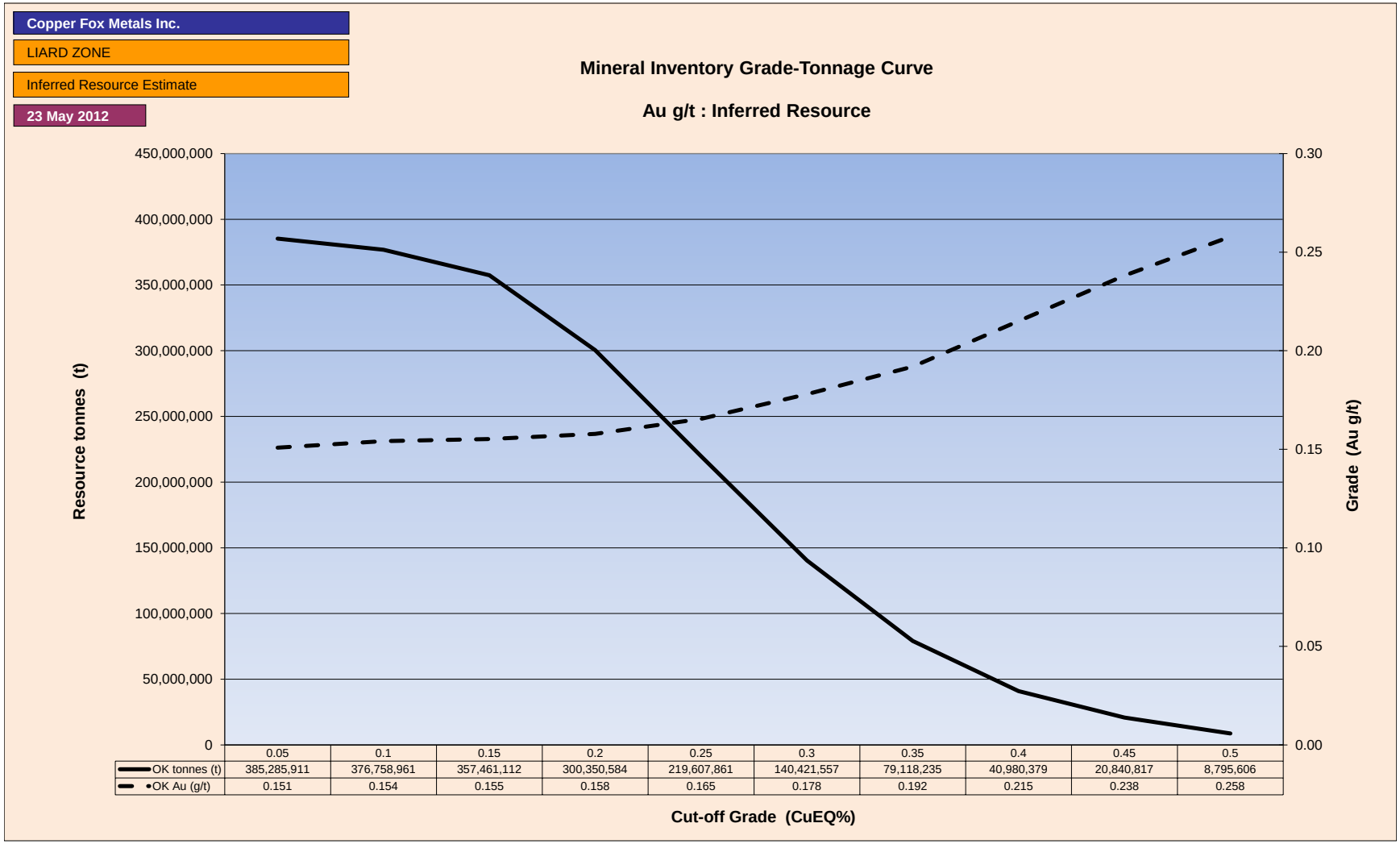

Copper Fox Metals Inc.
LIARD ZONE
Measured Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Au g/t : Meaured Resource
Resource tonnes (t)
Grade (Au g/t)
Cut-off Grade (CuEQ%)
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5
OK tonnes (t) 127,193,721 126,859,329 126,020,347 123,779,785 119,122,898 109,876,225 96,347,804 80,450,235 64,593,720 49,608,101
OK Au (g/t) 0.250 0.251 0.252 0.254 0.259 0.267 0.278 0.291 0.306 0.326

Indicated – Au

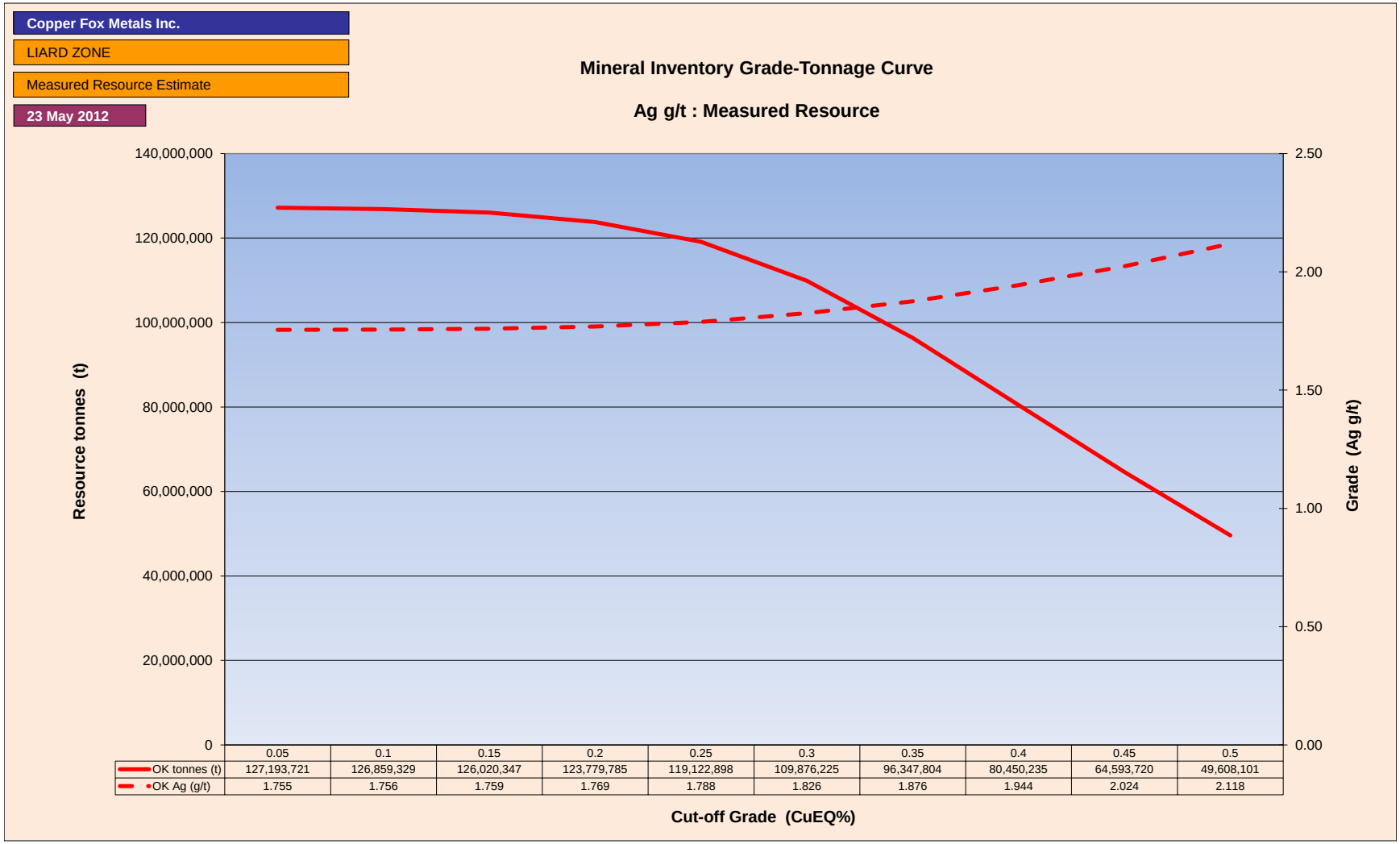


	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
OK tonnes (t)	635,732,714	633,046,112	614,567,158	570,084,066	497,089,456	405,879,294	310,468,398	226,396,694	158,404,537	101,924,933
OK Au (g/t)	0.181	0.182	0.184	0.187	0.195	0.207	0.222	0.238	0.256	0.274

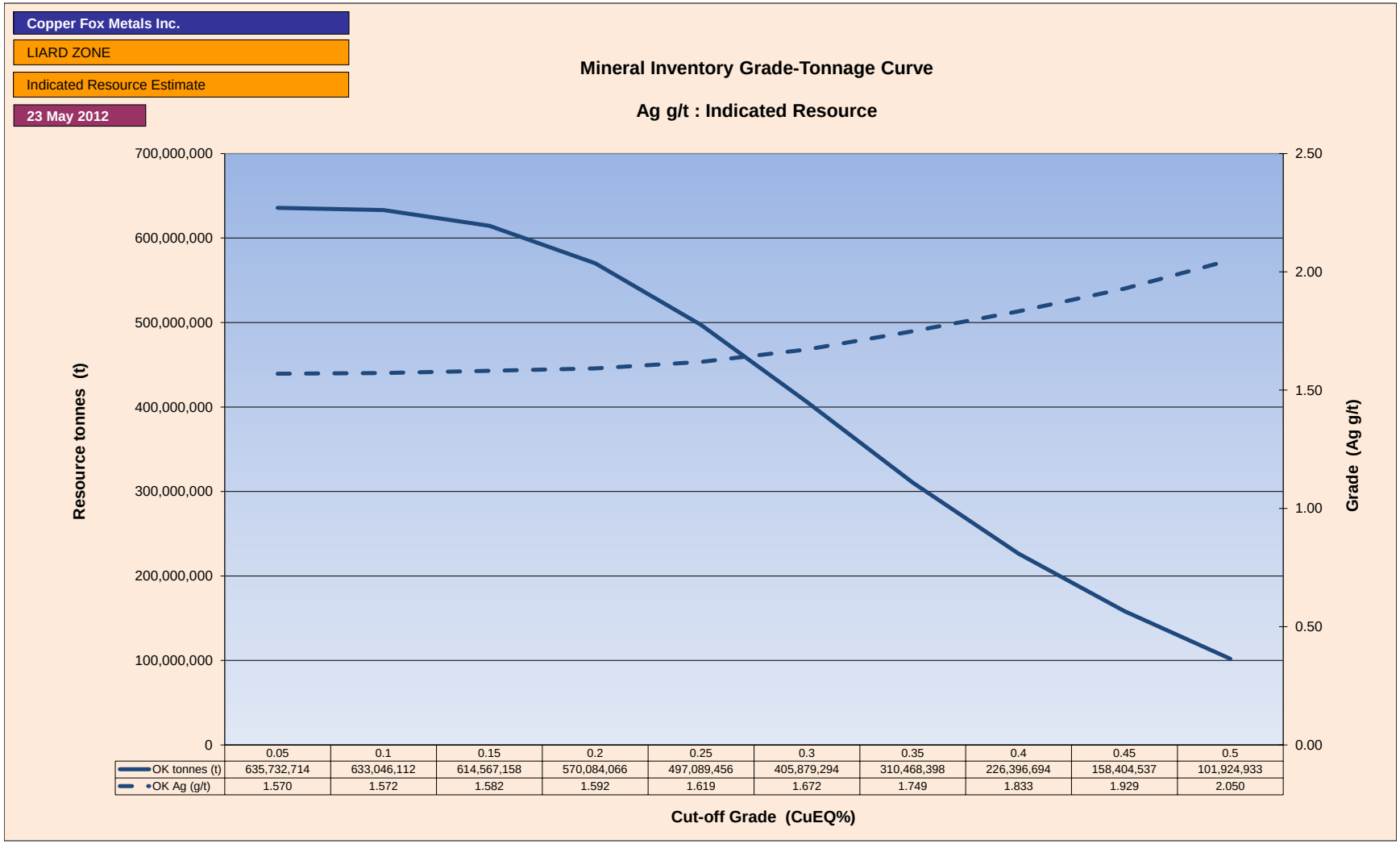
Inferred – Au


Copper Fox Metals Inc.
LIARD ZONE
Inferred Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Au g/t : Inferred Resource
Resource tonnes (t)
Grade (Au g/t)
Cut-off Grade (CuEQ%)
450,000,000
400,000,000
350,000,000
300,000,000
250,000,000
200,000,000
150,000,000
100,000,000
50,000,000
0
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5
OK tonnes (t) 385,285,911 376,758,961 357,461,112 300,350,584 219,607,861 140,421,557 79,118,235 40,980,379 20,840,817 8,795,606
OK Au (g/t) 0.151 0.154 0.155 0.158 0.165 0.178 0.192 0.215 0.238 0.258

Measured - Ag

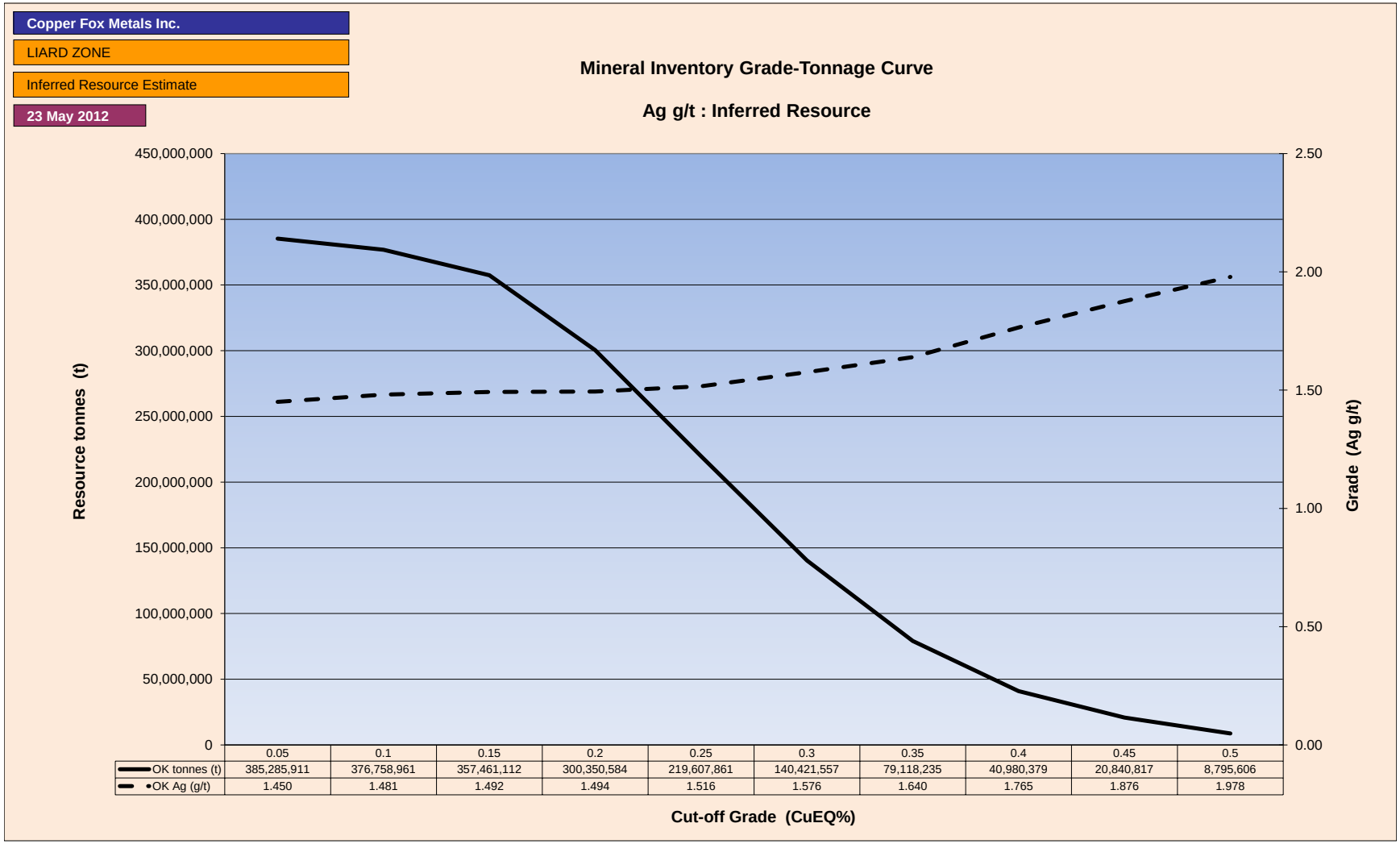

Copper Fox Metals Inc.
LIARD ZONE
Measured Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Ag g/t : Measured Resource
Resource tonnes (t)
Grade (Ag g/t)
Cut-off Grade (CuEQ%)
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
2.50
2.00
1.50
1.00
0.50
0.00
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5
OK tonnes (t) 127,193,721 126,859,329 126,020,347 123,779,785 119,122,898 109,876,225 96,347,804 80,450,235 64,593,720 49,608,101
OK Ag (g/t) 1.755 1.756 1.759 1.769 1.788 1.826 1.876 1.944 2.024 2.118

Indicated - Ag



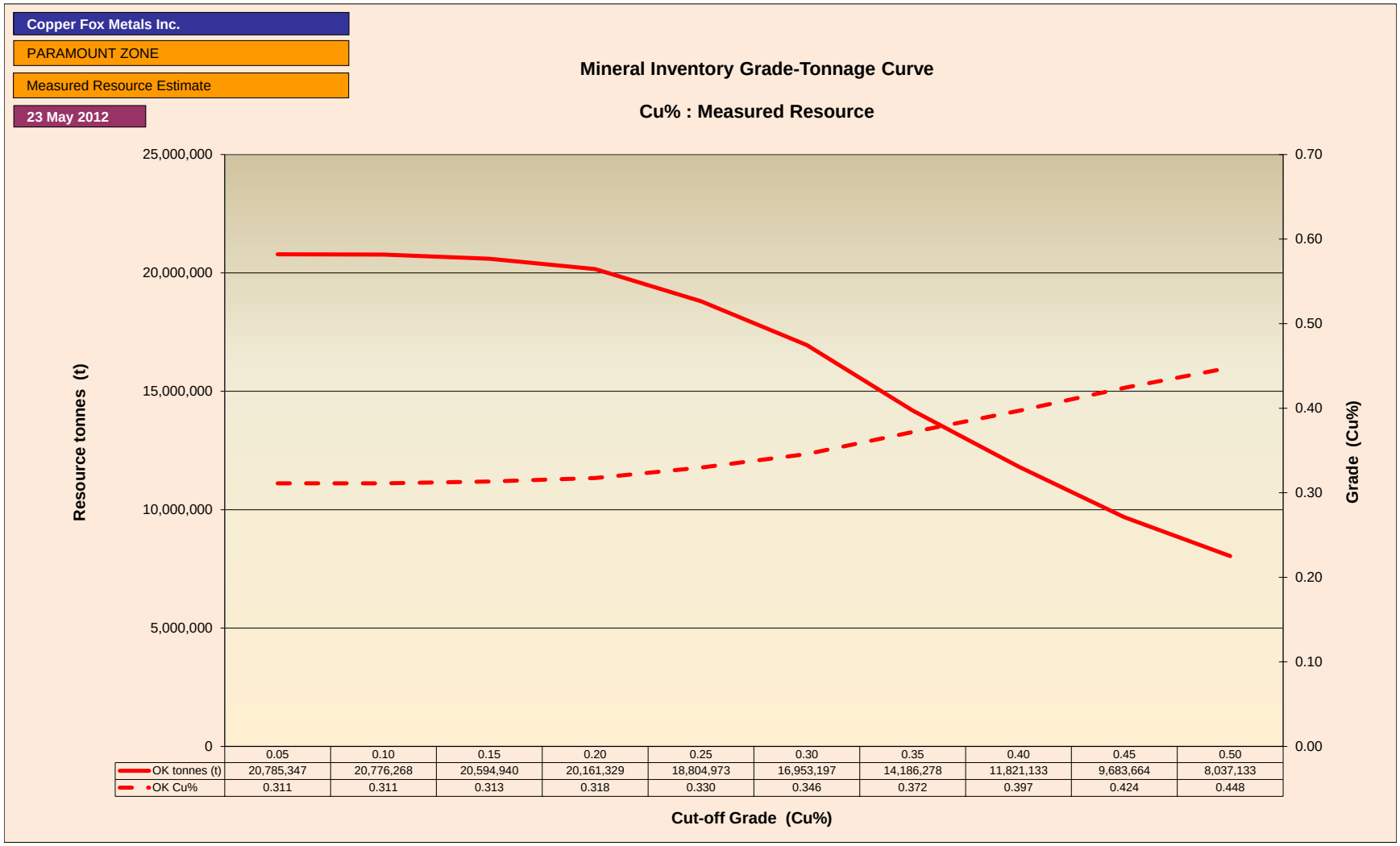
	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
OK tonnes (t)	635,732,714	633,046,112	614,567,158	570,084,066	497,089,456	405,879,294	310,468,398	226,396,694	158,404,537	101,924,933
OK Ag (g/t)	1.570	1.572	1.582	1.592	1.619	1.672	1.749	1.833	1.929	2.050

