MacArthur Copper Project
NI 43-101 Technical Report
Lyon County, Nevada, USA

Prepared for:

Quaterra Alaska, Incorporated

Quaterra Alaska Inc.

#1100-1199 West Hastings Street
Vancouver, BC V6E 3T5
Canada
Phone (604) 681-9059
Fax (604) 688-4670

Report Date: 02-17-2009

Tetra Tech
Project No.114-310920

Prepared by:

TETRA TECH
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.0 SUMMARY

Quaterra Alaska Inc. (Quaterra) Commissioned Tetra Tech Inc. (Tt) to prepare a Canadian National Instrument 43-101 (NI 43-101) compliant Technical Report for the MacArthur Copper Project in Lyon County, Nevada. The Qualified Person for this report is Mr. John W. Rozelle, P.G., Principal Geologist for Tetra Tech, Golden Colorado.

The MacArthur Copper Property is located near the geographic center of Lyon County, Nevada, USA along the northeastern flank of the Singatse Range approximately seven miles northwest of the town of Yerington, Nevada. The property is accessible from Yerington by approximately five miles of paved roads and two miles of maintained gravel road. Topographic coverage is on US Geological Survey “Mason Butte” and “Lincoln Flat” 7.5’ topographic quadrangles. The nearest major city is Reno, Nevada approximately 75 miles to the northwest.

1.1 Historic Drilling

Over the history of the project, previous operators have contributed more than 300 holes to the current drillhole database. TABLE 1-1 summarizes the exploration history of the MacArthur area.

TABLE 1-1: EXPLORATION DRILLING HISTORY
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Operator	Drill Program Date Range	Number of Holes Drilled	Feet Drilled
U.S. Bureau of Mines	1947-50	8	3,414
Anaconda Company	1955-57	14	3,690
Bear Creek Mining Company	1963-??	~14	Unknown
Superior Oil Company	1967-68	11	13,116
Anaconda Company	1972-73	280	55,809
Pangea Explorations, Inc.	1987-1991	15	2,110
Arimetco International, Inc.	Unknown	Unknown	Unknown
Total		**342**	**78,139**

1.2 Geology and Mineralization

The MacArthur property is one of several copper deposits and prospects located near the town of Yerington that collectively comprise the Yerington Mining District. The property is underlain by Middle Jurassic granodiorite and quartz monzonite intruded by northwesterly-trending, steeply north-dipping quartz porphyry dike swarms. These dikes host a large portion of the primary copper mineralization at the nearby Yerington mine and are associated with all copper occurrences in the district.

The MacArthur copper deposit, based on drilling to date, is a 50-150 foot thick, tabular zone of secondary copper (oxides and chalcocite) covering an area of approximately 1.5 square miles. This mineralized zone has been only partially delineated and remains open for extension to the north, west and south.

Oxide copper mineralization is most abundant and particularly well exposed in the walls of the MacArthur pit. The most common copper mineral is chrysocolla with minor malachite, azurite and neotocite. The flat-lying zones of oxide copper mirror topography, exhibit strong fracture control and range in thickness from 50 to 100 feet. Secondary chalcocite mineralization forms a blanket up to 50 feet thick that is mixed with and underlies the oxide copper. Primary chalcopyrite mineralization has been intersected in several locations mixed with and below the chalcocite. The extent of the primary copper is unknown as most of the drill holes bottomed at 400 feet or less.

The MacArthur deposit is part of a large, partially defined porphyry copper system that has been complicated by complex faulting and possible post-mineral tilting. Events leading to the current geometry and distribution of known mineralization include 1) emplacement of primary porphyry copper mineralization; 2) supergene enrichment resulting in the formation of a widespread, tabular zone of secondary chalcocite mineralization below outcrops of totally oxidized rocks called leached cap; 3) oxidation of outcropping and near-surface parts of this chalcocite blanket coupled with partial remobilization of copper to form the upper zone of oxide copper now exposed in the MacArthur pit.

Geophysics

The helicopter-borne aeromagnetic survey over the MacArthur Copper Project and the application of a 2-dimensional inversion algorithm to historical IPR data at MacArthur presents a geophysical interpretation of the area that is both indicative of mineralization presently identified on the project and encouraging for future growth of the deposit though additional drilling. High magnetic anomalies located at the southwest and northeast margins of the drill investigated areas present attractive targets for the discovery of primary sulfide mineralization. The North Porphyry Target to the northeast is further substantiated by both coincident IP and low resistivity anomalies. Limited drilling near both North Porphyry Target and in the Gallagher Prospect Area to the southwest has intersected significant widths of chalcopyrite mineralization. The strongest parts of both anomalies remain untested as does a large area of subdued magnetic response in the central portion of Quaterra's claim block that falls within a region of moderate to strong IP anomalies . The subdued magnetic response is due partially to the intense leaching of the near surface rocks that resulted in the formation of the oxide copper and chalcocite zones.

1.3 2007-2008 Exploration Drilling Program

From April 2007 through October 2008, Quaterra completed an extensive drilling program that totaled 80,136.6 feet in 173 holes including 23,921.6 feet of core in 49 holes and 56,215 feet of reverse circulation drilling in 124 holes. Quaterra's initial objective was to verify and expand the MacArthur oxide resource, as had been defined by the 1972-1973 Anaconda drilling program. Taking into account minor secondary chalcocite intersected in the few Anaconda drillholes that reached depths greater than 300 feet, Quaterra successfully targeted a deeper chalcocite zone in step-out holes from the pit. The program expanded the oxide mineralization, and encountered a large, underlying tabular blanket of mixed oxide-chalcocite mineralization that remains open for extension by additional drilling to the north, west and south of the MacArthur pit. The chalcocite blanket is associated with and overlies primary chalcopyrite mineralization. Chalcopyrite mineralization was verified by Quaterra's deeper drillholes in the western and northern margins of the drilled area. The primary copper mineralization in the northern area is a target for a possible porphyry center.

1.4 Resource Estimation

The mineral resource estimates have been generated from drillhole sample assay analyses and the interpretation of a geologic model which relates to the spatial distribution of copper in the MacArthur deposit. Interpolation characteristics have been defined based on the geology, drillhole spacing, and geostatistical analysis of the data.

Block Model Definition

The block model parameters for MacArthur were defined to best reflect both the drillhole spacing and current geologic interpretations. TABLE 1-2 shows the MacArthur block model parameters.

TABLE 1-2: MACARTHUR MODEL PARAMETERS
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

MacArthur Model Parameters	X (Columns)	Y (Rows)	Z (Levels)
Origin (lower left corner):	2,431,900.	4,686,900*	2,900
Block size (feet)	25	25	20
Number of Blocks	384	288	132
Rotation	0 degrees azimuth from North to left boundary		
Composite Length	20 feet (Bench)		
*10,000,000 was subtracted from Y (Northing).			

Assay Database

An Excel database was provided by Quaterra that contained the pertinent drillhole and assay information for the MacArthur deposit. The database contained a total of 537 drillholes, of which 450 drillholes from Quaterra and Anaconda were used. Eighty-eight drillholes were removed which contained 48 older drillholes with limited or no information on the assays (Pangea Gold 1991, Superior, USBM 1952, Anaconda 1955-57), 37 dummy drillholes entered into the database for planning purposes, and 3 new Quaterra Holes that were still awaiting assay data from the assay laboratory at the time resource modeling began. Of the 450 drillholes used, there are 280 Anaconda reverse circulation (RC) holes and 170 Quaterra drillholes (49 core and 121 RC holes). These drillholes contain 134,255.6 feet, producing 26,727 sample assay values at nominal 5-foot lengths.

Compositing

The assay data were composited to a 20-foot bench so that the planning data better reflect future mining scenarios. The composites were assigned MinZones based on constructed wireframe surfaces. First, GEMS™ was used to assign a MinZone to each block within the model. When a majority of a block fell within the interpreted MinZone wireframe it was assigned that code. These coded blocks were then imported into MicroModel® and used to tag and re-code each composite using a simple majority rule. These composites codes were used in the resource estimation.