Inferred - Ag


Copper Fox Metals Inc.
LIARD ZONE
Inferred Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Ag g/t : Inferred Resource
Resource tonnes (t)
Grade (Ag g/t)
Cut-off Grade (CuEQ%)
450,000,000
400,000,000
350,000,000
300,000,000
250,000,000
200,000,000
150,000,000
100,000,000
50,000,000
0
2.50
2.00
1.50
1.00
0.50
0.00
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5
OK tonnes (t) 385,285,911 376,758,961 357,461,112 300,350,584 219,607,861 140,421,557 79,118,235 40,980,379 20,840,817 8,795,606
OK Ag (g/t) 1.450 1.481 1.492 1.494 1.516 1.576 1.640 1.765 1.876 1.978

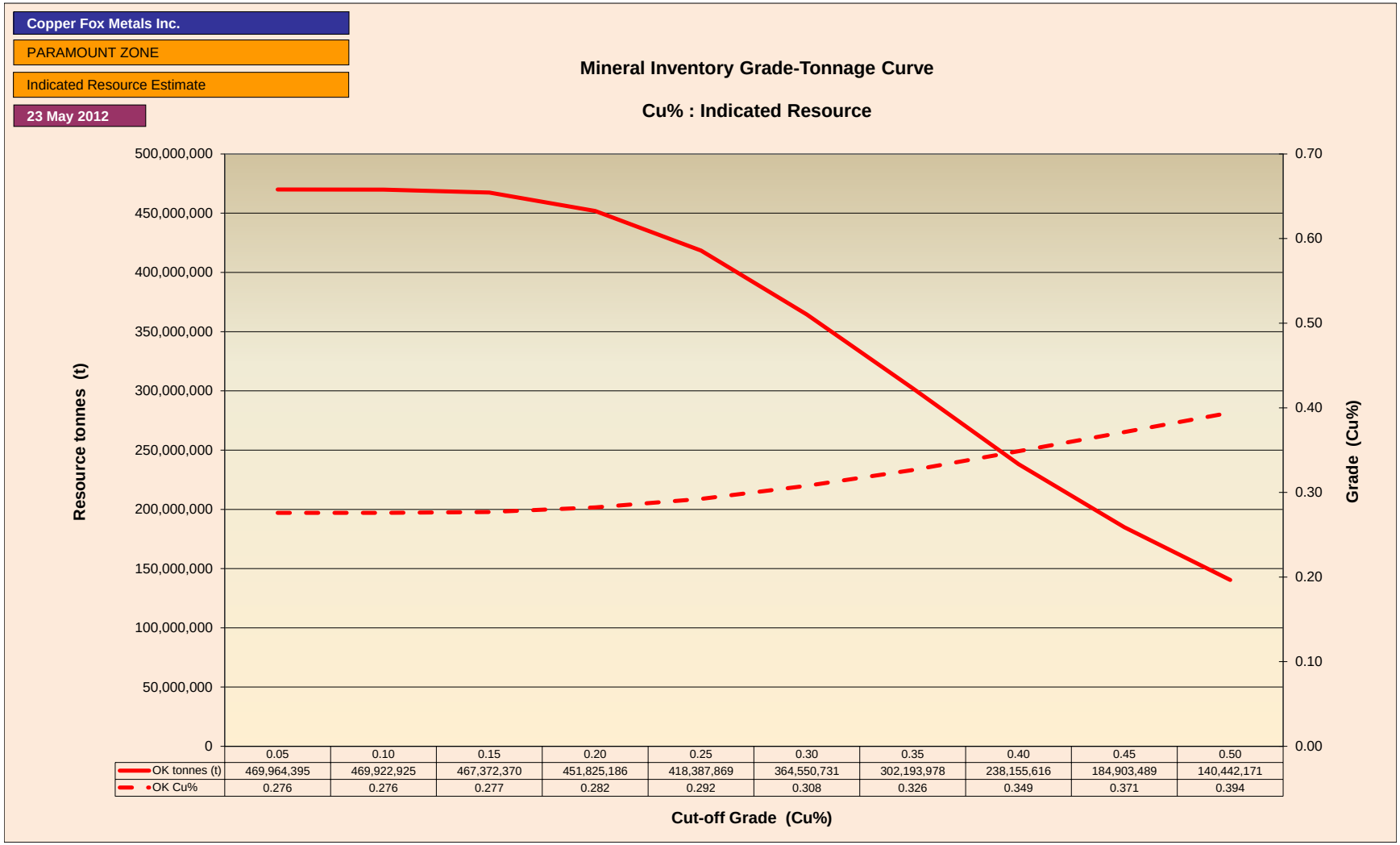
Grade – Tonnage Curves – Paramount Zone

Measured – Cu



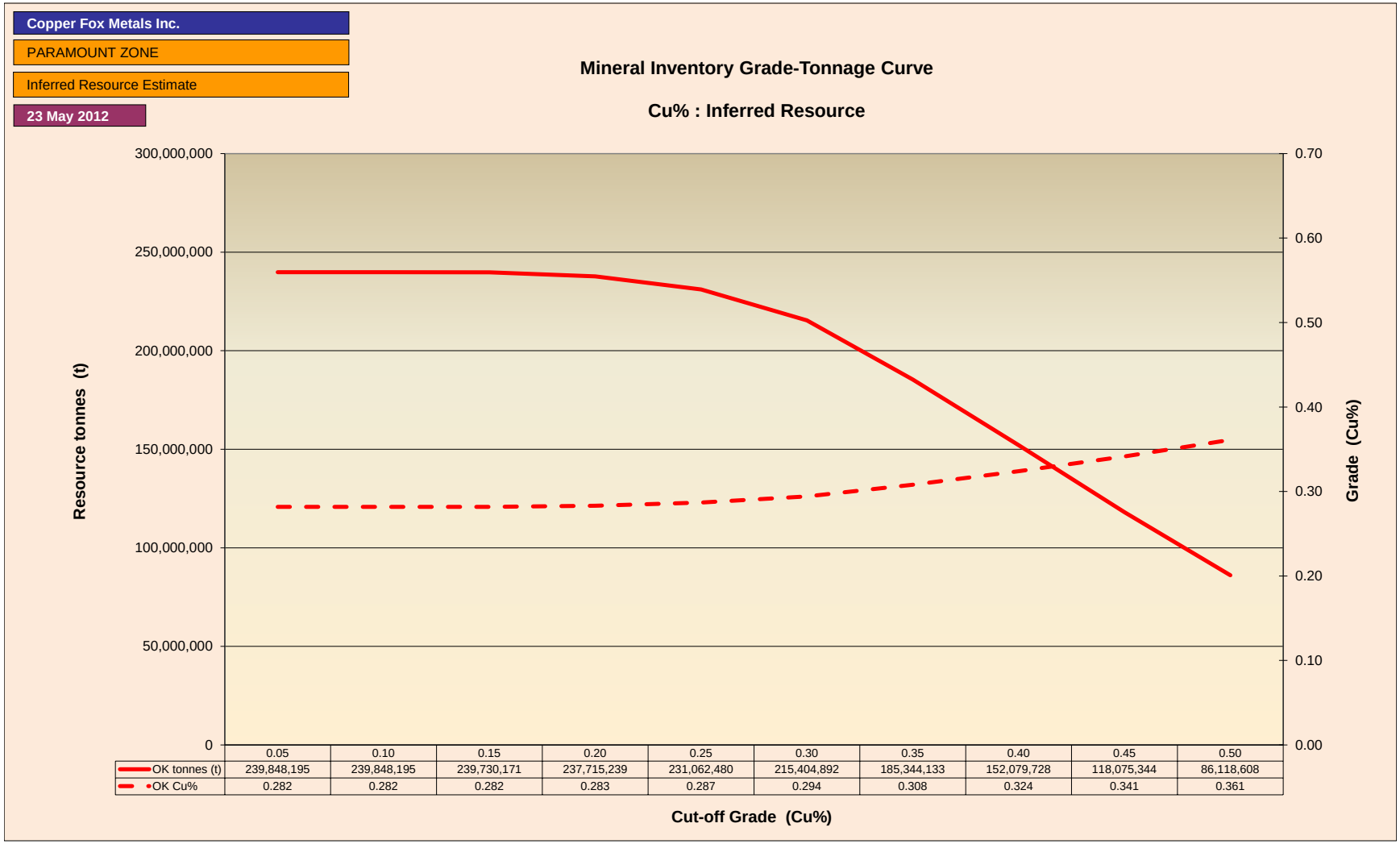
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
OK tonnes (t)	20,785,347	20,776,268	20,594,940	20,161,329	18,804,973	16,953,197	14,186,278	11,821,133	9,683,664	8,037,133
OK Cu%	0.311	0.311	0.313	0.318	0.330	0.346	0.372	0.397	0.424	0.448

Indicated – Cu



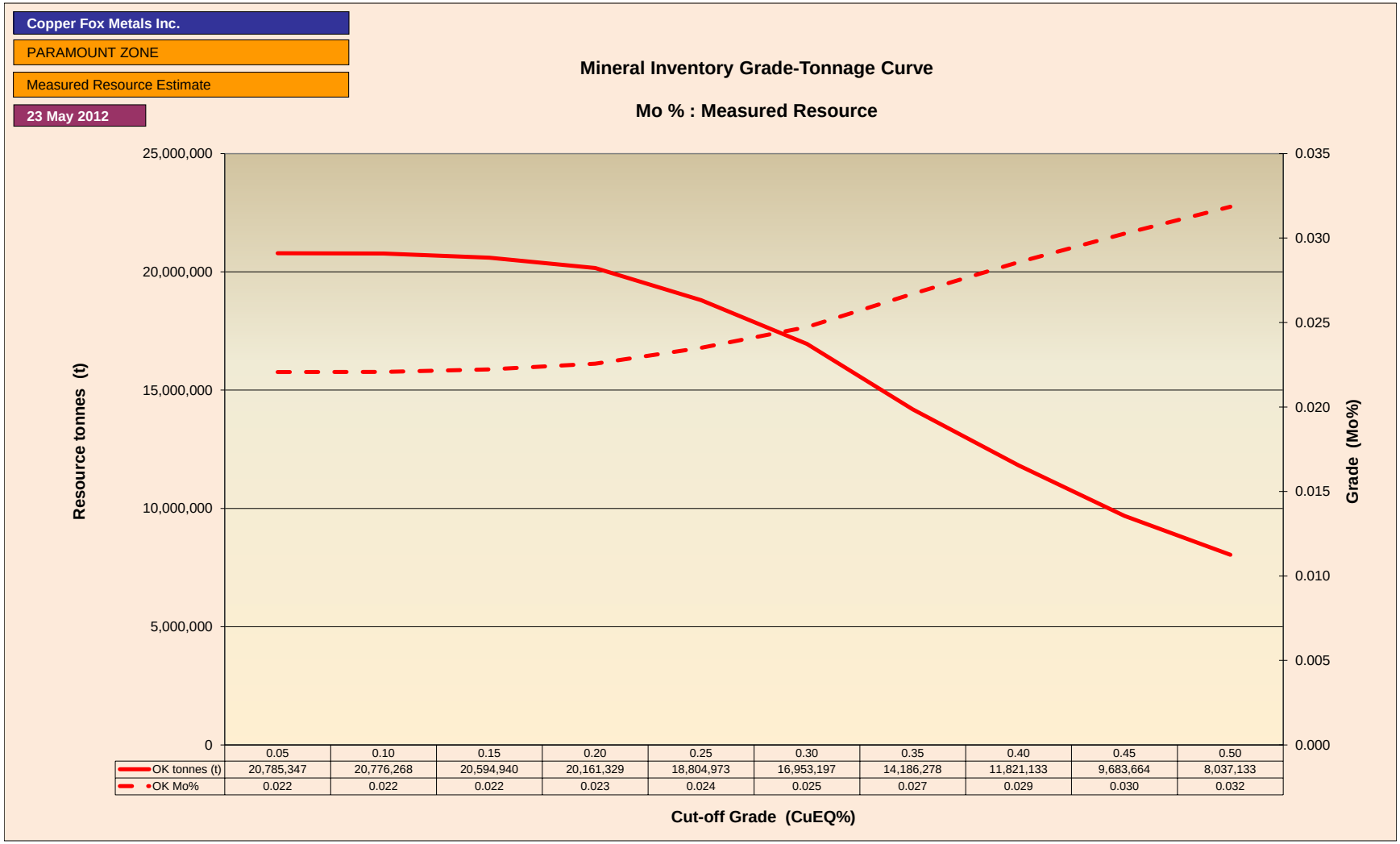
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
OK tonnes (t)	469,964,395	469,922,925	467,372,370	451,825,186	418,387,869	364,550,731	302,193,978	238,155,616	184,903,489	140,442,171
OK Cu%	0.276	0.276	0.277	0.282	0.292	0.308	0.326	0.349	0.371	0.394

Inferred – Cu

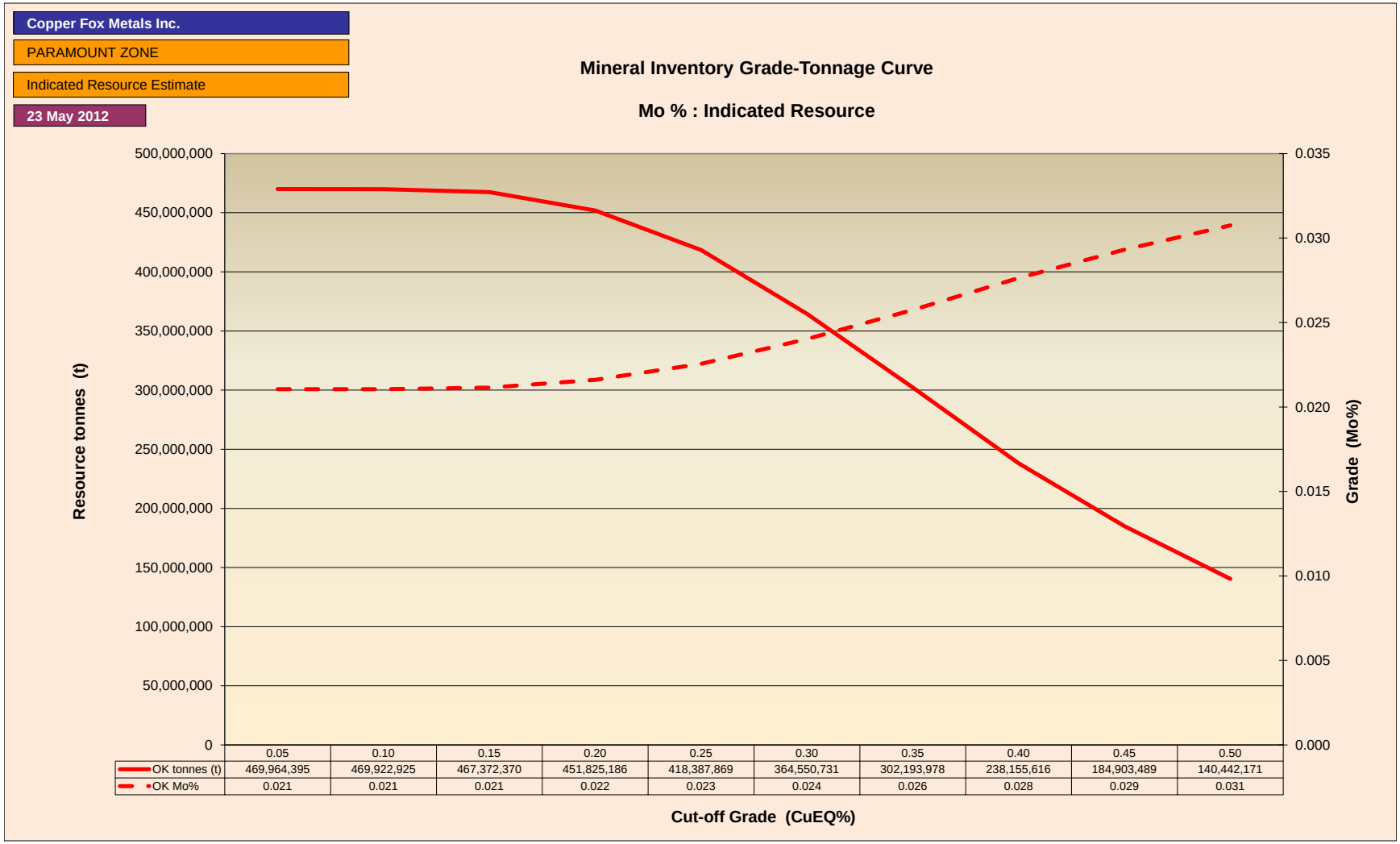


	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
OK tonnes (t)	239,848,195	239,848,195	239,730,171	237,715,239	231,062,480	215,404,892	185,344,133	152,079,728	118,075,344	86,118,608
OK Cu%	0.282	0.282	0.282	0.283	0.287	0.294	0.308	0.324	0.341	0.361

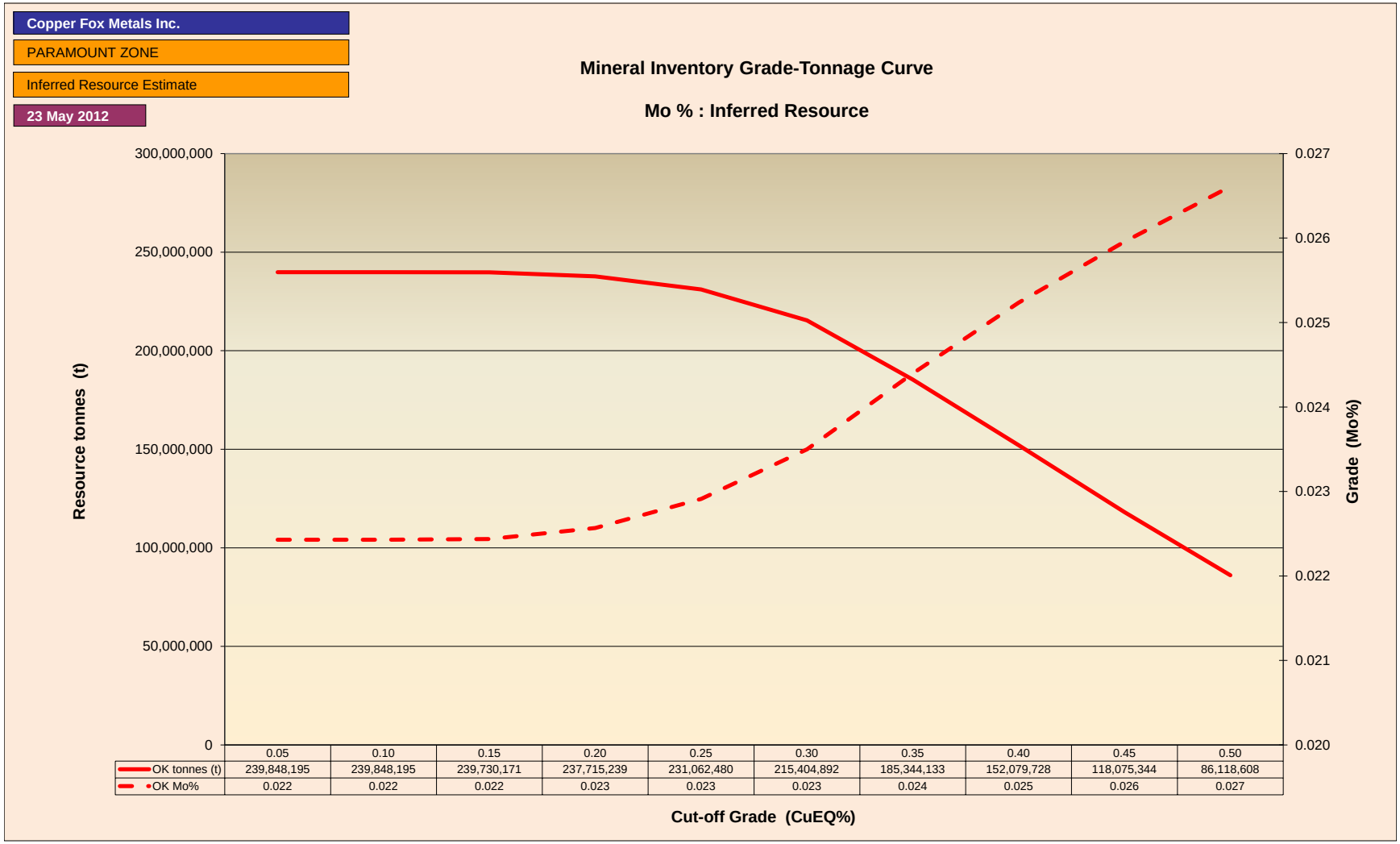
Measured – Mo


Copper Fox Metals Inc.
PARAMOUNT ZONE
Measured Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Mo % : Measured Resource
Resource tonnes (t)
Grade (Mo%)
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50
OK tonnes (t) 20,785,347 20,776,268 20,594,940 20,161,329 18,804,973 16,953,197 14,186,278 11,821,133 9,683,664 8,037,133
OK Mo% 0.022 0.022 0.022 0.023 0.024 0.025 0.027 0.029 0.030 0.032
Cut-off Grade (CuEQ%)

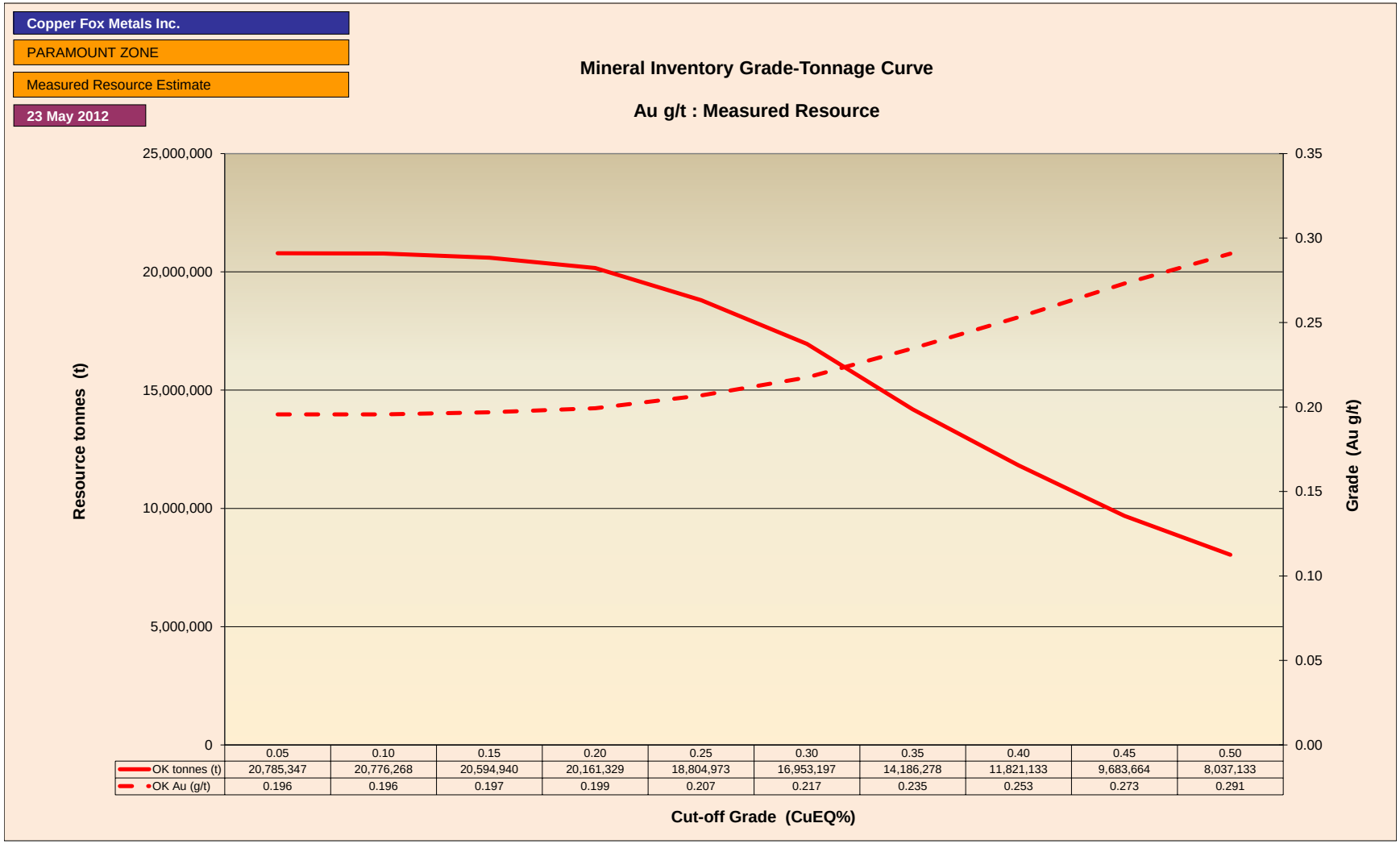
Indicated - Mo



Inferred – Mo

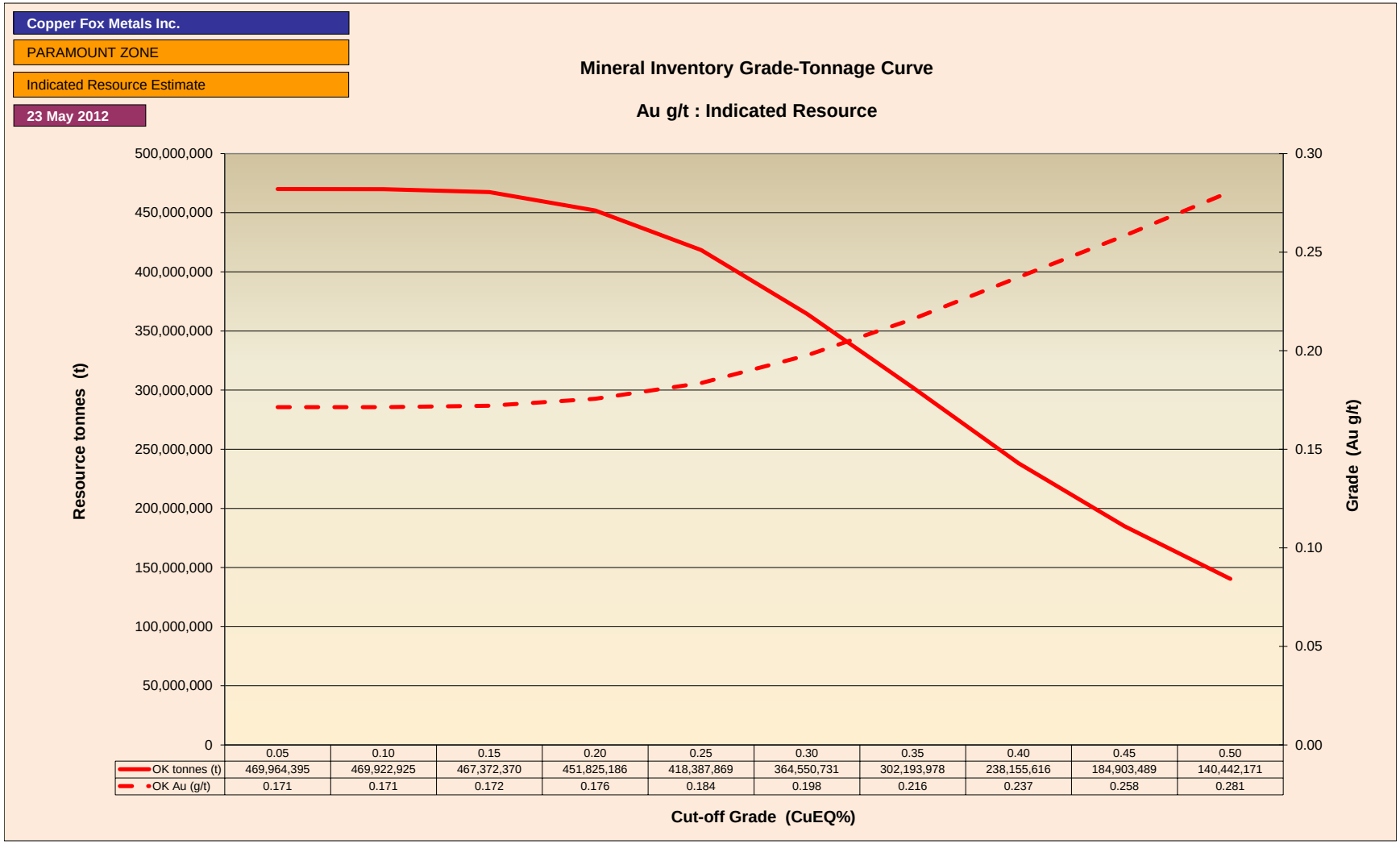

Copper Fox Metals Inc.
PARAMOUNT ZONE
Inferred Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Mo % : Inferred Resource
Resource tonnes (t)
Grade (Mo%)
300,000,000
250,000,000
200,000,000
150,000,000
100,000,000
50,000,000
0
0.027
0.026
0.025
0.024
0.023
0.022
0.021
0.020
0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50
OK tonnes (t) 239,848,195 239,848,195 239,730,171 237,715,239 231,062,480 215,404,892 185,344,133 152,079,728 118,075,344 86,118,608
OK Mo% 0.022 0.022 0.022 0.023 0.023 0.023 0.024 0.025 0.026 0.027
Cut-off Grade (CuEQ%)

Measured – Au



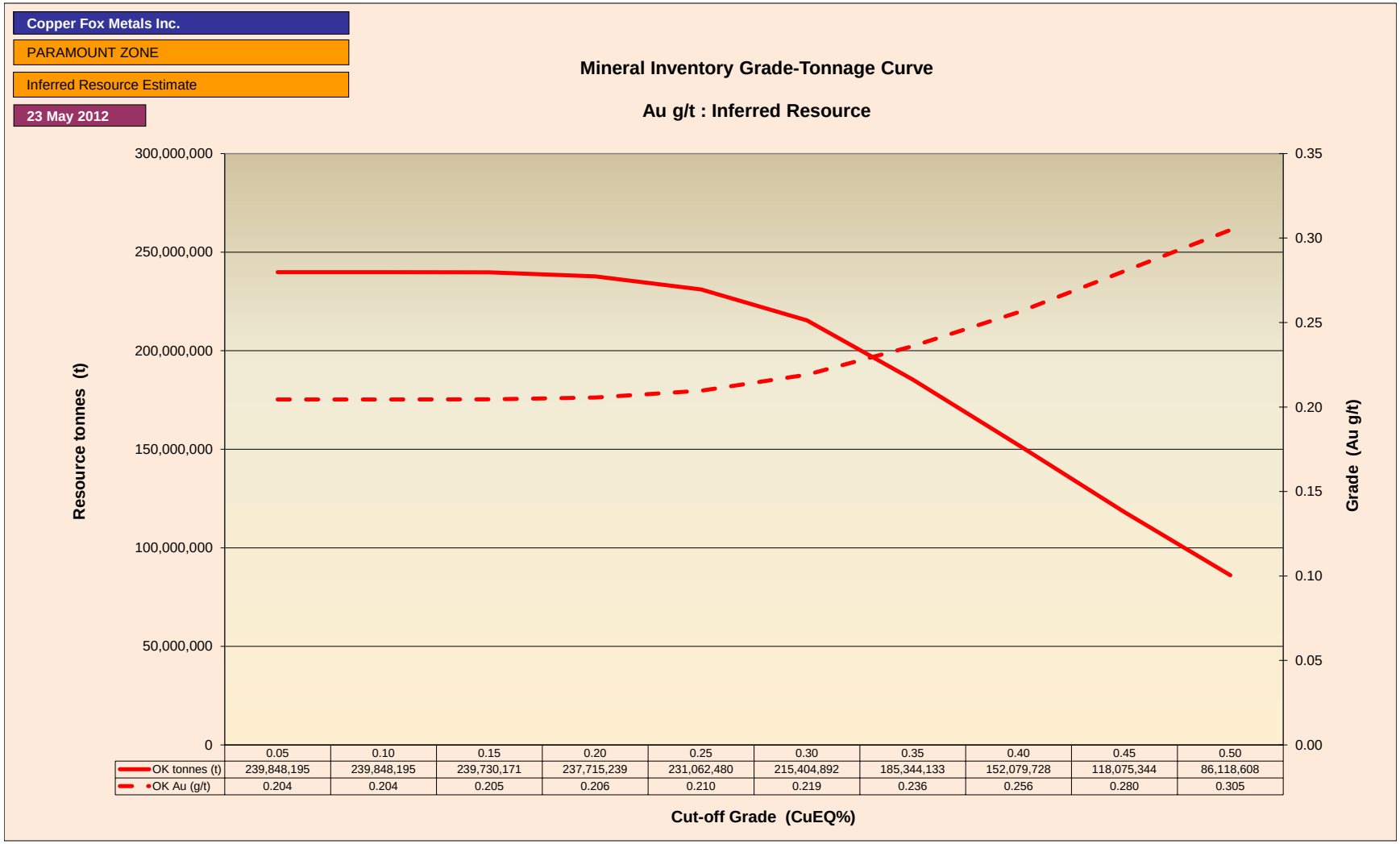
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
OK tonnes (t)	20,785,347	20,776,268	20,594,940	20,161,329	18,804,973	16,953,197	14,186,278	11,821,133	9,683,664	8,037,133
OK Au (g/t)	0.196	0.196	0.197	0.199	0.207	0.217	0.235	0.253	0.273	0.291

Indicated – Au

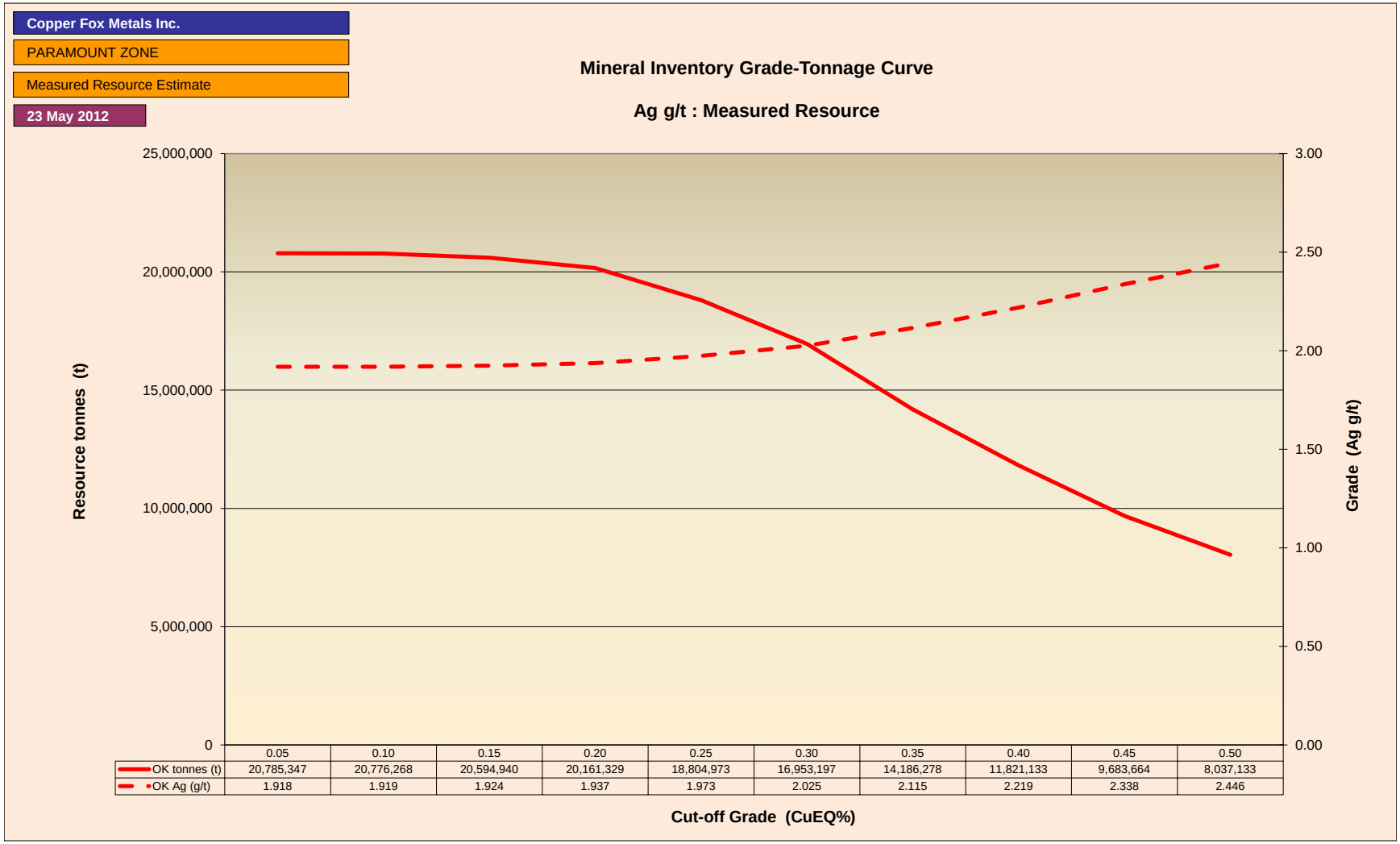


	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
OK tonnes (t)	469,964,395	469,922,925	467,372,370	451,825,186	418,387,869	364,550,731	302,193,978	238,155,616	184,903,489	140,442,171
OK Au (g/t)	0.171	0.171	0.172	0.176	0.184	0.198	0.216	0.237	0.258	0.281

Inferred – Au

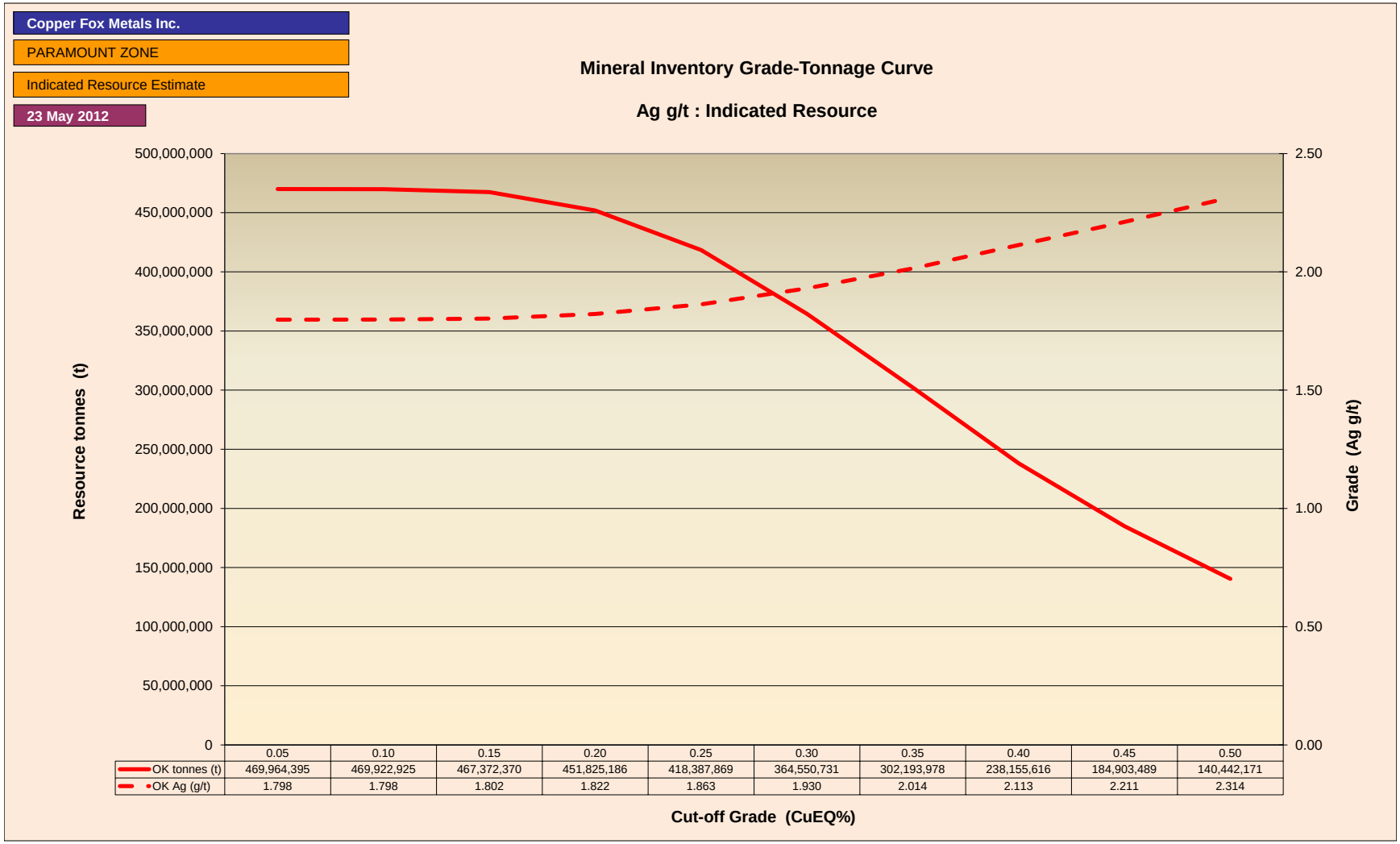

Copper Fox Metals Inc.
PARAMOUNT ZONE
Inferred Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Au g/t : Inferred Resource
Resource tonnes (t)
Grade (Au g/t)
300,000,000
250,000,000
200,000,000
150,000,000
100,000,000
50,000,000
0
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Cut-off Grade (CuEQ%)
0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50
OK tonnes (t) 239,848,195 239,848,195 239,730,171 237,715,239 231,062,480 215,404,892 185,344,133 152,079,728 118,075,344 86,118,608
OK Au (g/t) 0.204 0.204 0.205 0.206 0.210 0.219 0.236 0.256 0.280 0.305