Geostatistical Analyses

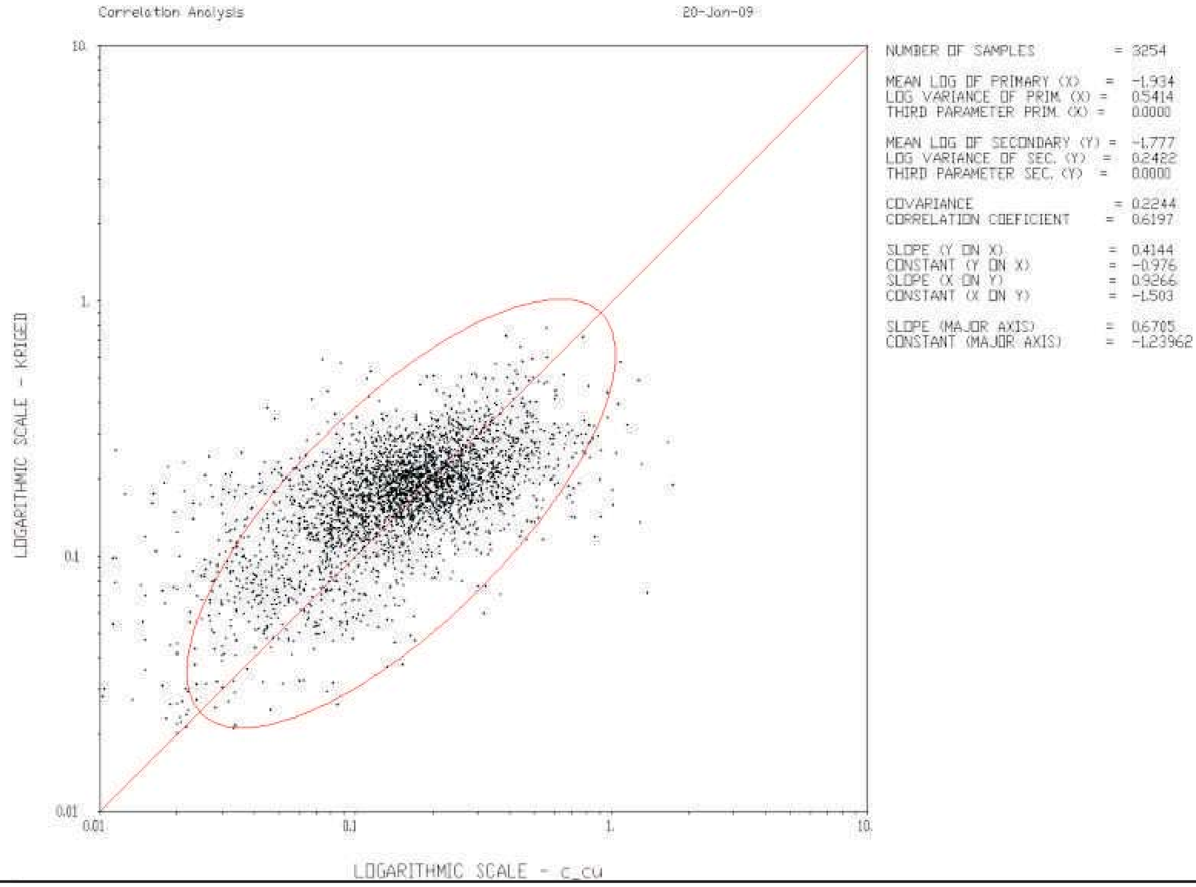
A total of twenty-two (21 directional and 1 omni-directional) variograms were calculated using MicroModel® for each MinZone within each model area (NW and SE). The program searches along each direction for data pairs within a 12.5-degrees window angle and 5-foot tolerance band. All experimental variograms are inspected so that spatial continuity along a primary, secondary and tertiary direction can be modelled. TABLE 1-3 details the whole-block kriging parameters used to develop the MacArthur resource estimate.

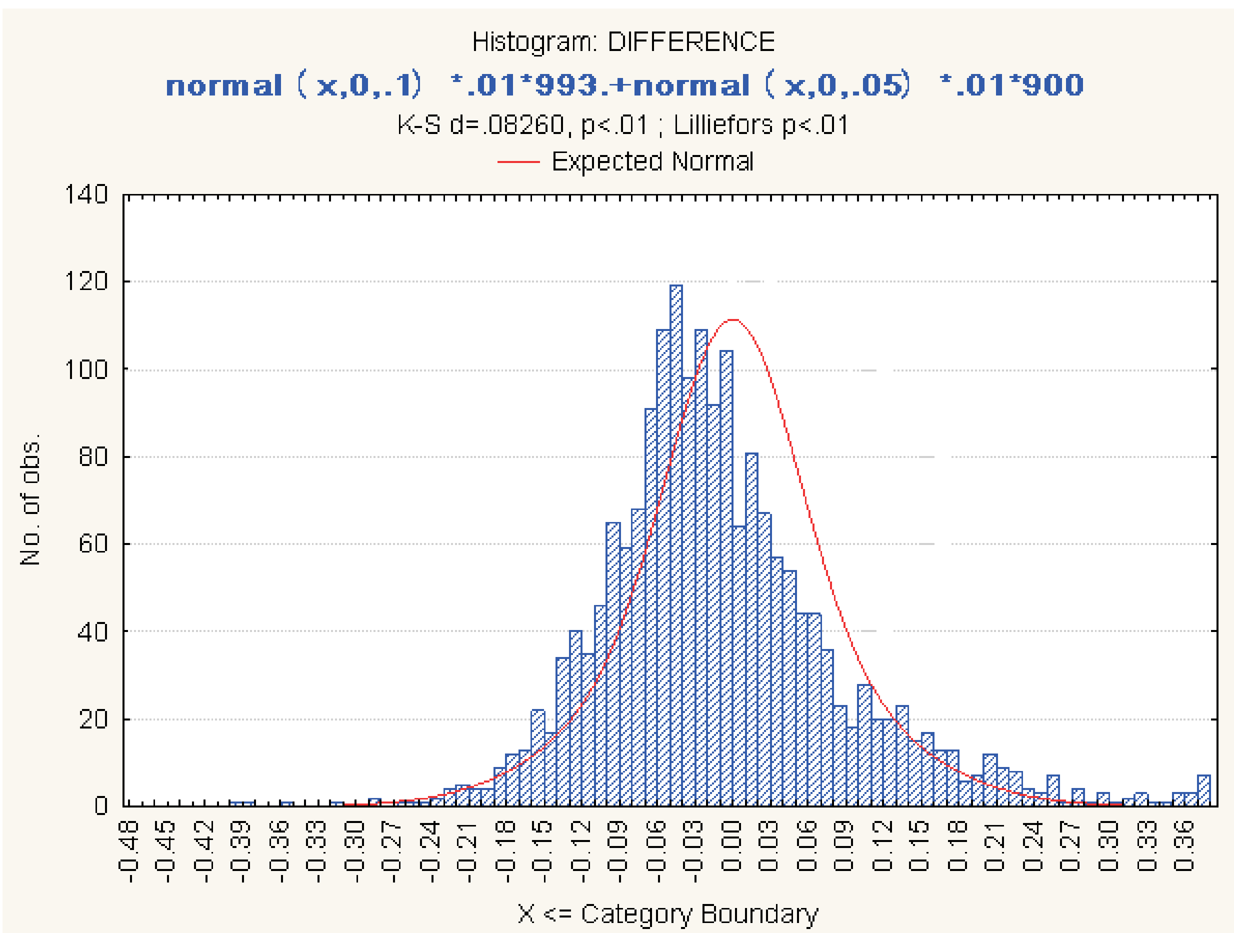
Each variogram model was then validated using the "jackknifing" method. This method sequentially removes values and then uses the remaining composites to krige the missing value using the proposed variogram. An example correlation plot of estimate and true values generated by jackknifing is shown in the top panel of FIGURE 1-1. The scatter of points represents the plotting of the estimated value and true value pairs. A perfect estimate would produce a scatter plot of points along a 45-degree line.

The second panel of FIGURE 1-1 shows a histogram of the difference between the estimated and true values, usually referred to as the error of estimation. This histogram shows that the error centers at zero and is slightly skewed positive. Kriging as an averaging method will always underestimate the highest grades; hence positive skew of the jackknife error is expected. It is Tt's opinion that the estimation parameters developed have produced a representative and acceptable resource estimate of the total copper present at the MacArthur property.

TABLE 1-3: KRIGING PARAMETERS
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Unitized General Relative Variogram Models by Zone	Spherical Variogram Parameters						
	Primary Range	Secondary Range	Tertiary Range	UGR Variance	Primary Axis Trend	Primary Axis Dip (+ down, - up)	Secondary Axis Rake
NW Model Zone 10							
Nugget	0	0	0	0.2	na	na	na
Structure 1	200	200	80	0.55	N 0° E	0°	0°
Structure 2	400	400	350	0.25	N 0° E	0°	0°
NW Model Zone 20							
Nugget	0	0	0	0.2	na	na	na
Structure 1	200	200	80	0.55	N 0° E	0°	0°
Structure 2	400	400	350	0.13	N 0° E	0°	0°
NW Model Zone 30							
Nugget	0	0	0	0.2	na	na	na
Structure 1	200	200	80	0.55	N 45° E	45°	0°
Structure 2	400	400	350	0.13	N 45° E	45°	0°
SE Model Zones 10							
Nugget	0	0	0	0.2	na	na	na
Structure 1	150	75	50	0.55	N 30° E	20°	-10°
Structure 2	300	200	300	0.13	N 30° E	20°	-10°
Structure 3	6000	6000	6000	0.12	N 30° E	20°	-10°
SE Model Zone 20							
Nugget	0	0	0	0.2	na	na	na
Structure 1	150	75	50	0.55	N 0° E	0°	0°
Structure 2	300	200	300	0.13	N 0° E	0°	0°
Structure 3	6000	6000	6000	0.12	N 0° E	0°	0°
SE Model Zone 30							
Nugget	0	0	0	0.2	na	na	na
Structure 1	150	75	50	0.55	N 45° E	45°	0°
Structure 2	300	200	300	0.13	N 45° E	45°	0°
Structure 3	6000	6000	6000	0.12	N 45° E	45°	0°





Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	*QUATERRA ALASKA, INC.*	Fig1-1.cdr	**Figure 1-1** **Jackknife Validation of Kriging Model (SE Area, Minzone 10)**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 02/09/2009	

Resource Classification

Tt used a two-part approach to classify the total copper resources. This approach takes into account the spatial distribution of the drilling, the distance to the nearest data points used to estimate a block, and finally the relative kriging error generated by the estimate grade. Tt has found this approach to be very robust and provide highly reproducible results. The following points detail this approach.