Measured - Ag



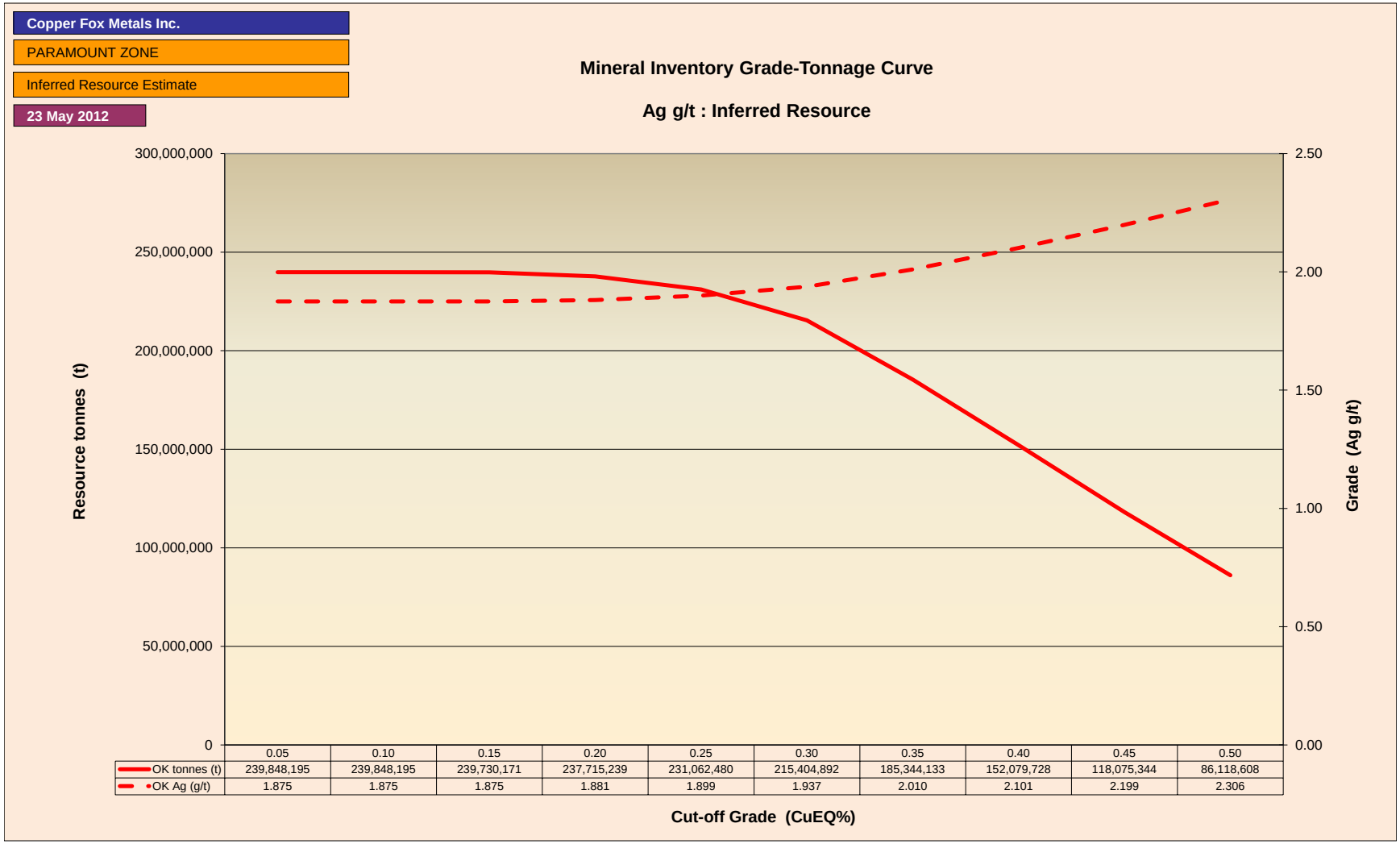
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
OK tonnes (t)	20,785,347	20,776,268	20,594,940	20,161,329	18,804,973	16,953,197	14,186,278	11,821,133	9,683,664	8,037,133
OK Ag (g/t)	1.918	1.919	1.924	1.937	1.973	2.025	2.115	2.219	2.338	2.446

Indicated - Ag



	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
OK tonnes (t)	469,964,395	469,922,925	467,372,370	451,825,186	418,387,869	364,550,731	302,193,978	238,155,616	184,903,489	140,442,171
OK Ag (g/t)	1.798	1.798	1.802	1.822	1.863	1.930	2.014	2.113	2.211	2.314

Inferred - Ag

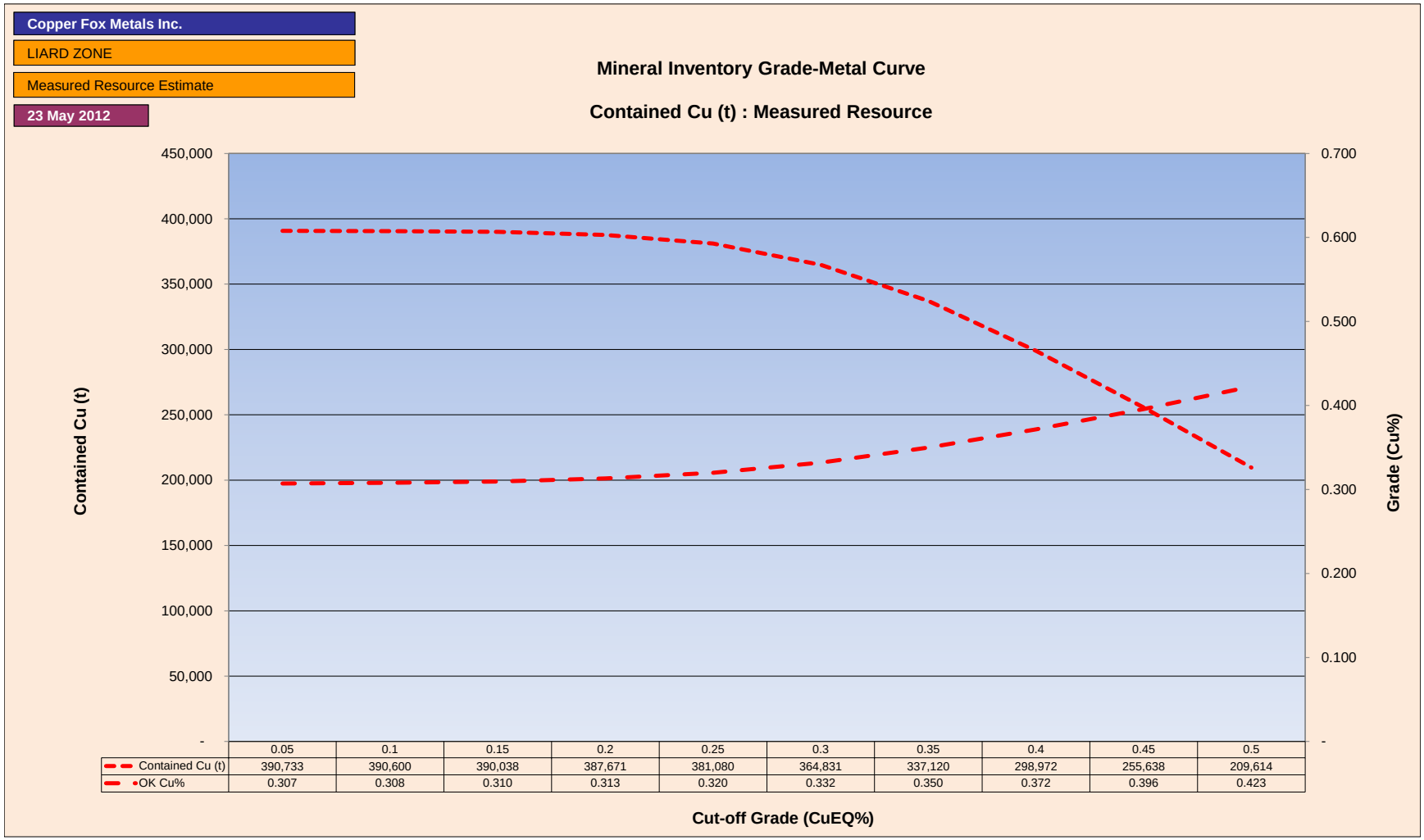

Copper Fox Metals Inc.
PARAMOUNT ZONE
Inferred Resource Estimate
23 May 2012
Mineral Inventory Grade-Tonnage Curve
Ag g/t : Inferred Resource
Resource tonnes (t)
Grade (Ag g/t)
300,000,000
250,000,000
200,000,000
150,000,000
100,000,000
50,000,000
0
2.50
2.00
1.50
1.00
0.50
0.00
Cut-off Grade (CuEQ%)
0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50
OK tonnes (t) 239,848,195 239,848,195 239,730,171 237,715,239 231,062,480 215,404,892 185,344,133 152,079,728 118,075,344 86,118,608
OK Ag (g/t) 1.875 1.875 1.875 1.881 1.899 1.937 2.010 2.101 2.199 2.306

APPENDIX H

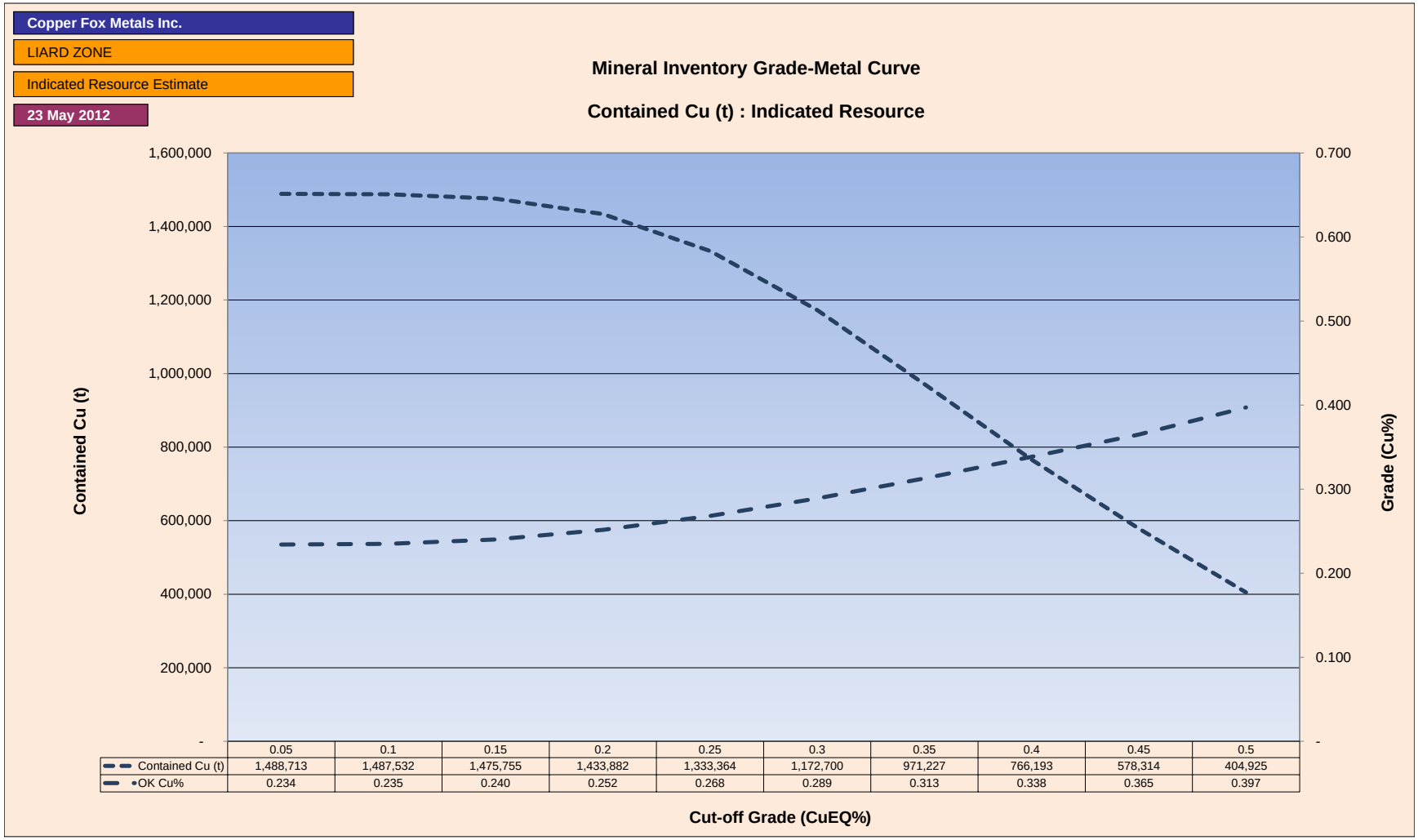
GRADE – METAL CURVES

Grade – Metal Curves – Liard Zone

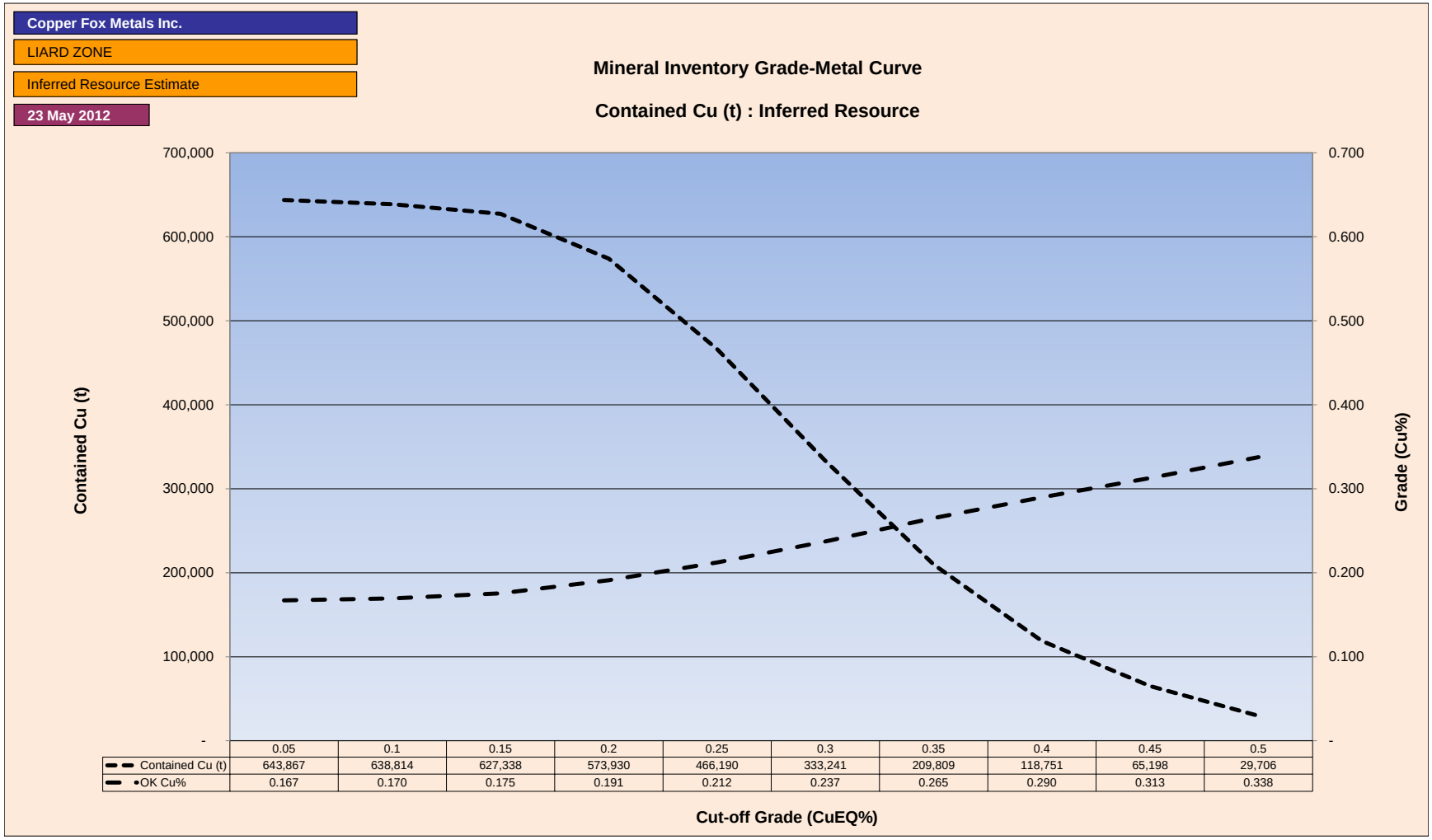
Measured – Cu



Indicated – Cu

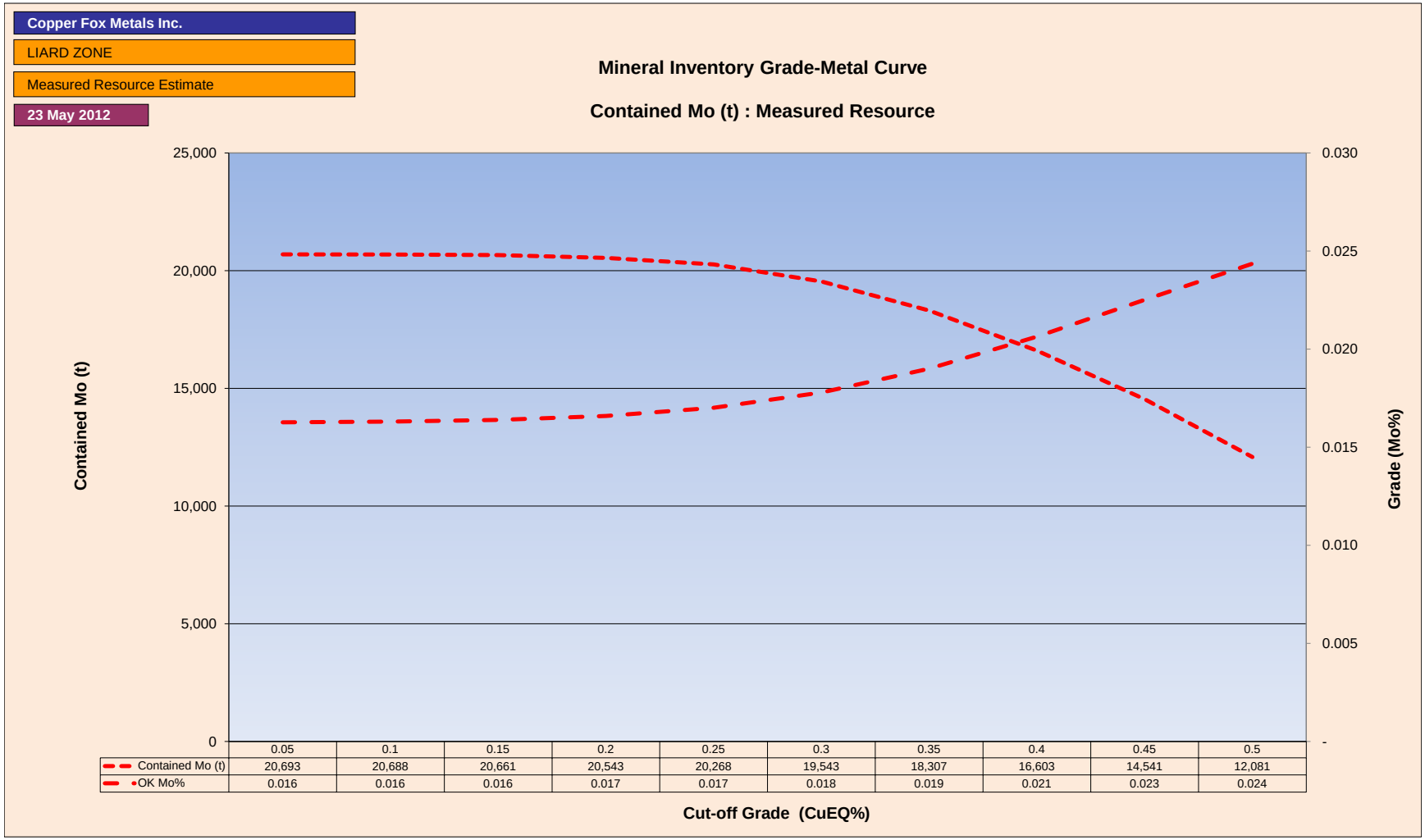


Inferred – Cu



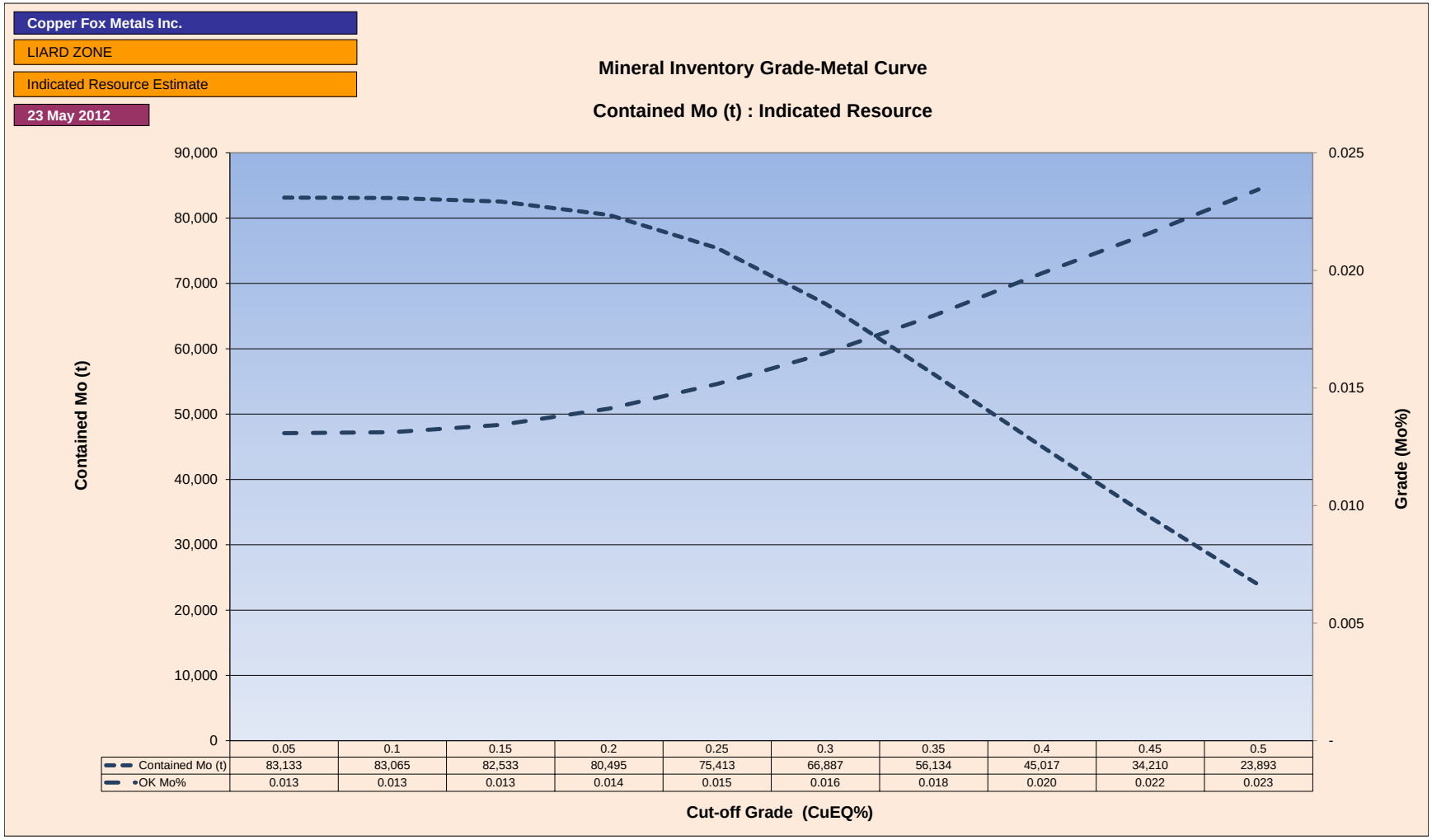
	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Contained Cu (t)	643,867	638,814	627,338	573,930	466,190	333,241	209,809	118,751	65,198	29,706
OK Cu%	0.167	0.170	0.175	0.191	0.212	0.237	0.265	0.290	0.313	0.338

Measured – Mo



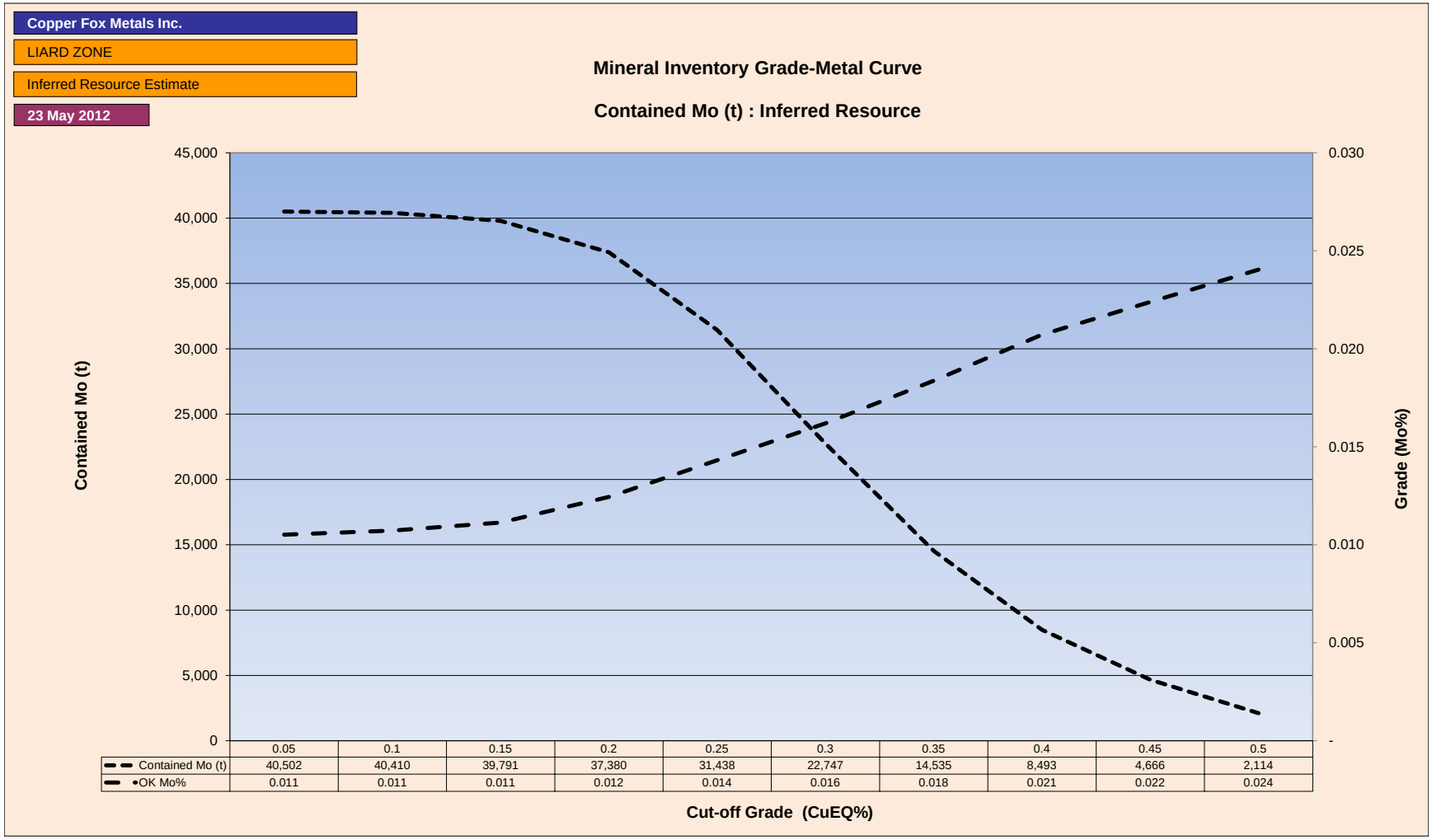
	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Contained Mo (t)	20,693	20,688	20,661	20,543	20,268	19,543	18,307	16,603	14,541	12,081
OK Mo%	0.016	0.016	0.016	0.017	0.017	0.018	0.019	0.021	0.023	0.024

Indicated - Mo



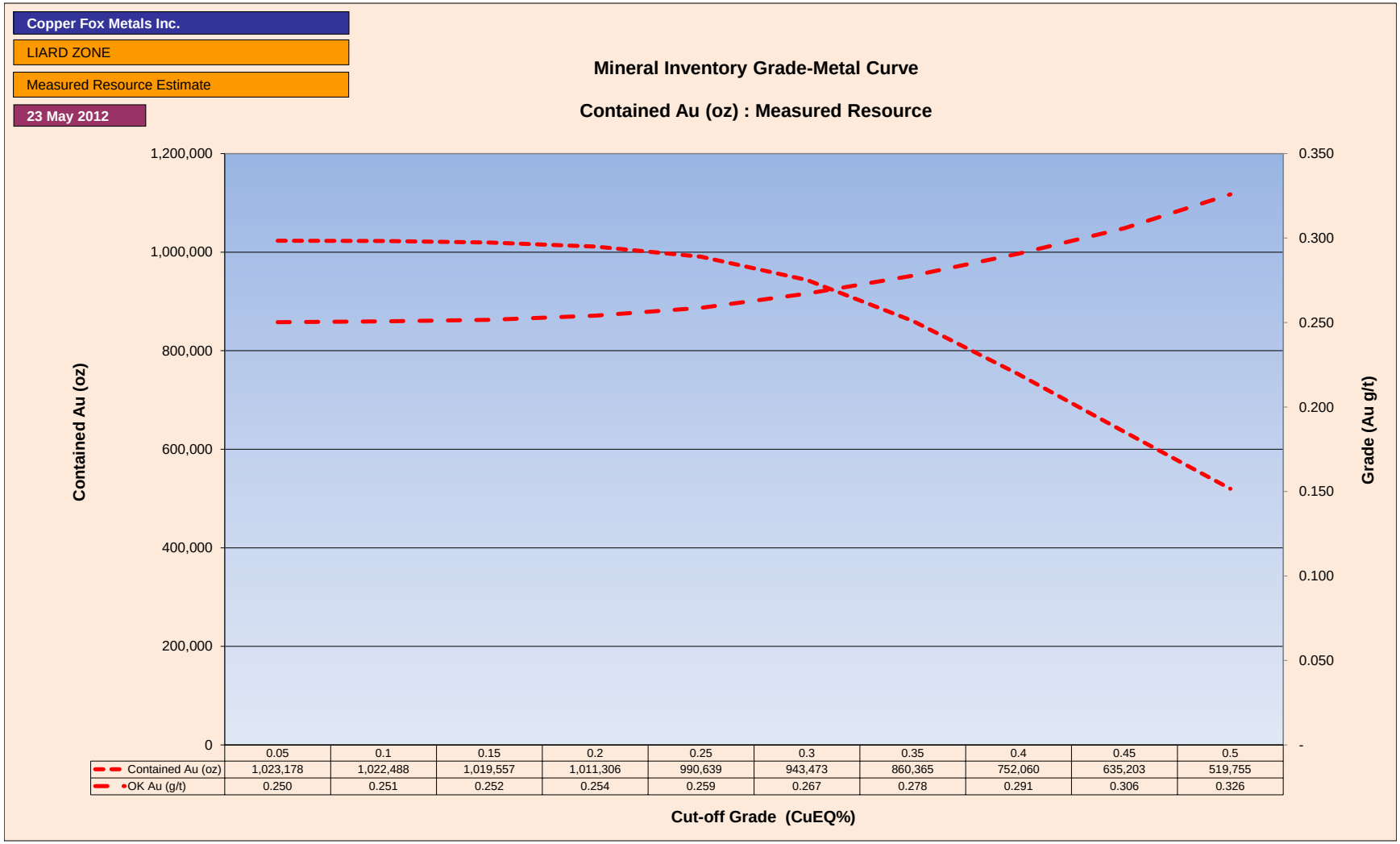
	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Contained Mo (t)	83,133	83,065	82,533	80,495	75,413	66,887	56,134	45,017	34,210	23,893
OK Mo%	0.013	0.013	0.013	0.014	0.015	0.016	0.018	0.020	0.022	0.023

Inferred – Mo

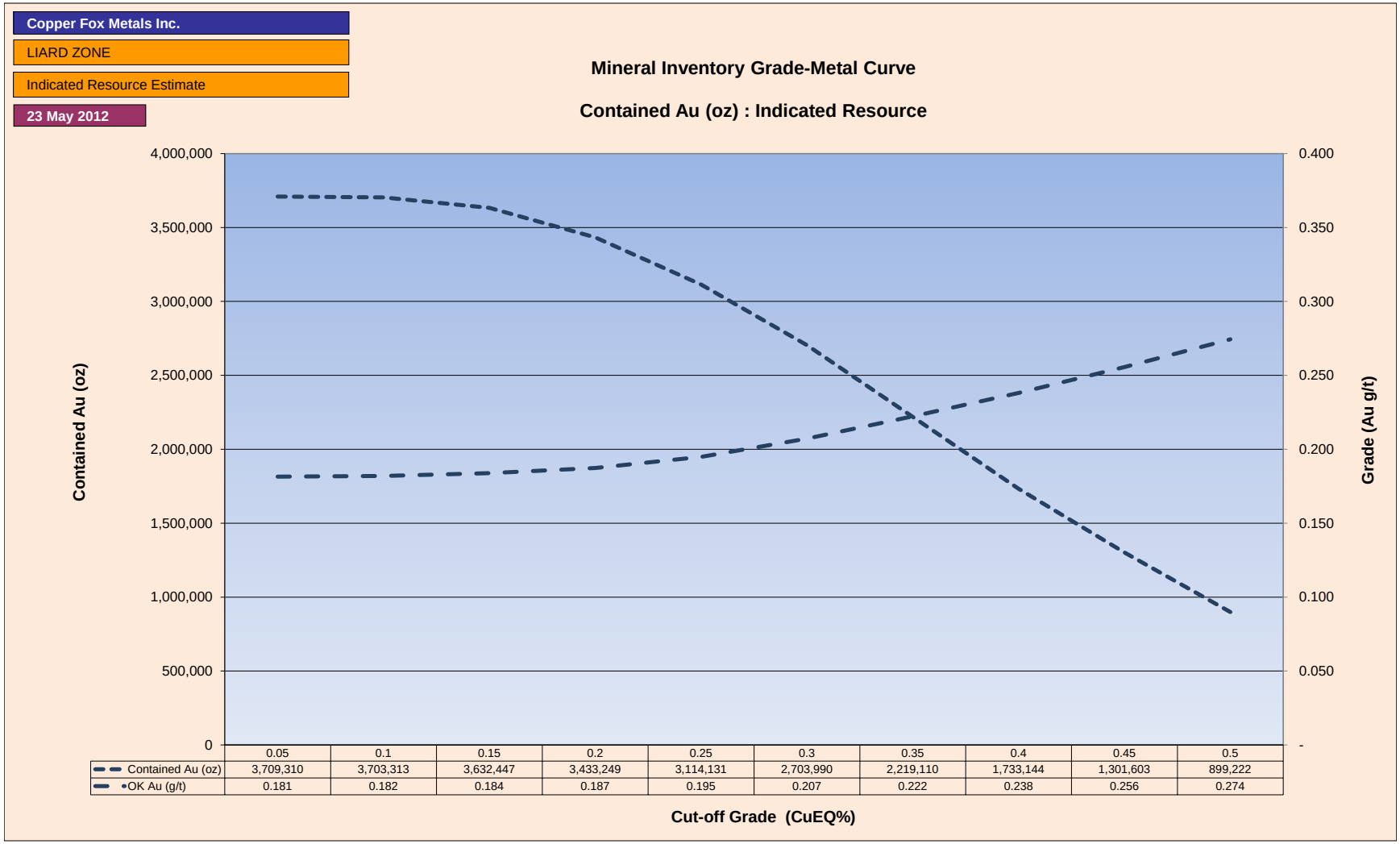


	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Contained Mo (t)	40,502	40,410	39,791	37,380	31,438	22,747	14,535	8,493	4,666	2,114
OK Mo%	0.011	0.011	0.011	0.012	0.014	0.016	0.018	0.021	0.022	0.024

Measured – Au

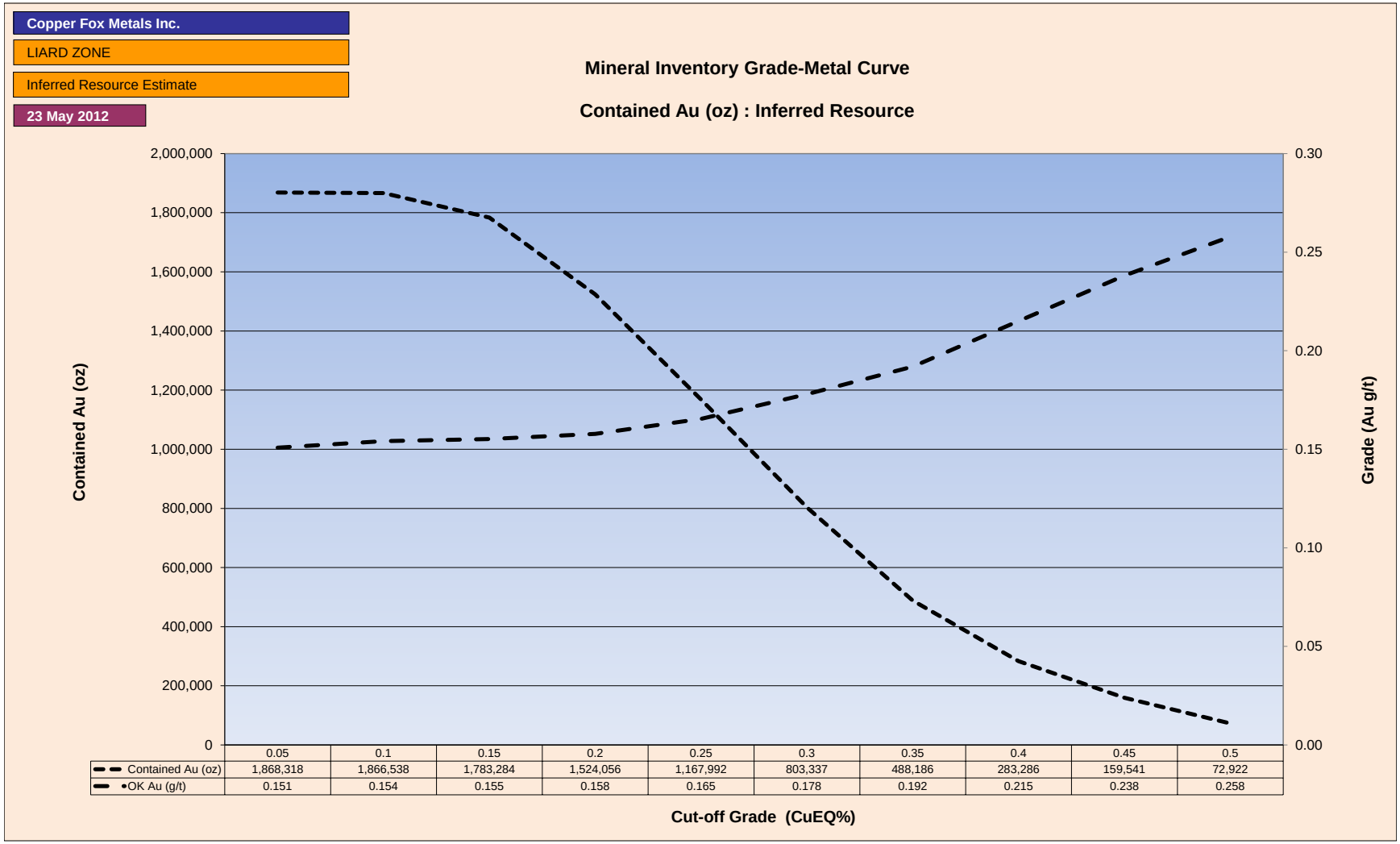

Copper Fox Metals Inc.
LIARD ZONE
Measured Resource Estimate
23 May 2012
Mineral Inventory Grade-Metal Curve
Contained Au (oz) : Measured Resource
Contained Au (oz)
Grade (Au g/t)
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
0.350
0.300
0.250
0.200
0.150
0.100
0.050
-
0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5
Contained Au (oz) 1,023,178 1,022,488 1,019,557 1,011,306 990,639 943,473 860,365 752,060 635,203 519,755
OK Au (g/t) 0.250 0.251 0.252 0.254 0.259 0.267 0.278 0.291 0.306 0.326
Cut-off Grade (CuEQ%)