- A measured block requires a minimum of 22 samples, with a maximum of four samples per sector in a six sector search pattern and a maximum of three composites coming from a single drillhole. This implies that in most cases, for a block to be classified as measured there must be at least eight drillholes in four cardinal directions.
- The constraints for an indicated block are not as stringent as for a measured block. An indicated block requires a minimum of 12 samples, with a maximum of three samples per sector in a sector search pattern and a maximum number of four composites coming from a single drillhole. This implies that for most cases an indicated block must have at least three drillholes in three of the four cardinal directions.
- Relaxing the constraints even more, an inferred block requires a minimum of one sample, with a maximum of three samples per sector in a sector search pattern and a maximum number of four composites from a single drillhole. This implies that for most cases an inferred block must have at least one hole with 20 feet of mineralized material within the appropriate MinZone.

In addition to the kriging search parameters, kriging error comes into play in determining if a block falls into a particular class. Tt has found that by plotting the kriging error as a log-probability plot, there is a natural break in the distribution and signifies when the error is too great to allow a block to be classified as measured or indicated. In the case of the MacArthur deposit, any block with kriging error above 0.6 was classified as inferred.

Estimated Resources

A summary of the Measured and Indicated Mineral Resources is shown in TABLE 1-4. A summary of the Inferred Mineral Resources is shown in TABLE 1-5. The base case cutoff grade for the leachable resources is 0.18 percent TCu. The base case cutoff grade for the primary sulfide resources is 0.30 percent TCu. Both of these values are representative of actual operating cutoff grades in use as of the date of this report. It is Tt's opinion that the MacArthur Mineral Resources meet the current CIM definitions for classified resources.

Based on the work presented in this report, there are still significant areas within the current drillhole pattern and adjacent to the drilled areas for development of additional mineral resources. It is Tt's recommendation that future drilling be targeted in three primary areas:

1. Infill and improvement of the known oxide and chalcocite resources,
2. Potential enlargement of the oxide and chalcocite/oxide mix resource areas, and
3. Investigation of the potential primary sulfide mineralization at depth.

TABLE 1-4: MEASURED AND INDICATED TOTAL COPPER RESOURCES QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009				
Measured Resources	**Cutoff Grade %TCu**	**Tons (x1000)**	**Average Grade %TCu**	**Contained Copper (lbs x 1000)**
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	307	0.585	3,594.28
	0.40	957	0.486	9,309.09
	0.35	1,695	0.437	14,812.69
	0.30	3,044	0.386	23,486.70
	0.25	5,889	0.331	38,942.61
	0.20	11,470	0.278	63,708.34
	0.18	**14,170**	**0.261**	**73,969.30**
	0.15	17,186	0.244	83,970.00
Primary Sulfide Material (MinZone 30)	0.50	N/A	N/A	N/A
	0.40			
	0.35			
	0.30			
	0.25			
	0.20			
	0.18			
	0.15			
Indicated Resources	**Cutoff Grade %TCu**	**Tons (x1000)**	**Average Grade %TCu**	**Contained Copper (lbs x 1000)**
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	598	0.628	7,505.20
	0.40	1,518	0.516	15,661.55
	0.35	2,390	0.463	22,139.62
	0.30	4,022	0.406	32,638.77
	0.25	8,728	0.332	58,021.47
	0.20	27,608	0.255	140,754.35
	0.18	**43,195**	**0.231**	**199,683.85**
	0.15	72,111	0.204	294,730.71
Primary Sulfide Material (MinZone 30)	0.50	2	0.562	22.48
	0.40	7	0.473	66.26
	0.35	27	0.392	211.73
	0.30	**84**	**0.342**	**574.22**
	0.25	204	0.300	1,224.82
	0.20	481	0.254	2,441.56
	0.18	565	0.245	2,762.85
	0.15	730	0.226	3,305.44

TABLE 1-4 CONTINUED: MEASURED + INDICATED COPPER RESOURCES QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009				
Measured + Indicated Resources	**Cutoff Grade %TCu**	**Tons (x1000)**	**Average Grade %TCu**	**Contained Copper (lbs x 1000)**
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	905	0.613	11,099.48
	0.40	2,475	0.504	24,970.64
	0.35	4,085	0.452	36,952.31
	0.30	7,066	0.397	56,125.46
	0.25	14,617	0.332	96,964.08
	0.20	39,078	0.262	204,462.69
	0.18	**57,365**	**0.239**	**273,653.15**
	0.15	89,297	0.212	378,700.71
Primary Sulfide Material (MinZone 30)	0.50	2	0.562	22.48
	0.40	7	0.473	66.26
	0.35	27	0.392	211.73
	0.30	**84**	**0.342**	**574.22**
	0.25	204	0.300	1,224.82
	0.20	481	0.254	2,441.56
	0.18	565	0.245	2,762.85
	0.15	730	0.226	3,305.44

TABLE 1-5: INFERRED COPPER RESOURCES QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009				
	Cutoff Grade %TCu	**Tons (x1000)**	**Average Grade %TCu**	**Contained Copper (lbs x 1000)**
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	3,988	0.971	77,468.26
	0.40	6,932	0.744	103,111.97
	0.35	9,416	0.646	121,668.91
	0.30	15,772	0.515	162,380.18
	0.25	29,287	0.401	234,916.85
	0.20	57,484	0.313	359,765.78
	0.18	**75,832**	**0.283**	**429,335.65**
	0.15	114,426	0.243	555,424.47
Primary Sulfide Material (MinZone 30)	0.50	4,538	0.593	53,802.53
	0.40	5,633	0.567	63,844.42
	0.35	5,842	0.560	65,395.35
	0.30	**6,398**	**0.539**	**68,932.05**
	0.25	9,101	0.459	83,601.79
	0.20	12,418	0.398	98,747.94
	0.18	14,367	0.370	106,172.13
	0.15	18,116	0.327	118,587.34

1.5 Recommendations and Proposed Work Plan

Recommendations

As part of this NI 43-101 Technical Report, Tt has developed the following list of recommendations for the MacArthur Project. The most significant of these recommendations include:

- For all total copper assays from the oxide and the chalcocite zones that contain greater than 0.1 percent TCu, Quaterra will use an assay system that includes TCu assay, warm H_2SO_4 assay, and QLT or standard sequential leach assaying methodology. Tt should mention that Quaterra has already begun this process for the drilling completed in 2008 and Quaterra has agreed to add this to their standard practices for all future drilling and assaying.
- Begin a duplicate sample procedure for current and all future analytical work. This will require re-assaying of some of the 2008 drilling samples. This has already been started.
- Perform statistical analyses on standards from every sample lot (this may require Quaterra to begin to submit samples in lots of 40 to 50 samples) and use it to determine whether the assaying is meeting the analytical accuracy required by current assaying guidelines. This procedure is discussed in depth in SECTION 13.
- Place the purchased blanks and standards in a locked environment to control access to these important components of the QA/QC program. This change has already been completed.
- Add another standard that contains both copper and gold. Currently, two standards are used, one containing copper only, the other containing gold only.
- Complete infill drilling to an approximate average drillhole spacing of 250 feet. This will allow re-classification of inferred category resources into measured and indicated categories in areas that are currently under-drilled.

Proposed Work Plan

Quaterra's future plans include reducing drillhole spacing, preliminary metallurgical testwork, initiating mine planning and baseline environmental studies, continued surface geologic mapping, and securing adequate supplies of water and power. These items are required for the project to proceed toward feasibility.

Near term plans are dependent on approval of the Plan of Operation / Environmental Assessment (expected Spring 2009) by the Bureau of Land Management. Plan approval will allow Quaterra to initiate a comprehensive reverse circulation and core drilling program designed to expand oxide and chalcocite mineralization and continue to test for underlying sulfide chalcopyrite mineralization. Priority drilling will seek to expand higher-grade sulfide copper intersected along the northernmost drill fence, some 5,000 feet north of the MacArthur pit. Drilling will infill the current 500 foot hole spacing and is planned in the area west of the pit where drill density coverage is poor to absent over an approximate 2,000 foot by 2,000 foot area.

Attention will also be directed to metallurgical leach column tests with oxide-bearing host rock readily sourced from the MacArthur Pit. Large diameter drilling will be necessary to obtain adequate sample material from the non-outcropping chalcocite and chalcopyrite mineralization.

Refined QA/QC protocols will include insertion of a gold-copper standard and a second gold standard on all future sample shipments. To assure that there is no contamination during sample preparation at the laboratory, duplicate assays will be run on coarse rejects from the next drill sample below a higher grade assay. Statistical analyses, duplicating a population of oxide, chalcocite, and chalcopyrite-bearing samples, will continue.

TABLE 1-6: PROPOSED BUDGET FOR PLAN OF WORK
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Task	Estimated Completion Date*	Estimated Cost to Complete*	Notes
Preliminary metallurgical sampling and shipping	Q3-09	$20,000	Oxide mineralization from MacArthur pit
Prelim column tests	Q3-09	$60,000	90 day testing time
Surface Geological Mapping	Q3-09	$60,000	May be ongoing
Plan of Op. & EA approval	Q3-09	$75,000	Includes prelim bonding
North porphyry drilling	Q4-10	$190,000	1-2000' core holes
Step-out & Infill RC Drilling	Q4-10	$300,000	20-500' holes
Drilling & QAQC assays	Q4-10	$120,000	3,000 x $40/sample
Mine planning and baseline environmental studies	Q4-10	$150,000	
Personnel & Infrastructure	Q4-10	$540,000	18 months
Total – Overall Budget		**$1,515,000**	

* Completion dates and expenditures represent minimum programs based on depressed economic and market conditions and are subject to the availability of funding.

2.0 INTRODUCTION

2.1 General

Quaterra commissioned Tt to prepare a Technical Report for the MacArthur Copper Project in Lyon County, Nevada that meets the requirements of Canadian National Instrument 43-101. This report has been prepared in accordance with the guidelines provided in NI 43-101, Standards of Disclosure for Mineral Projects, dated December 23, 2005. The Qualified Person responsible for this report is Mr. John W. Rozelle, P.G., Principal Geologist of Tetra Tech.

2.2 Purpose of Report

The purpose of this report is to analyze and interpret all available data in order to produce a CIM NI 43-101 compliant mineral resource estimate assuming the data adequately support such an estimate. This report has been prepared for validating the current resource estimation for the MacArthur Copper project. Quaterra currently has sole ownership of all claims within the historic pit area and all but six within the project area. It is the intent of Quaterra to continue to drill on the site in order to better define and expand the mineralization and its boundaries.

2.3 Sources of Information

This report is based on data supplied by Quaterra with the use of historic data from Anaconda, Pangea Explorations (Pangea), North Exploration LLC (North) and Arimetco International Inc. (Arimetco). Drilling and Sampling started in 1955 with Anaconda and has continued to date with Quaterra's current exploration program.

Information provided by Quaterra includes:

- Assumptions, conditions, and qualifications as set forth in the report;
- Land status (Ms. Tracy O. Guinand, Registered Landman);
- Drillhole records;
- Property history details;
- Sampling protocol details;
- Geological and mineralization setting;
- Data, reports, and opinions from prior owners and third-party entities; and
- Copper and other assays from original assay records and reports.

2.4 Qualifications of Consultant

This report has been prepared based on a technical review by consultants sourced from Tt's Golden, Colorado office and Quaterra professionals. These professionals are specialists in the fields of geology, geostatistics, mineral resource estimation, mineral reserve estimation and classification.

TABLE 2-1: KEY PROJECT PERSONNEL
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Company	Name	Title
Quaterra Alaska, Inc.	George Eliopulos	General Manager
	David Heatwole	Exploration Manager
	Judy Pratt	Technical Services
	Joe Inman	Consulting Geophysicist
Tetra Tech, Inc.	John Rozelle	Principal Geologist
	Rex Bryan	Sr. Geostatistician
	Steve Krajewski	Sr. Geologic Modeller

2.5 Units

Unless explicitly stated, all units presented in this report are in the Imperial System (i.e. short tons, miles, feet, inches, pounds, percent, parts per million, and troy ounces). All monetary values are in United States (US) dollars unless otherwise stated.

Common units of measure and conversion factors used in this report include:

Linear Measure:

1 inch = 2.54 centimeters

1 foot = 0.3048 meter

1 yard = 0.9144 meter

1 mile = 1.6 kilometers

Area Measure:

1 acre = 0.4047 hectare

1 square mile = 640 acres = 259 hectares

Capacity Measure (liquid):

1 US gallon = 4 quarts = 3.785 liter

1 cubic meter per hour = 4.403 US gpm

Weight:

1 short ton	= 2000 pounds	= 0.907 tonne
1 pound	= 16 oz	= 0.454 kg
1 oz (troy)	= 31.103486 g	

Analytical Values:

	percent	grams per metric tonne	troy ounces per short ton
1%	1%	10,000	291.667
1 gm/tonne	0.0001%	1.0	0.0291667
1 oz troy/short ton	0.003429%	34.2857	1
10 ppb			0.00029
100 ppm			2.917

Frequently used acronyms and abbreviations:

AA	=	atomic absorption spectrometry
Ag	=	silver
Au	=	gold
°C	=	degrees Centigrade
CIC	=	Carbon-in-column
CIM	=	Canadian Institute of Mining, Metallurgical, and Petroleum
CIP	=	Carbon-in-pulp
°F	=	degrees Fahrenheit
FA	=	Fire Assay
ft	=	foot or feet
g	=	gram(s)
g/kWh	=	grams per kilowatt hour
g/t	=	grams per tonne
h	=	hour
ICP	=	Inductively Coupled Plasma Atomic Emission Spectroscopy
km	=	kilometer
kV	=	kilovolts
kWh	=	Kilowatt hour
kWh/t	=	Kilowatt hours per tonne
l	=	liter
m	=	meter(s)
ml	=	milliliter
m2	=	square meter(s)
m2/t/d	=	square meters per tonne per day
m3	=	cubic meter(s)
m3/h	=	cubic meter(s) per hour
mm	=	millimeter
MW	=	megawatts

NSR	=	net smelter return
Ag oz/t	=	troy ounces silver per short ton (oz/ton)
Au oz/t	=	troy ounces gold per short ton (oz/ton)
ppm	=	parts per million
ppb	=	parts per billion
RC	=	reverse circulation drilling method
ton	=	short ton(s)
tonne	=	metric tonne
t/m^3	=	tonne per cubic meter
tpd	=	tonnes per day
tph	=	tonnes per hour
µm	=	micron(s)
%	=	percent
tpy	=	tons (or tonnes) per year
tpm	=	tons (or tonnes) per month
tpd	=	tons (or tonnes) per day

Abbreviations of the Periodic Table

actinium = Ac	aluminum = Al	americium = Am	antimony = Sb	argon = Ar
arsenic = As	astatine = At	barium = Ba	berkelium = Bk	beryllium = Be
bismuth = Bi	bohrium = Bh	boron = B	bromine = Br	cadmium = Cd
calcium = Ca	californium = Cf	carbon = C	cerium = Ce	cesium = Cs
chlorine = Cl	chromium = Cr	cobalt = Co	copper = Cu	curium = Cm
dubnium = Db	dysprosium = Dy	einsteinum = Es	erbium = Er	europium = Eu
fermium = Fm	fluorine = F	francium = Fr	gadolinium = Gd	gallium = Ga
germanium = Ge	gold = Au	hafnium = Hf	hahnium = Hn	helium = He
holmium = Ho	hydrogen = H	indium = In	iodine = I	iridium = Ir
iron = Fe	juliotium = Jl	krypton = Kr	lanthanum = La	lawrencium = Lr
lead = Pb	lithium = Li	lutetium = Lu	magnesium = Mg	manganese = Mn
meltnerium = Mt	mendelevium = Md	mercury = Hg	molybdenum = Mo	neodymium = Nd

3.0 RELIANCE ON OTHER EXPERTS

The MacArthur Copper Project, having been an operating mine for several years, has been the subject of numerous written reports. Many of these reports and other documents were prepared by mining consulting firms on behalf of the operators of the mine/property at the time. Tt has used a number of the references in the preparation of the mineral resource estimate detailed herein. The reports referenced have each been reviewed for materiality and accuracy, as they pertain to Quaterra's plans for property development. Specific experts, both internal to Tt and external, that had an important role in the preparation of this report include:

Dr. Stephen A. Krajewski

Dr. Krajewski graduated with Geography (B.S., 1964), Geology (M.S., 1971) and Earth Science (Ed.D., 1977) degrees from The Pennsylvania State University. He is a member of the American Institute of Professional Geologists (Member Number 4739), a member of the Society for Mining, Metallurgy, and Exploration, Inc. (SME), member of the American Association of Petroleum Geologists, and a member of the Rocky Mountain Association of Geologists.