Indicated – Au



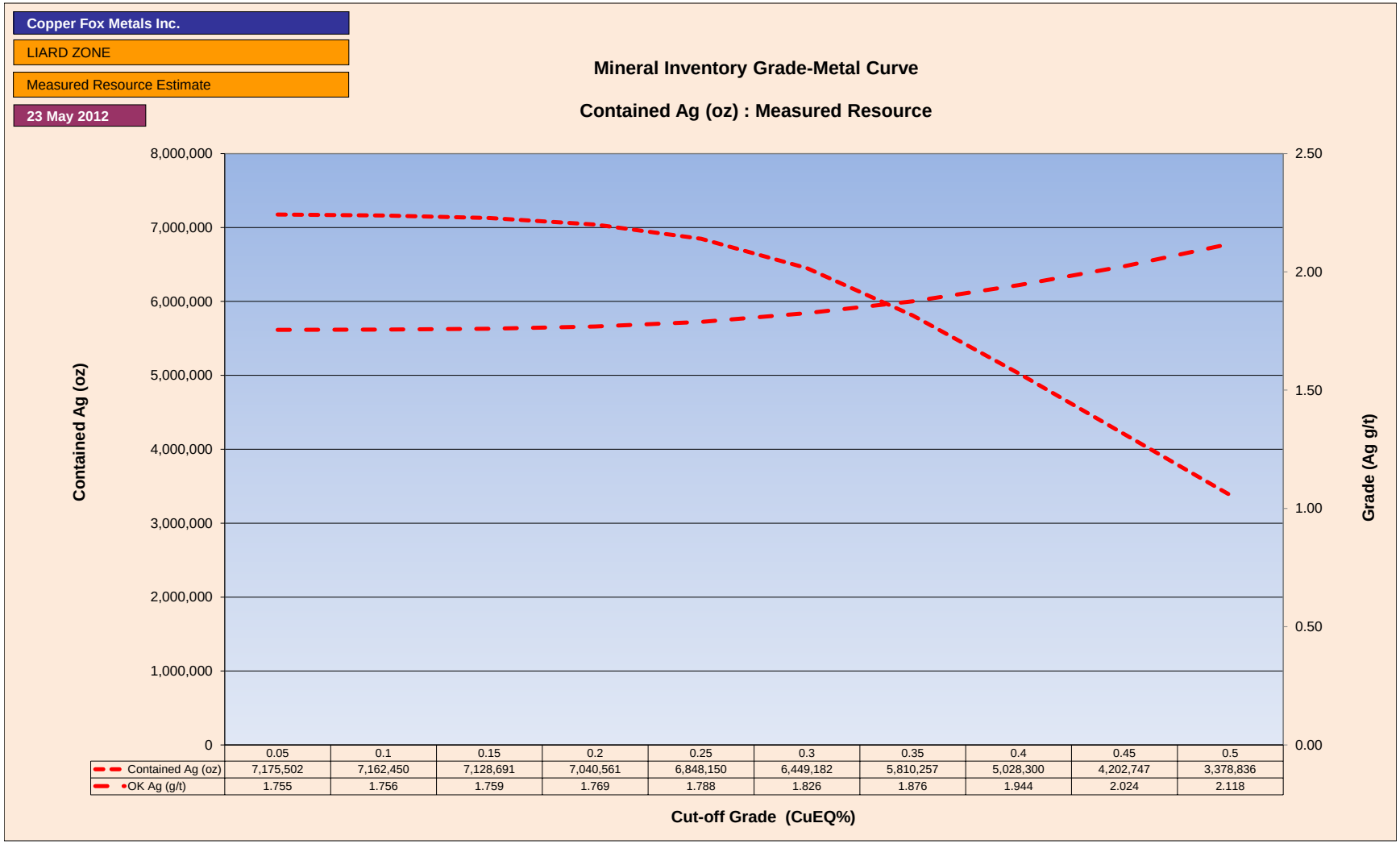
	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Contained Au (oz)	3,709,310	3,703,313	3,632,447	3,433,249	3,114,131	2,703,990	2,219,110	1,733,144	1,301,603	899,222
OK Au (g/t)	0.181	0.182	0.184	0.187	0.195	0.207	0.222	0.238	0.256	0.274

Inferred – Au



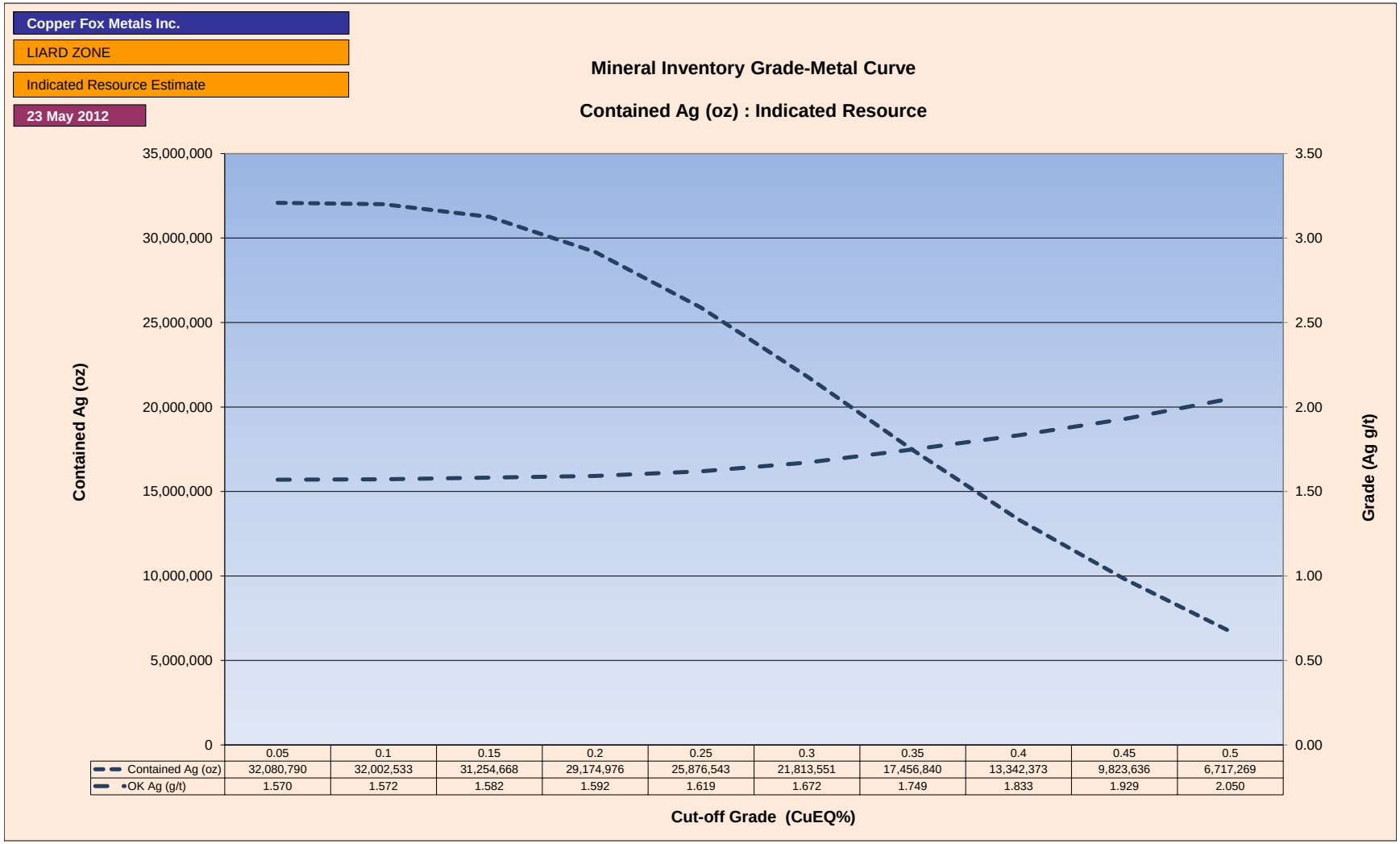
	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Contained Au (oz)	1,868,318	1,866,538	1,783,284	1,524,056	1,167,992	803,337	488,186	283,286	159,541	72,922
•OK Au (g/t)	0.151	0.154	0.155	0.158	0.165	0.178	0.192	0.215	0.238	0.258

Measured - Ag

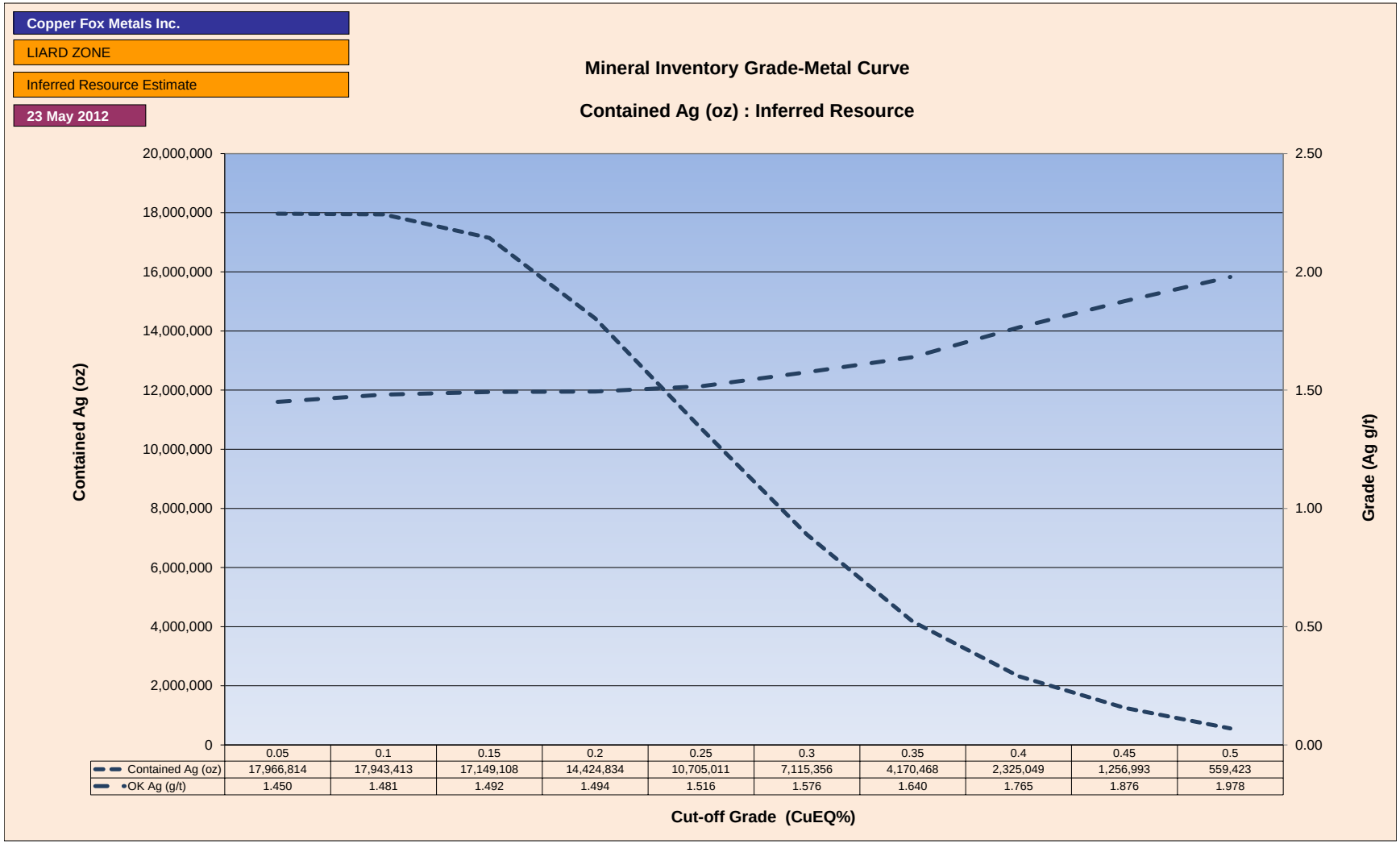


	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Contained Ag (oz)	7,175,502	7,162,450	7,128,691	7,040,561	6,848,150	6,449,182	5,810,257	5,028,300	4,202,747	3,378,836
OK Ag (g/t)	1.755	1.756	1.759	1.769	1.788	1.826	1.876	1.944	2.024	2.118

Indicated - Ag



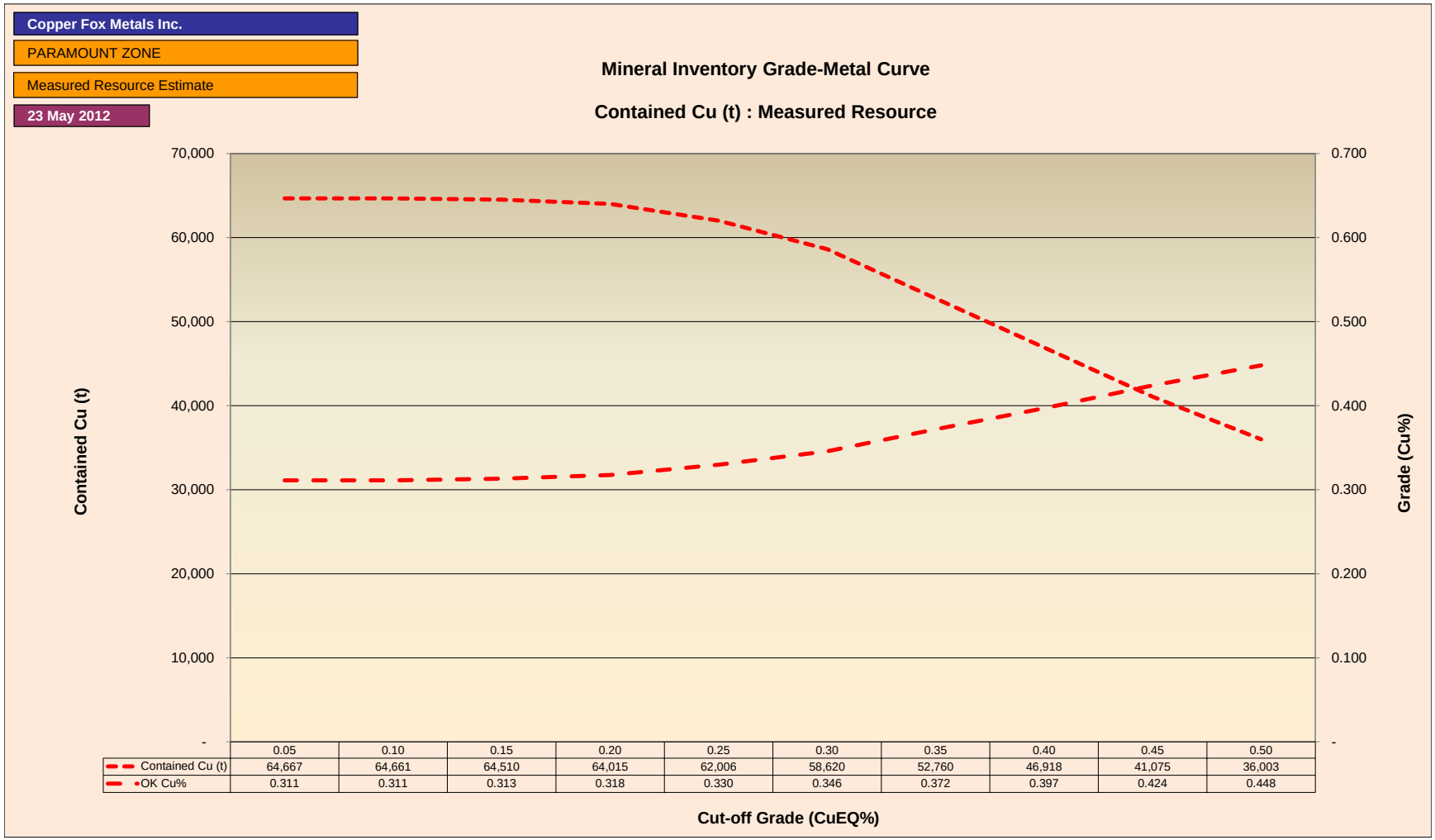
Inferred - Ag



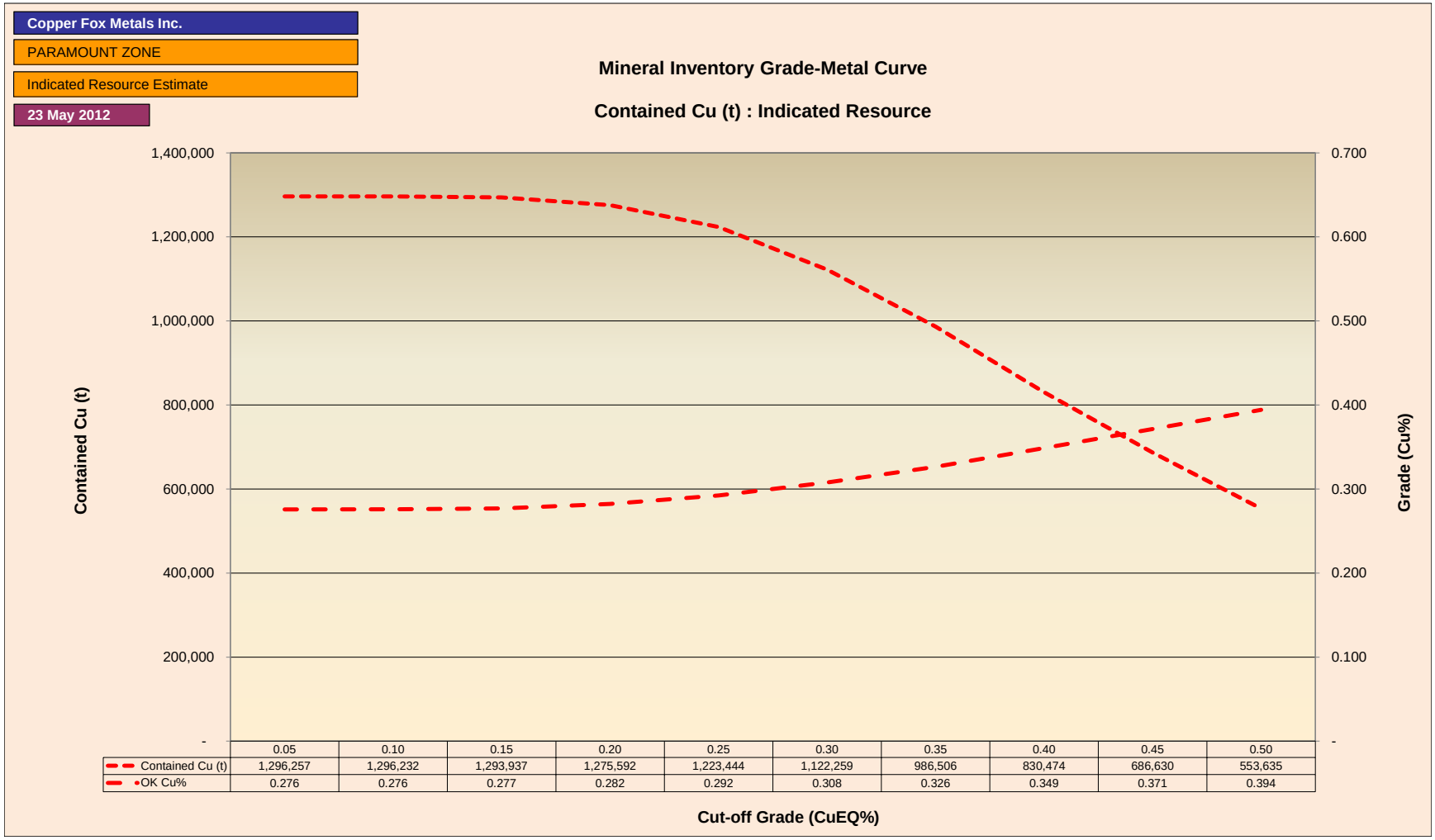
	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Contained Ag (oz)	17,966,814	17,943,413	17,149,108	14,424,834	10,705,011	7,115,356	4,170,468	2,325,049	1,256,993	559,423
OK Ag (g/t)	1.450	1.481	1.492	1.494	1.516	1.576	1.640	1.765	1.876	1.978