Dr. Krajewski has utilized computers to map and model mineral deposits since 1983. His geologic career has included 42 years of domestic and international experience in the employ of major and junior mining industry companies, major and minor oil and gas companies, environmental consulting companies, a state geological survey, and universities.

Dr. Rex C. Bryan

Dr. Bryan graduated with a Mineral Economics Ph.D. from the Colorado School of Mines, Golden, Colorado, in 1980. He graduated in 1976 from Brown University, in Providence, Rhode Island, with a M.Sc. Geology, he also graduated from Michigan State University with a MBA (1973) and a BS in Engineering (1971). Dr. Bryan is a member of SME.

Dr. Bryan has worked as a geostatistical reserve analyst and mineral industry consultant for a total of 26 years since graduating from Colorado School of Mines. He is an expert witness to industry and for the U.S. Department of Justice on ore-grade control, reserves, and mine contamination issues. He is currently a consultant to the industry in mine valuation, ore reserve estimation, and environmental compliance.

Mr. George Eliopulos

Mr. Eliopulos graduated with a Geological Engineering M.S. from the University of Arizona, Tucson, Arizona, in 1974. He also graduated in 1972 with a Geological Engineering B.S. from the Colorado School of Mines, Golden, Colorado. He is a member of the Society of Economic Geologists (SEG), the Geological Society of Nevada (GSN), and is a Certified Professional Geologist, CPG-11010.

Mr. Eliopulos has worked as a mine geologist in an operating gold mine and has been engaged in mineral exploration for precious and base metals throughout the western US and for heavy mineral sands in the southeastern US since graduation from the University of Arizona. He currently consults to Quaterra for the exploration of the MacArthur project.

Mr. David Heatwole

Mr. Heatwole graduated from the University of Arizona, Tucson, Arizona in 1966 with an MS in Geology and in 1964 with a B.S. in Geological Engineering. The University of Arizona awarded him an honorary PE degree of Geological Engineer in 1970.

Mr. Heatwole worked for the Anaconda Company for 20 years as a geological engineer in exploration, development and production on assignments in the southwest US, Mexico, Chile, Nevada, and Alaska. After the acquisition of Anaconda by Atlantic Richfield he worked 7 years in executive positions involving oil production on Alaska's North Slope and petroleum exploration in the Soviet Far East

In 1992, Mr. Heatwole formed the Alaska Russia Investment Company and engaged in consulting activates for natural resource development and the sale of mining equipment to the Russian Far East. He currently consults to Quaterra regarding exploration of the MacArthur project.

Ms. Judy Pratt

Ms. Pratt graduated with a B.S. in Engineering Science, with a minor in Geology in 1975 from Colorado State University, Fort Collins, Colorado and is a member of SME.

Ms. Pratt has worked in mineral exploration since 1968 in various capacities, including landman, database administrator, project geologist and assistant regional exploration manager. Since 1994 she has primarily worked in developing 3D models of mineral deposits, resource evaluations, and reserve estimates for open pit operations. She is currently a full time employee of Quaterra.

Mr. Joe Inman

Mr. Inman graduated from the University of Utah in 1973 (M.Sc.) and has more than 30 years experience in mineral exploration and environmental studies. He has extensive experience and expertise in nearly all geophysical methods including magnetics, gravity, induced polarization/resistivity (IPR), electromagnetics including both time-domain EM and frequency-domain EM (CSAMT, MaxMin,), and radiometrics all in airborne, ground and downhole configurations. Recent experience and areas of interest include the application of seismic methods to mineral exploration as well as data inversion techniques of all geophysical data sets, including integrated earth modeling. Mr. Inman has been involved in all aspects of applying geophysics to exploration including survey design (technical specifications), data acquisition, contractor evaluation and selection, data processing and interpretation. He was a key member of the exploration teams that discovered the Crandon, Wisconsin, VMS deposit; and the A154 and Tli Kwi Cho kimberlite deposits, NWT, Canada. Most recently he provided and managed geophysics programs for the Western Silver team that explored and expanded the Penasquito, Mexico, discovery into a world-class silver-gold-lead-zinc deposit.

Prior to becoming a consulting geophysicist, Mr. Inman was Director of Technical Support and Services at Kennecott Exploration, responsible for ensuring Kennecott's geologists, geophysicists and data managers had knowledge of, access to and made best use of state-of-the-art exploration methods including geophysics, geochemistry, remote sensing and data/information management technologies. Mr. Inman is a member of the Society of Exploration Geophysicists and a registered professional geophysicist in the state of California.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The MacArthur Copper Property is located near the geographic center of Lyon County, Nevada, USA along the northeastern flank of the Singatse Range approximately seven miles northwest of the town of Yerington, Nevada (FIGURES 4-1 and 4-2). The property is accessible from Yerington by approximately five miles of paved roads and two miles of maintained gravel road. Topographic coverage is on US Geological Survey "Mason Butte" and "Lincoln Flat" 7.5' topographic quadrangles. The nearest major city is Reno, Nevada approximately 75 miles to the northwest.

4.2 Property Ownership

The property consists of 295 unpatented lode claims totaling approximately 5,970 acres on lands administered by the US Department of Interior - Bureau of Land Management (BLM) (FIGURE 4-3). The claims are held by Quaterra by means of a mineral lease with option to purchase, executed on August 27, 2005, followed by two amendments dated January 16, 2007 and August 6, 2007, with North. Quaterra has the right to purchase the claims from North by making a $2,405,000 payment by January 16, 2011 that will include advance payments of the royalty totaling $335,000 by January 15, 2011. Quaterra's purchase is subject to a two percent Net Smelter Return (NSR) royalty with a royalty buy down option of $1,000,000 to purchase one percent of the NSR, leaving a perpetual one percent NSR. The agreement with North Exploration is in good standing.

There are six unpatented claims interior to the MacArthur property which are not controlled by Quaterra. Quaterra is currently negotiating the lease, or purchase, of mineral rights for these claims from two separate owners.

4.3 Land Tenure

Quaterra's claims are located in sections 2 and 3, Township 13 North, Range 24 East; in sections 13, 14, 15, 22, 23, 24, 26, 27, 34, 35, and 36, Township 14 North, Range 24 East; and in sections 17, 18, 19, 20, 29, 30, and 31, Township 14 North, Range 25 East, Mount Diablo Base & Meridian. The claims were staked by placing a location monument (two- by two-inch wood post) along the center line of each claim and two- by two-inch wood posts at all four corners, with all posts properly identified in accordance with the rules and regulations of the BLM and the State of Nevada. Maximum dimension of unpatented lode claims is 600 feet x 1500 feet. The author observed various location monuments and claim corners during the field examination. No legal survey of the claims has been undertaken. Claim outlines and boundaries are displayed on FIGURES 4-2 and 4-3 and a complete listing of the claims with serial numbers is included in Appendix A.

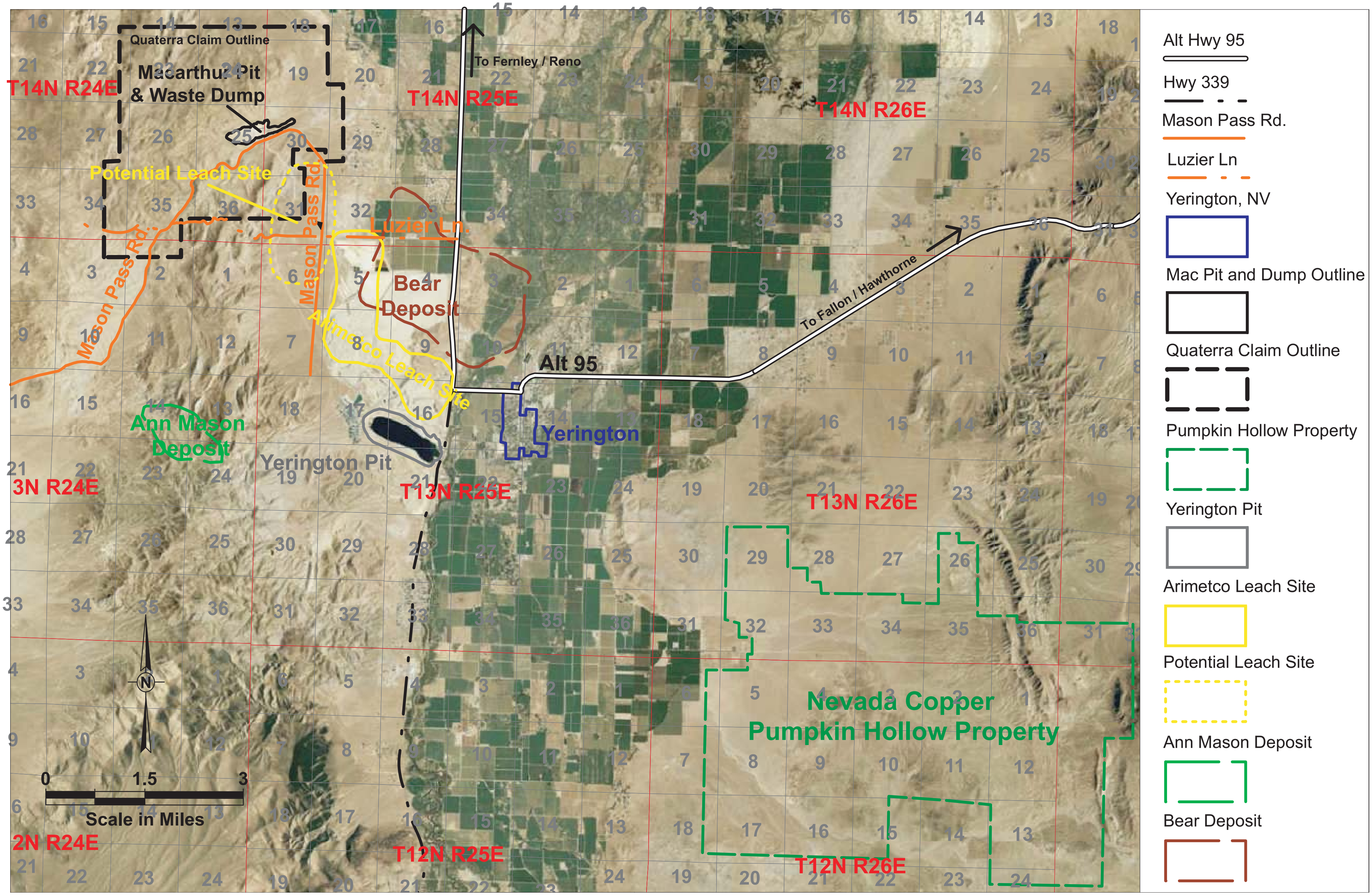
All unpatented lode-mining claims staked in the United States require a Federal annual maintenance fee of $125 each, due by 12:00 PM (noon) of September 1 of each year. Further, each lode claim staked in Nevada requires an Intent to Hold fee of $10.50 each, plus a $4.00 filing fee, due 60 days after September 1 of each year.

Quaterra's 2007-2008 core and reverse circulation exploration drilling programs were approved by the BLM at the Notice of Intent level supported by posting of a $37,075 bond (File Name: NVN-083324, 3809, (NV-033)). Quaterra has submitted and is currently awaiting BLM approval for a Plan of Operations / Environmental Assessment to expand the MacArthur exploration program beyond the Notice of Intent level.

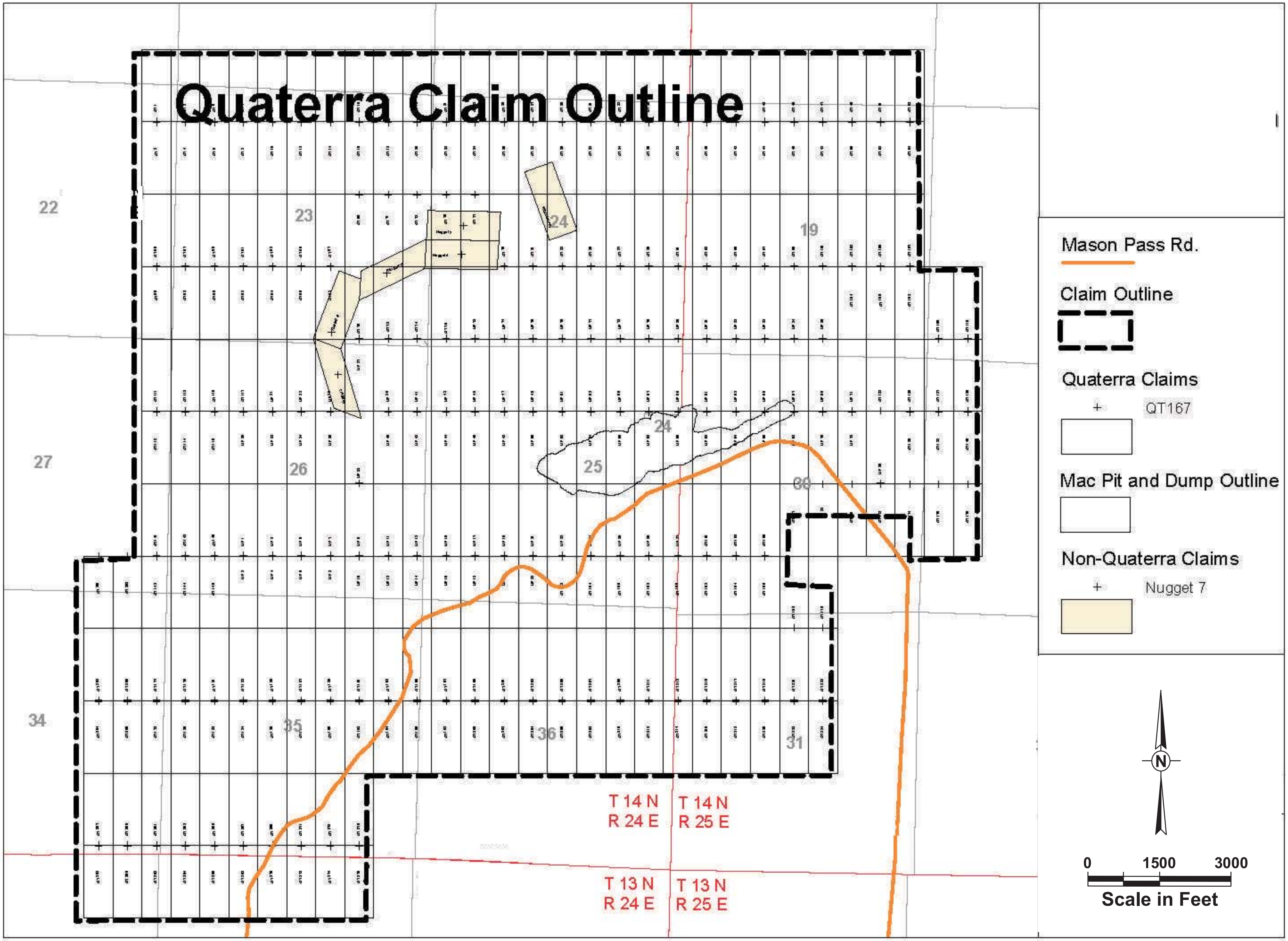
TETRA TECH
603 Park Point Drive, Suite 250
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Date of Issue.	Client Name.	
11/21/2008	**QUATERRA ALASKA INC.**	
Project No.		
114-310920	Project Name.	
Drawing File Name.	MacArthur Copper Property	
Fig4-1.cdr		

FIGURE 4-1
General Location Map
MacArthur Copper Project



Issued by:	Drawing Provided by/Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	Fig4-2.cdr	**Figure 4-2** **Regional Layout of the Yerington Area**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 12/01/2008	



Issued by:	Drawing Provided by/Prepared for:	File Name:
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	Fig4-3.cdr
	Project: MacArthur Copper Project	Project Number: 114-310920
	Project Location: Lyon County, Nevada	Date of Issue: 2/09/2009

Figure 4-3
Location of Quaterra Claims and Property Position

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Accessibility

Access to the property from the town of Yerington is approximately three miles north along US Highway ALT 95 to Luzier Lane, then west approximately two miles by pavement to the Mason Pass road, an improved gravel road leading two miles northerly to the property (FIGURE 4-2). Property entry is along a 100-foot wide gravel road that accessed the MacArthur open pit copper mine during the 1990s. Beyond the MacArthur pit area are several existing historic two-track dirt roads that provide access throughout the property.

5.2 Climate and Physiography

Elevations on the property range from 4,600 to 5,600 feet as low-rolling to moderately steep terrain sparsely covered by sagebrush and interspersed low profile desert shrubs. There are no active streams or springs on the property. All gulches that traverse the property are dry. The climate is temperate and is characterized by cool winters with temperatures between zero and 50 degrees Fahrenheit and warm to hot summers with temperatures between 50 and 100 degrees Fahrenheit. Average annual precipitation is estimated at three to eight inches per year, with a significant part of this total precipitation falling as snow and increasing with elevation. Work can be conducted throughout the year with only minor stoppage during winter months due to heavy snowfall or unsafe travel conditions when roads are particularly muddy.

5.3 Local Resources and Infrastructure

The nearest population center is the agricultural community of Yerington seven miles to the southeast along improved gravel roads and pavement. Formerly an active mining center from 1953 to 1978 when Anaconda operated the Yerington copper mine and from 1995 to 1997 when Arimetco operated the MacArthur oxide copper mine, Yerington now serves as a base for three active exploration groups: Quaterra Alaska Inc (MacArthur property), PacMag Metals Limited, Australia (Ann Mason copper-molybdenum property), and Nevada Copper Corporation (Pumpkin Hollow Copper Project) as displayed on FIGURE 4-2. Yerington hosts a work force active in, qualified for, or familiar with mining operations within a one-hour drive.