Grade – Metal Curves – Paramount Zone

Measured – Cu

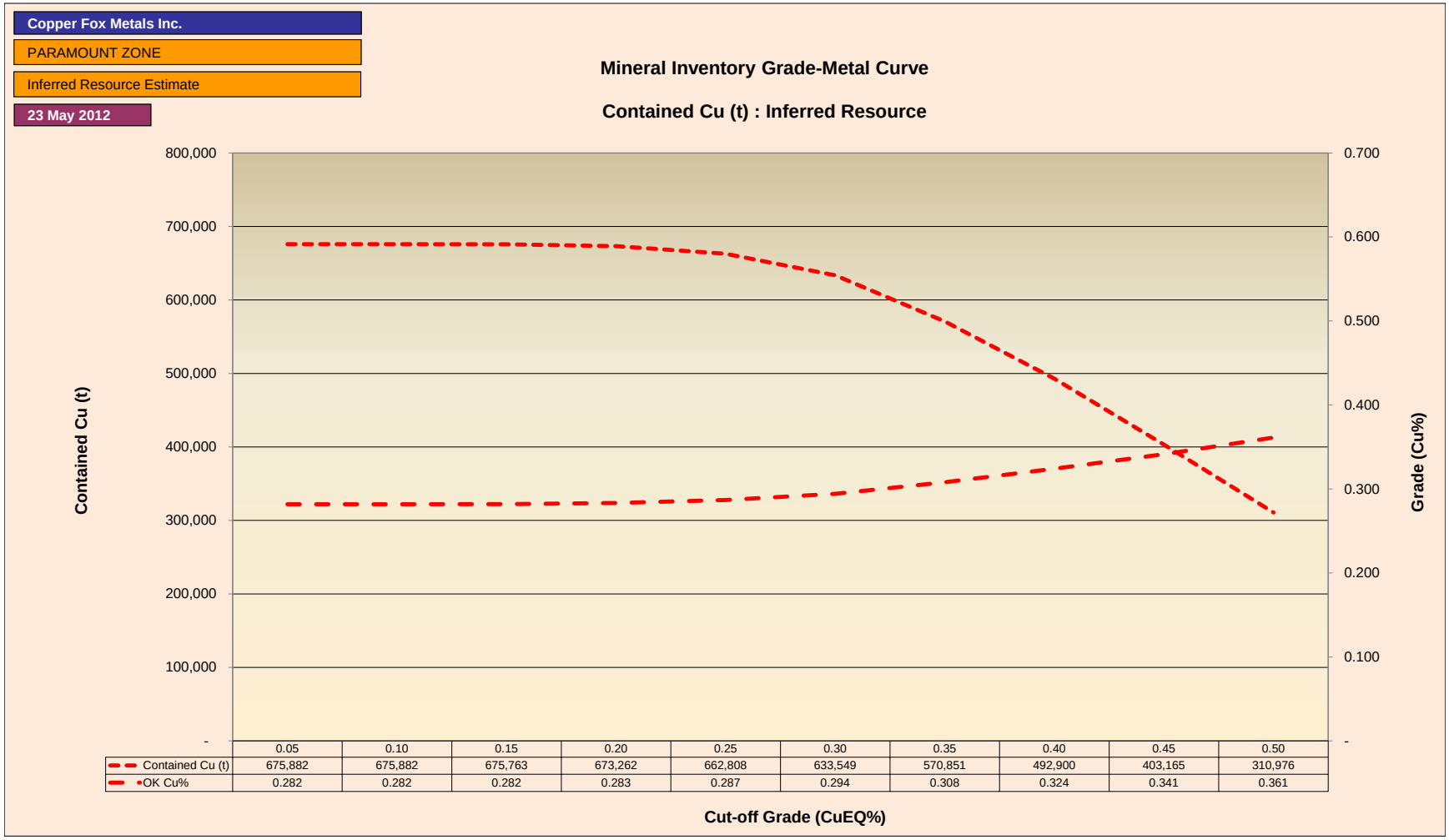


Indicated – Cu



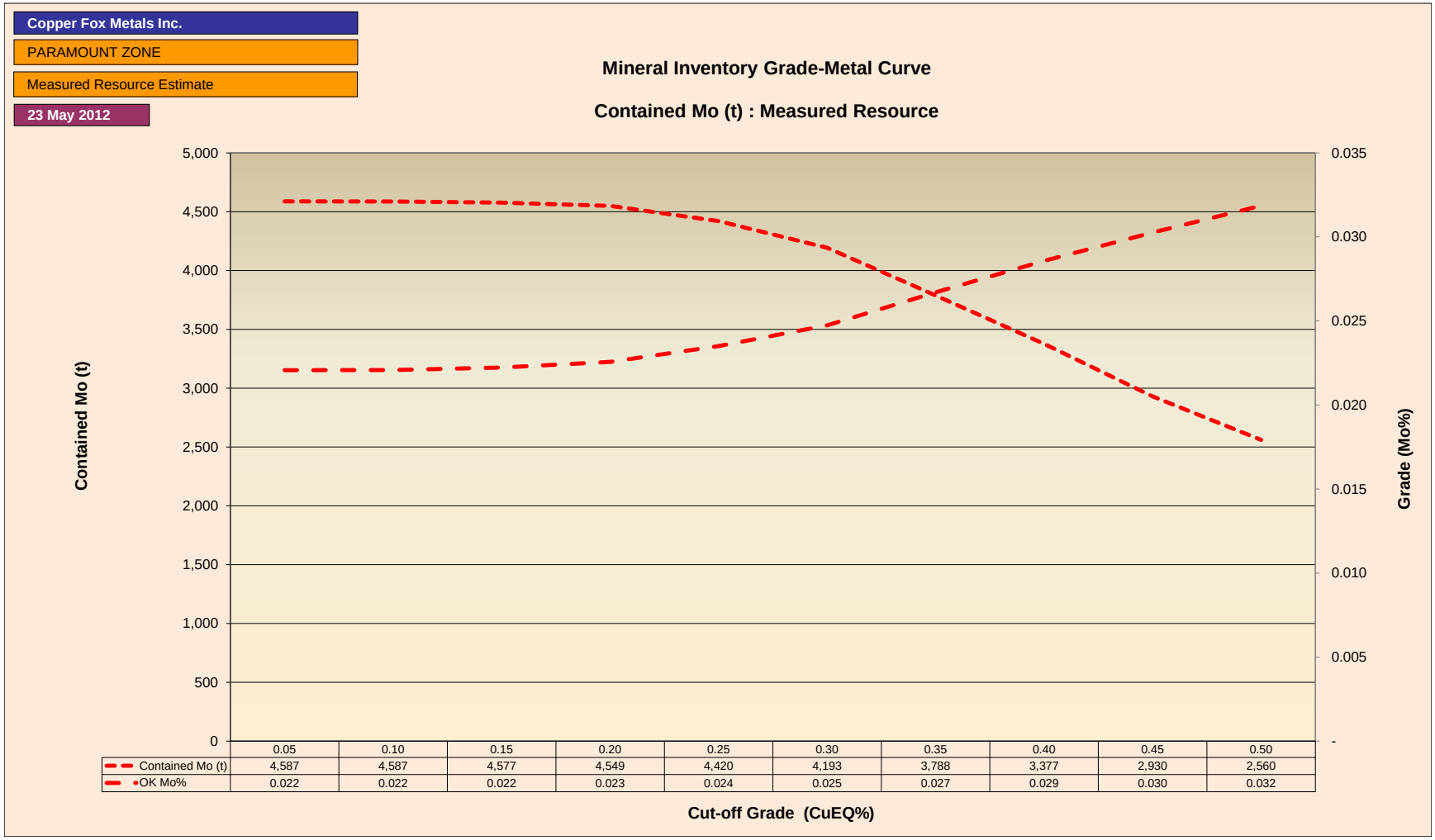
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Cu (t)	1,296,257	1,296,232	1,293,937	1,275,592	1,223,444	1,122,259	986,506	830,474	686,630	553,635
OK Cu%	0.276	0.276	0.277	0.282	0.292	0.308	0.326	0.349	0.371	0.394

Inferred – Cu



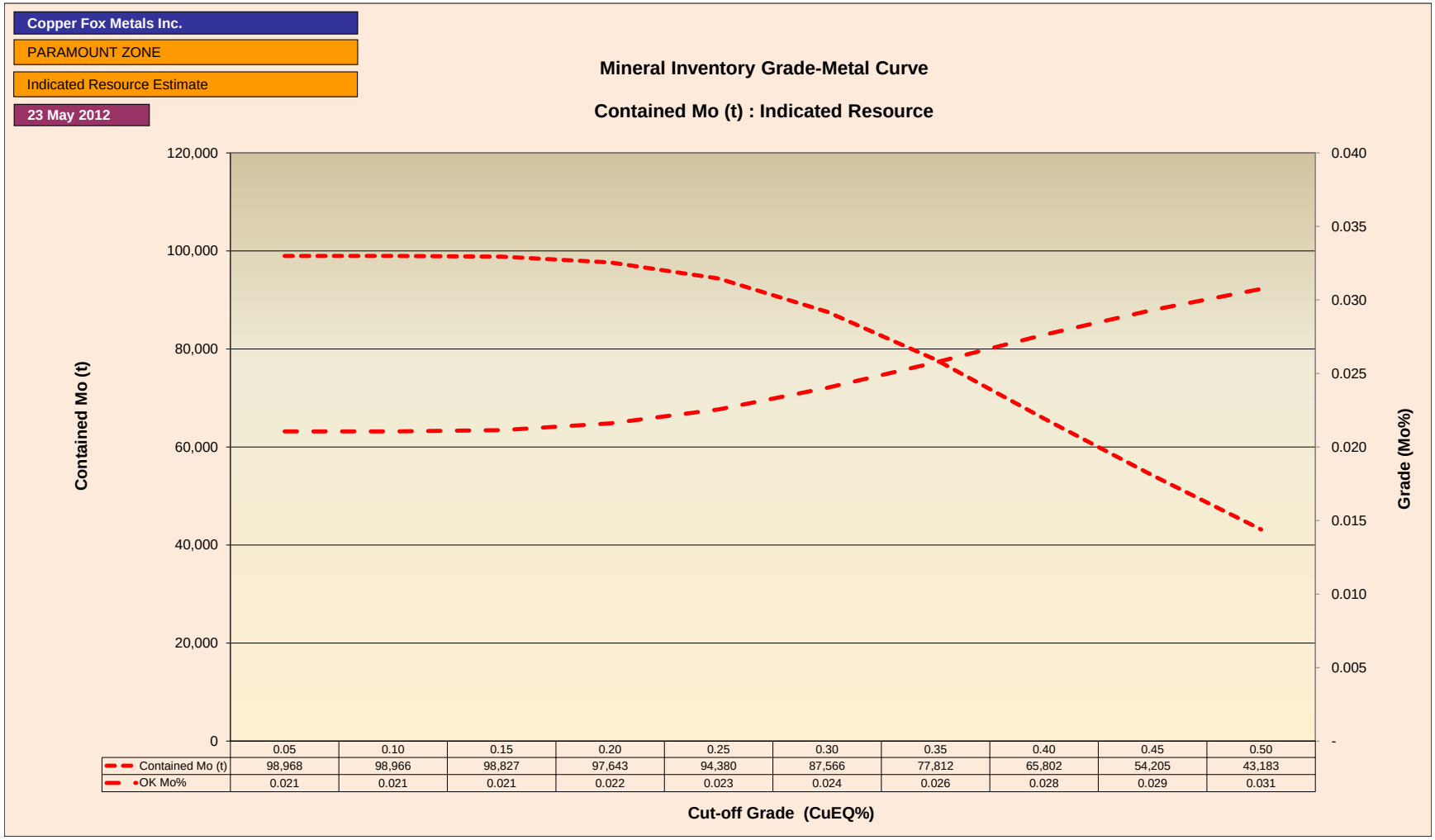
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Cu (t)	675,882	675,882	675,763	673,262	662,808	633,549	570,851	492,900	403,165	310,976
OK Cu%	0.282	0.282	0.282	0.283	0.287	0.294	0.308	0.324	0.341	0.361

Measured – Mo



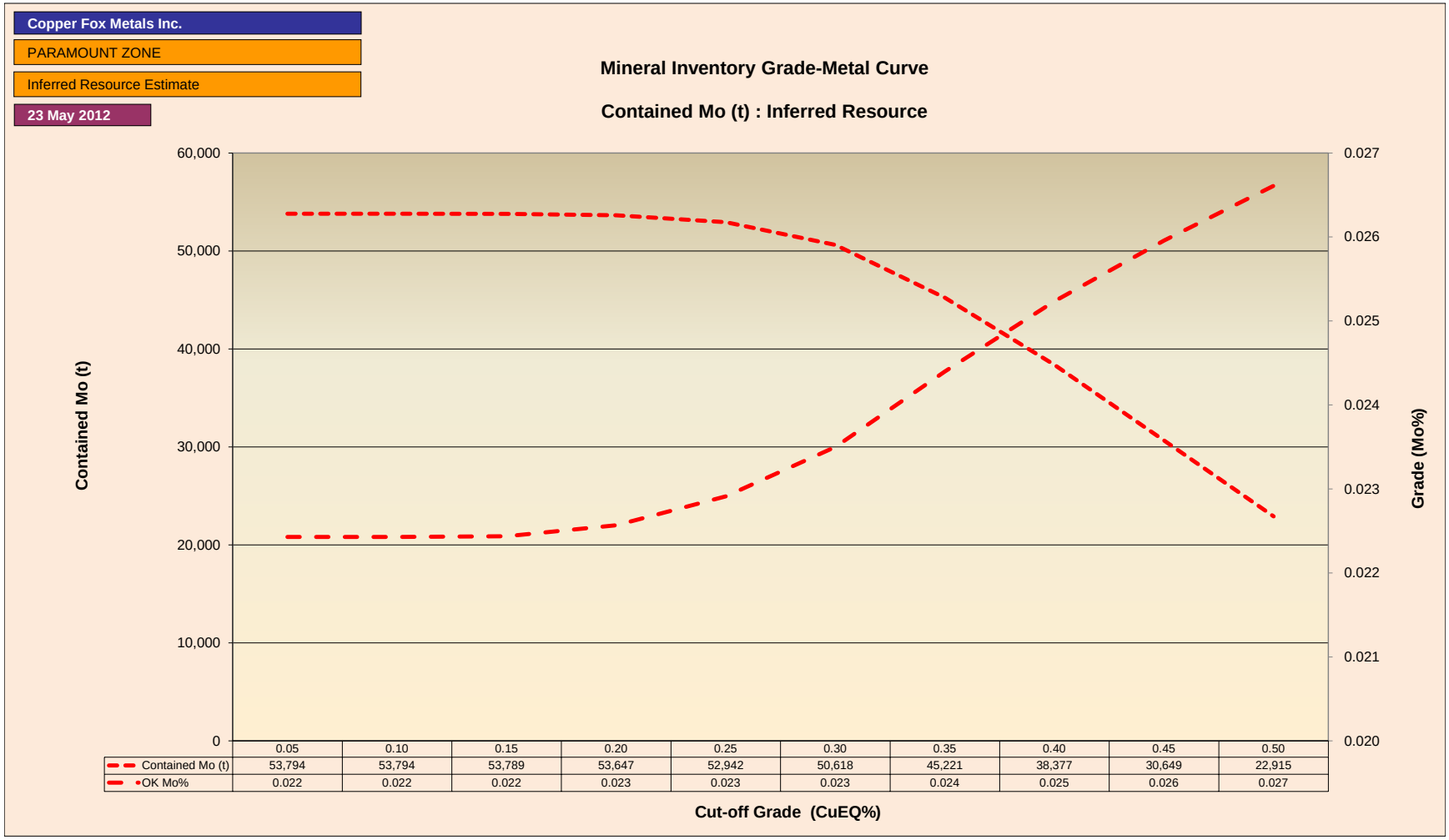
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Mo (t)	4,587	4,587	4,577	4,549	4,420	4,193	3,788	3,377	2,930	2,560
OK Mo%	0.022	0.022	0.022	0.023	0.024	0.025	0.027	0.029	0.030	0.032

Indicated - Mo



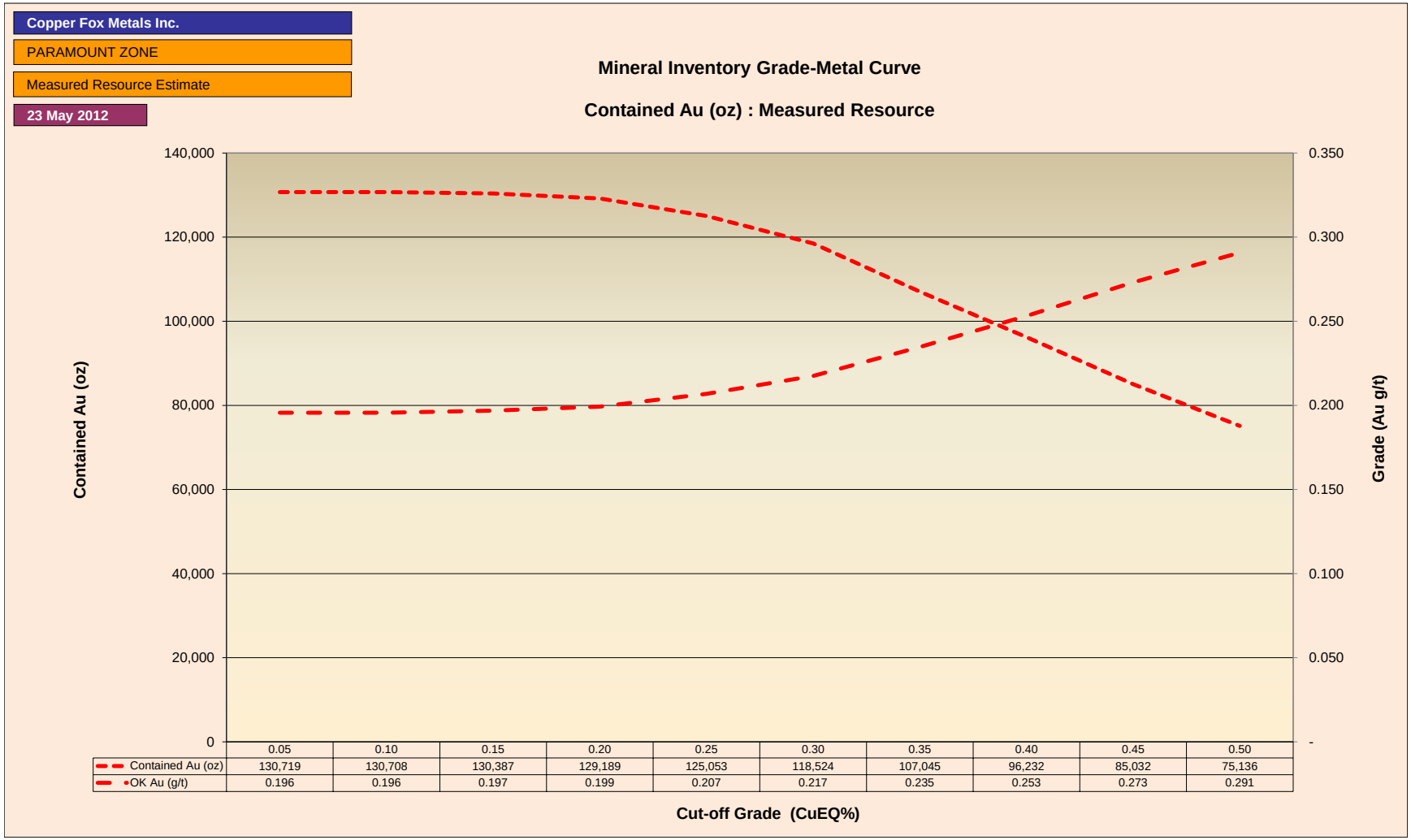
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Mo (t)	98,968	98,966	98,827	97,643	94,380	87,566	77,812	65,802	54,205	43,183
OK Mo%	0.021	0.021	0.021	0.022	0.023	0.024	0.026	0.028	0.029	0.031