Yerington offers most necessities and amenities including police, hospital, groceries, fuel, regional airport, hardware, and other necessary items. One core drilling contractor is based in Yerington. Drilling supplies and assay laboratories can be found in Reno, a 1.5-hour drive. Reverse circulation drilling contractors are found in the Elko, Nevada area, a five-hour drive.

During the Arimetco operating period, leach ore mined from the MacArthur pit was trucked approximately five miles south to the former Anaconda Yerington mine site where leach pads (loaded on approved liners) were constructed on Yerington mine vat leach tailings. Options for oxide leach pad sites for the MacArthur project are on unpatented claims controlled by Quaterra toward the northeast portion of the claim block, or on privately-owned lands not controlled by Quaterra located on either side of the Mason Pass access road (sections 29, 30, 31, 32 T14N, R24E) (FIGURE 4-2). All sites are sufficient in size to accommodate potential plant sites, tailings and heap leach pad sites, and storage areas. Power is available within one mile of the MacArthur pit along the Mason Pass road, water within one mile from low-lying areas along the Walker River drainage basin to the east. Should the former Anaconda Yerington mine area be chosen, power and water supplies are currently active.

6.0 HISTORY

6.1 Property History

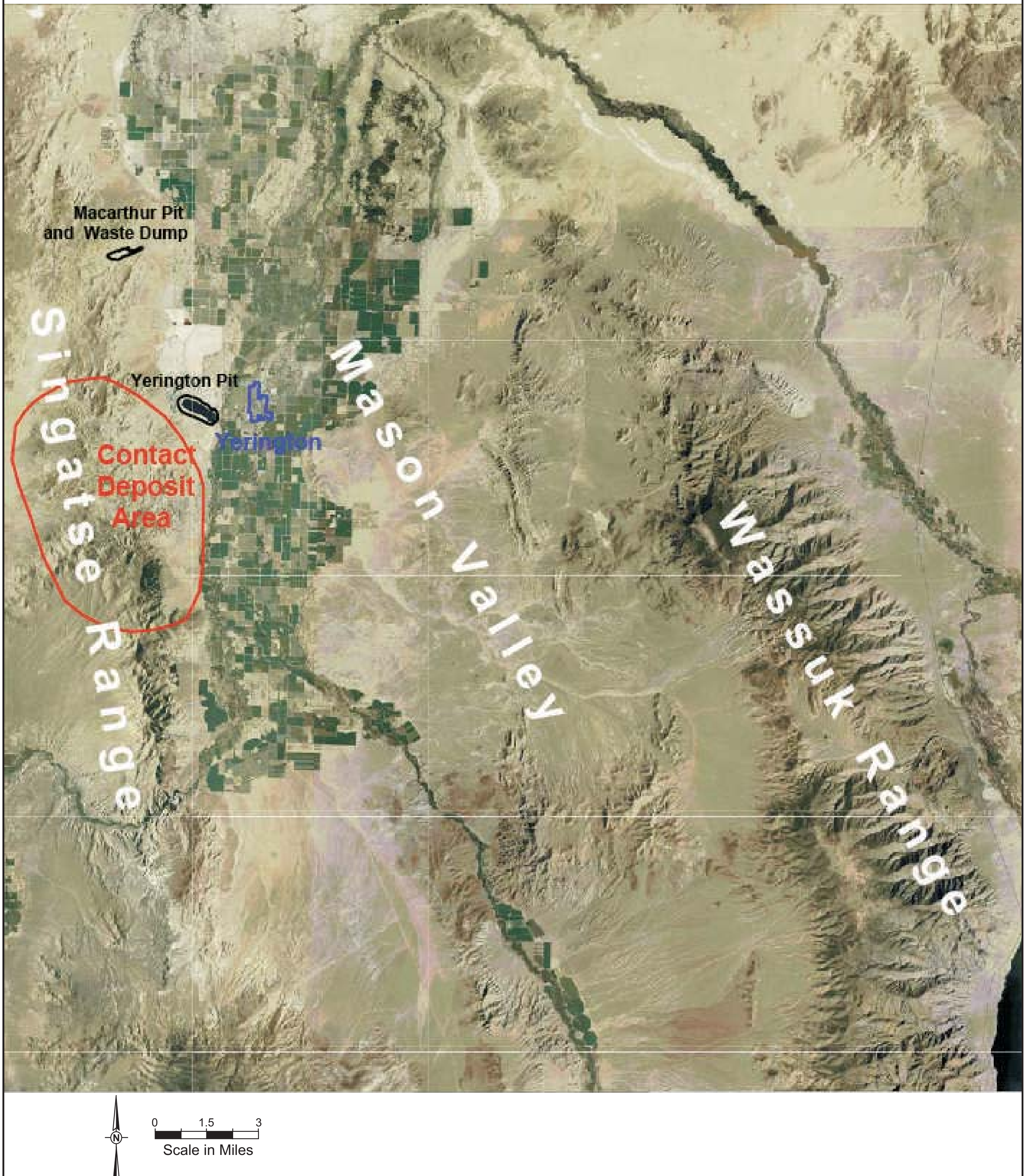
Following the early 1860s bonanza silver discoveries along the Comstock Lode in the Virginia City mining district, prospectors stepped out 30 miles to the southeast to investigate the colorful oxide copper showings along the Singatse Range within the present-day Yerington mining district (FIGURE 6-1). A majority of the early work (earliest recorded date of 1883) concentrated on contact-metamorphic replacement copper deposits hosted in limestone or limey sedimentary rocks clustered from four to six miles south-southwest of the MacArthur property (Moore, 1969). These contact copper deposits were mined on a small scale, shipping 2,000 to 1.7 million tons of copper ore. Most of this early activity took place before and during World War I. Tingley, et al (1993) estimate production from the Yerington district at over 85 million pounds of copper from 1905 to 1920 ostensibly with very little contribution from the shallow prospects of the MacArthur area.

Following the 1920s, only minor copper production is recorded from the contact replacement prospects and mines (Moore, 1969). The largest nearby operation, located in the Buckskin mining district approximately five miles northwest of the MacArthur property, was the Minnesota Mine. Originally, copper was mined in the early 1920s but sizeable production of skarn (contact) magnetite iron ore began in 1952 with approximately four million tons of ore produced by the end of 1966.

During the 1940s, Anaconda geologists investigated copper showings over the MacArthur property and conducted pre-development drilling over the present day Yerington Mine. US Government-funded strategic minerals exploration in the early 1950s supported Anaconda's initial development of the Yerington mine (fully funded by Anaconda following expiration of strategic minerals funding in the late 1950s). During 1953 to 1978, Anaconda produced 162 million tons of 0.55 percent Cu ore amounting to over one billion pounds of copper from a single open pit mine known as the Yerington Mine located five miles south of the MacArthur property (Tingley, et al, 1993). Oxide and sulfide copper ores, hosted in a Middle Jurassic porphyry system of granodiorite and quartz monzonite, were extracted from the Yerington Mine.

Anaconda and the US Bureau of Mines were two of several groups who conducted mineral exploration campaigns at the MacArthur property from the mid 1940s through the early 1970s. The most significant program was conducted in 1972 to 1973 by Anaconda following an extensive trenching and drilling program that resulted in a published 13 million tons of plus 0.4 percent Cu mineralization (Heatwole, 1978).

During the late 1980s, Arimetco permitted heap leaching sites on existing dumps at the Yerington mine site (historic Anaconda pit) with feed sourced from Yerington mine oxide stockpiles and vat leach tailings. Arimetco expanded their operations to include an approximate 5.5 million ton heap grading about 0.30 percent Cu mined from 1995 to 1997 from the present day MacArthur pit. Based on 1972 and 1973 Anaconda drilling, Arimetco published a non-NI 43-101 compliant reserve of 29 million tons of 0.28 percent Cu ore remaining in the planned MacArthur pit (MineMarket.com, 2000).