Inferred – Mo



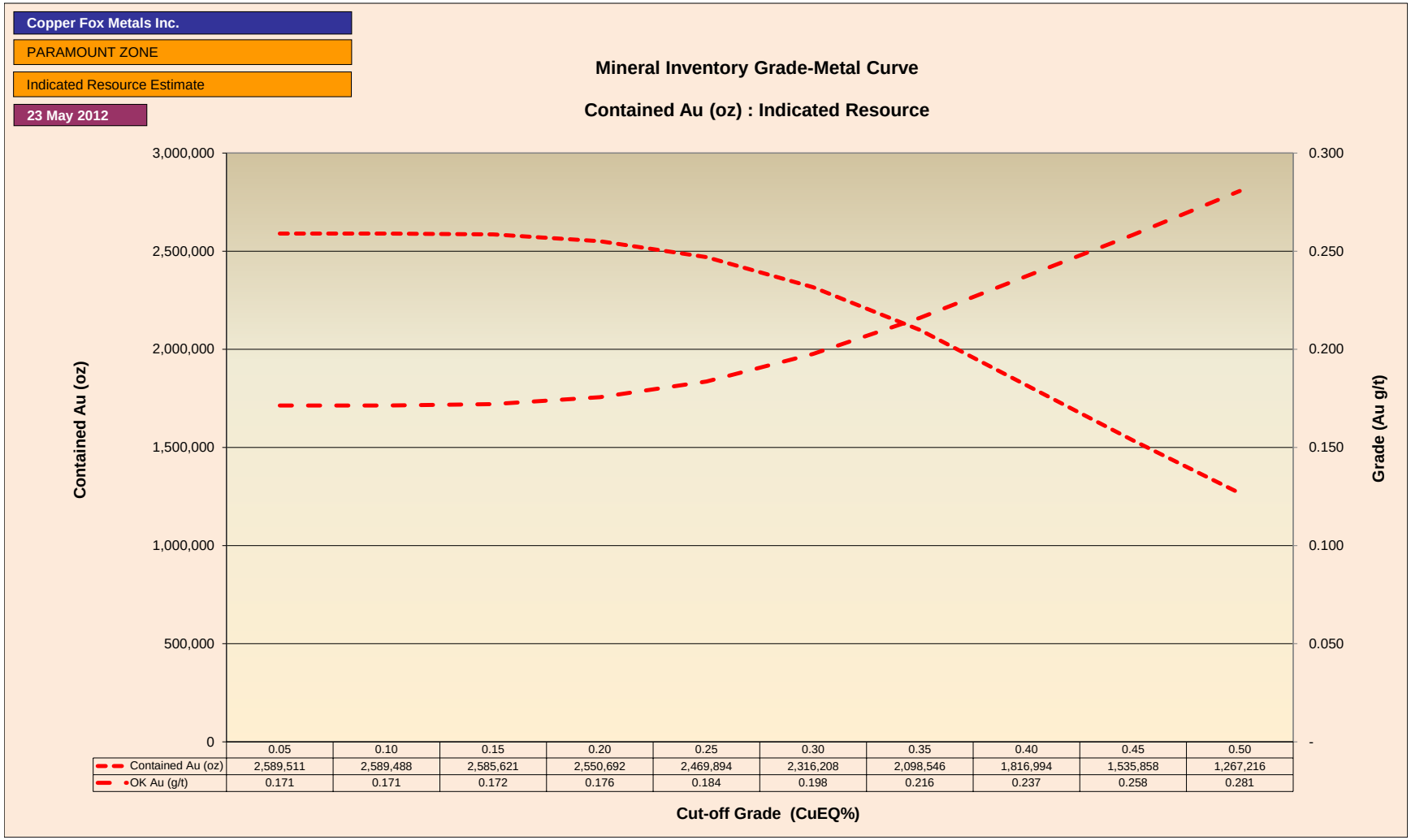
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Mo (t)	53,794	53,794	53,789	53,647	52,942	50,618	45,221	38,377	30,649	22,915
OK Mo%	0.022	0.022	0.022	0.023	0.023	0.023	0.024	0.025	0.026	0.027

Measured – Au



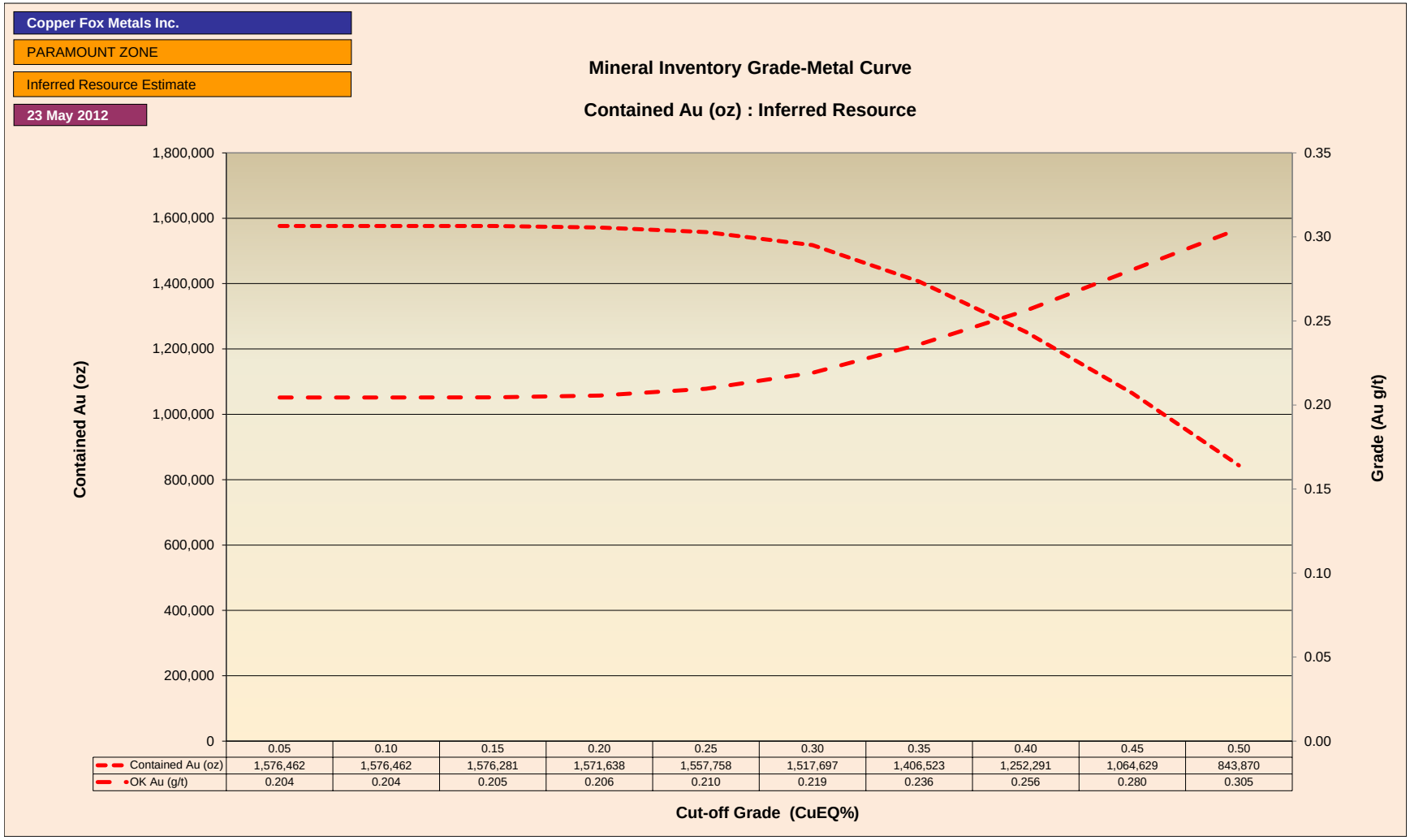
Cut-off Grade (CuEQ%)	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Au (oz)	130,719	130,708	130,387	129,189	125,053	118,524	107,045	96,232	85,032	75,136
OK Au (g/t)	0.196	0.196	0.197	0.199	0.207	0.217	0.235	0.253	0.273	0.291

Indicated – Au



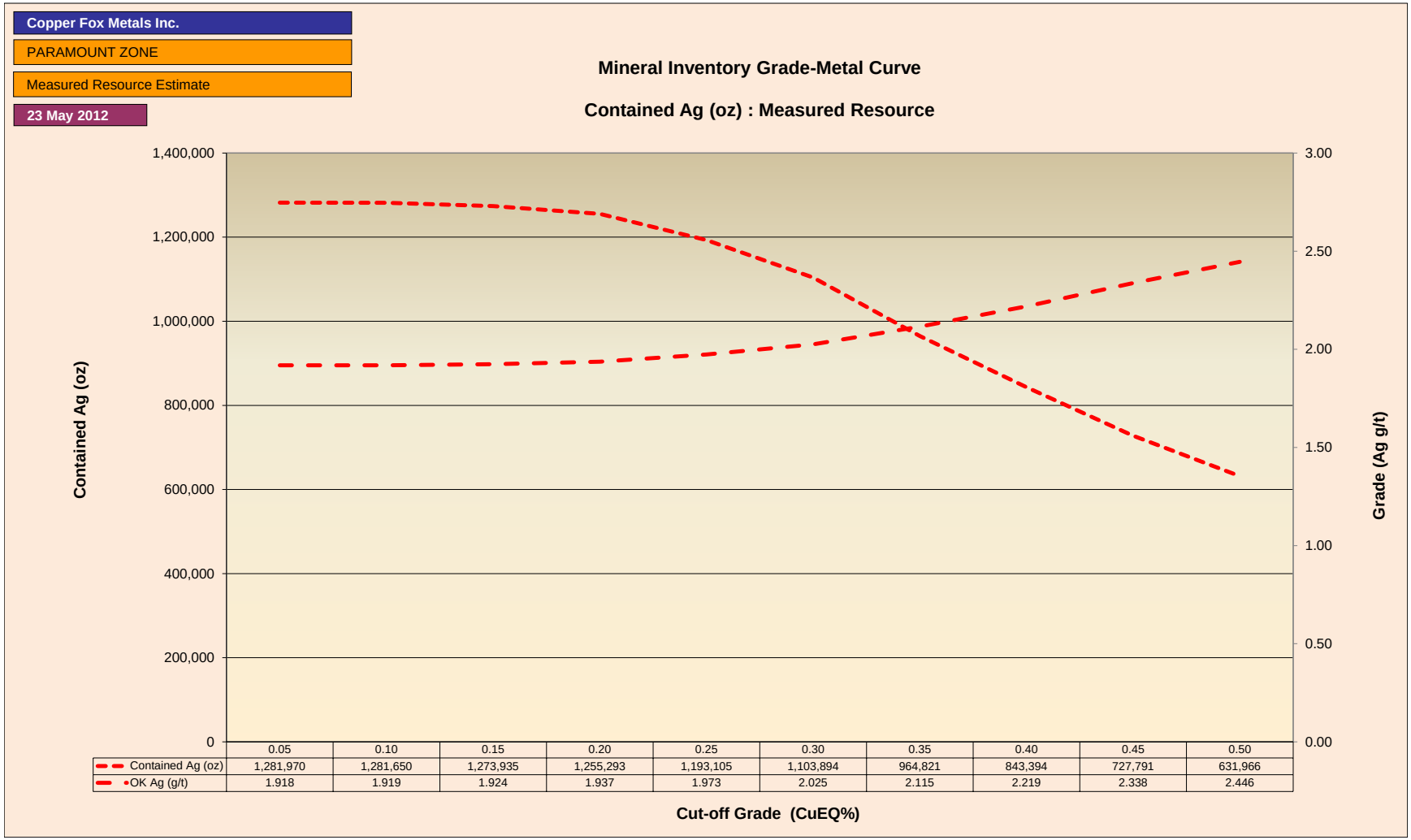
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Au (oz)	2,589,511	2,589,488	2,585,621	2,550,692	2,469,894	2,316,208	2,098,546	1,816,994	1,535,858	1,267,216
OK Au (g/t)	0.171	0.171	0.172	0.176	0.184	0.198	0.216	0.237	0.258	0.281

Inferred – Au



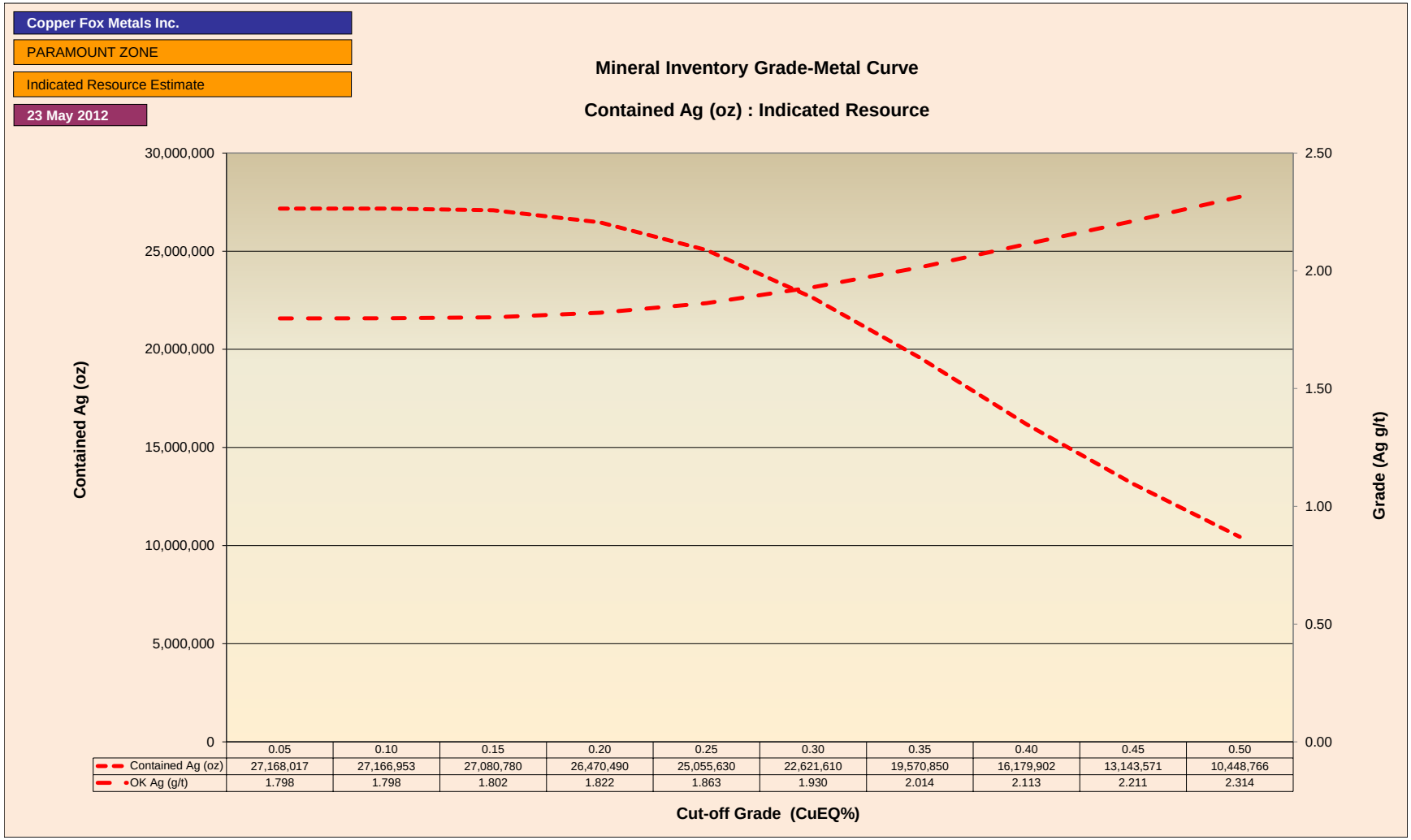
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Au (oz)	1,576,462	1,576,462	1,576,281	1,571,638	1,557,758	1,517,697	1,406,523	1,252,291	1,064,629	843,870
OK Au (g/t)	0.204	0.204	0.205	0.206	0.210	0.219	0.236	0.256	0.280	0.305

Measured - Ag



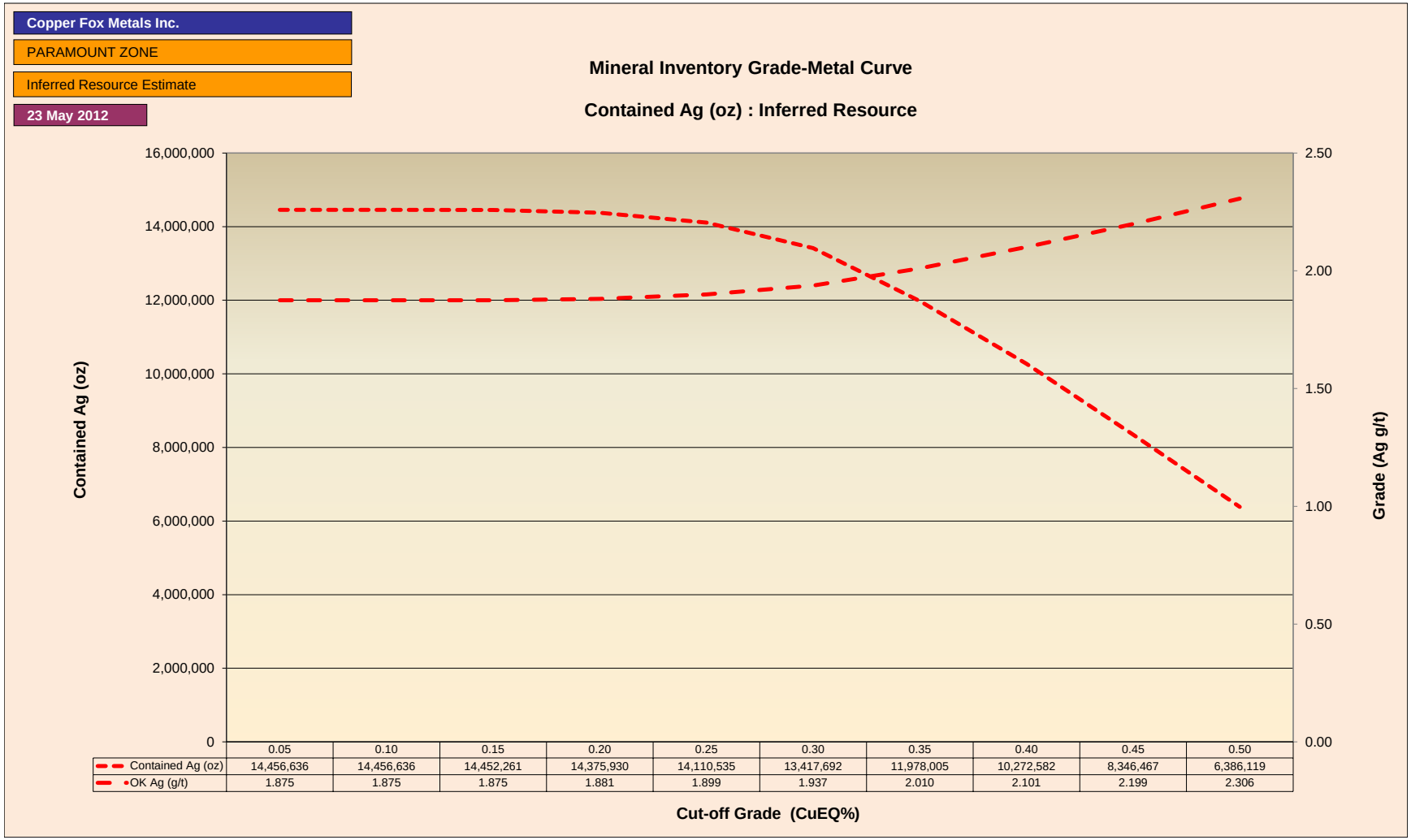
	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Ag (oz)	1,281,970	1,281,650	1,273,935	1,255,293	1,193,105	1,103,894	964,821	843,394	727,791	631,966
OK Ag (g/t)	1.918	1.919	1.924	1.937	1.973	2.025	2.115	2.219	2.338	2.446

Indicated - Ag



	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Ag (oz)	27,168,017	27,166,953	27,080,780	26,470,490	25,055,630	22,621,610	19,570,850	16,179,902	13,143,571	10,448,766
OK Ag (g/t)	1.798	1.798	1.802	1.822	1.863	1.930	2.014	2.113	2.211	2.314

Inferred - Ag



	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
Contained Ag (oz)	14,456,636	14,456,636	14,452,261	14,375,930	14,110,535	13,417,692	11,978,005	10,272,582	8,346,467	6,386,119
OK Ag (g/t)	1.875	1.875	1.875	1.881	1.899	1.937	2.010	2.101	2.199	2.306