Issued by:	Drawing Provided by/Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	Fig6-1.cdr	**Figure 6-1** **Major Structural Features**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 11/24/2008	

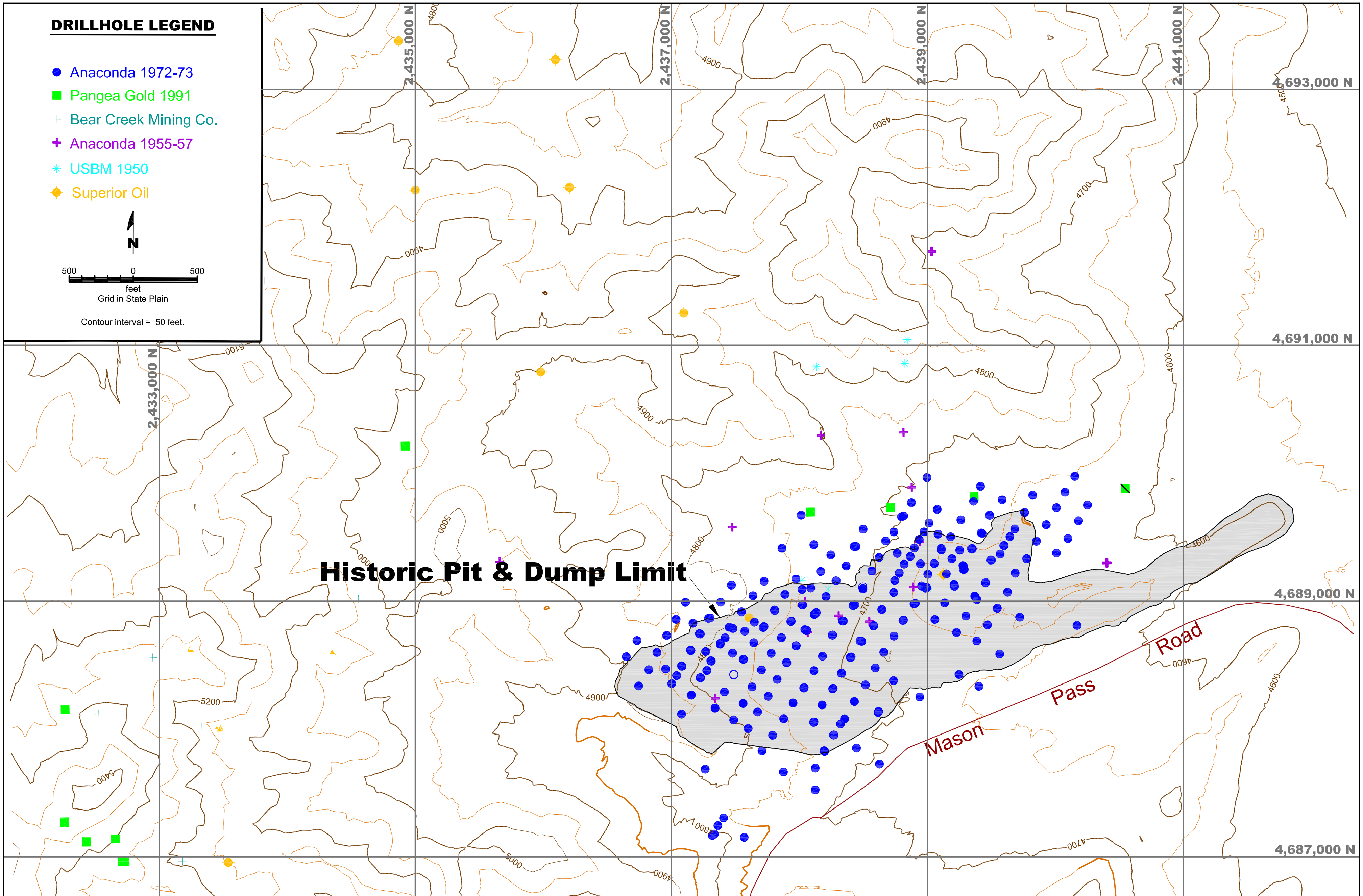
6.2 Exploration & Drilling History

Although the MacArthur area is dotted with numerous shallow pits and prospects, there is little available information. Over the history of the project, several operators have contributed to the current drillhole database of more than 300 holes. TABLE 6-1 summarizes the exploration history of the MacArthur area. FIGURE 6-2 shows the location of all historical drillholes.

TABLE 6-1: EXPLORATION DRILLING HISTORY
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Operator	Drill Program Date Range	Number of Holes Drilled	Feet Drilled
U.S. Bureau of Mines	1947-50	8	3,414
Anaconda Company	1955-57	14	3,690
Bear Creek Mining Company	1963-??	~14	Unknown
Superior Oil Company	1967-68	11	13,116
Anaconda Company	1972-73	280	55,809
Pangea Explorations, Inc.	1987-1991	15	2,110
Arimetco International, Inc.	Unknown	Unknown	Unknown
Total		**342**	**78,139**

During the late 1940s, Consolidated Copper Mines consolidated various claims into a single package that became known as MacArthur, and then attracted the interest of the US Bureau of Mines during their investigation and development of domestic mineral resources. The Bureau of Mines completed 7,680 feet of trenching in 1948 and followed up with eight diamond drillholes for 3,414 feet in 1950 (Matson, 1952). Five of the US Bureau of Mines' holes (#1-5) fall within the northern segment of the present day MacArthur open pit where green copper-stained croppings predominated TABLE 6-2. Holes #6-8 were collared in an area of widespread iron oxide staining approximately 2,000 feet north of the MacArthur pit. Oxide copper was intersected in the southern holes #1-5 whilst secondary, sooty, chalcocite enrichment was found in the northern holes #6-8. Following the US Bureau of Mines exploration and drilling, Consolidated Copper abandoned their claims.



Issued by:	Prepared for:	File Name:
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	DH-Maps.dwg
	Project: MacArthur Copper Project	Project Number: 114-310920
	Project Location: Lyon County, Nevada	Date of Issue: 02/09/2009

Figure 6-2
Location of Historic Drillholes

TABLE 6-2: U.S. BUREAU OF MINES 1947-1950 DRILLING HIGHLIGHTS QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009			
Hole ID	**Total Depth (ft)**	**Key Intercepts**	**Notes**
Hole 1	220	110+: 0.2%Cu	Bottomed in +0.2%Cu
Hole 2	556' (-45º)	509-556': 0.55	Bottomed in 0.55
Hole 3	428'	245-286': 0.40	
Hole 4	469' (-45º)	79-114': 0.82, ave 0.2+/-	Lost hole
Hole 5	510	291'+: 0.25; ave. 0.2+/-	Bottomed in 0.25
Hole 6	409'	241-303': 0.61. 303'+: ~0.15	Bottomed in 0.2
Hole 7	428'	262-297': 0.51	
Hole 8	394'	250-299': 0.36	Lost hole

During the middle 1950s, Anaconda, by then operating the Yerington Mine, acquired leases and began investigations at MacArthur including 33 shallow drillholes (only 11 exceeding 100 feet) during 1955, 1956, and 1957. Six Anaconda holes (#'s 12, 14-17, and 19) fall within the current MacArthur pit limits. Key interval assay results from the holes exceeding 100 feet in depth are shown in TABLE 6-3 (Anaconda Collection-American Heritage Center). Anaconda, likely searching for shallow oxide feed for their Yerington mine, abandoned the claims sometime after 1957.

TABLE 6-3: ANACONDA COMPANY 1955-1957 DRILLING HIGHLIGHTS QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009			
Hole ID	**Total Depth (ft)**	**Key Intercepts**	**Notes**
Mc 9	388'	153-188': 0.52% Cu	Bottomed in <0.1% Cu
Mc10	350	139-161': 0.44% Cu	Bottomed in 0.09% Cu
Mc 11	299'	144-178: 0.32% Cu	Bottomed in 0.2% Cu
Mc 12	471'	267-273: 1.0% Cu	
Mc 13	292'		Bottomed in <0.1% Cu
Mc 17	152'		Bottomed in 0.12% Cu
Mc 18	493'	306-380: 0.35% Cu	Bottomed in 0.13% Cu
Mc 19	347'	65-150: 0.22% Cu	Bottomed in 0.08% Cu
Mc 20	292'		Bottomed in 0.06% Cu
Mc 21	252'		Bottomed in 0.05% Cu
Mc 22	263'	235-245' 1.02% Cu	Bottomed in 0.15% Cu

In 1963, Bear Creek Mining Company (Bear Creek) optioned claims on the MacArthur property that included leases on the Gallagher area to the west (within Quaterra's current claim position) as well as staking additional claims. Bear Creek completed large-scale geologic mapping, rock chip (and float) grid sampling, alteration mapping, Induced Polarization/Resistivity (IPR) and audio magneto-telluric geophysical surveys, and drilled at least fourteen air rotary holes, the deepest to 663 feet. At least four holes for 1,237 feet were drilled to satisfy claim staking location work. Exploration drilling was targeted on limonite cappings and on IP anomalies. Bear Creek drilled north and west of the MacArthur pit boundaries, focusing most of their attention and drilling in the Gallagher area.

During 1967 to 1968, The Superior Oil Company (Superior) optioned the claims formerly held by Bear Creek and drilled eleven holes as rotary pre-collar, core finish, for 13,116 feet testing the concept that a deep primary sulfide-bearing porphyry copper ore shell might underlie the MacArthur oxide mineralization heretofore tested no deeper than 663 feet. Two of Superior's holes were collared along the current north margin of the MacArthur pit while the remainder fall within Quaterra's claim boundaries. Superior failed to meet objectives and abandoned the claims in the late 1960s.

During the early 1970s, with the Yerington mine nearing the end of its life, Anaconda acquired a land position and launched an extensive trenching and rotary drilling program (over 225 rotary holes for approximately 46,000 feet in 1972 and 55 rotary holes for approximately 9,809 feet in 1973) over and adjacent to the present day MacArthur pit. The result was a resource approaching 13 million tons of plus 0.4 percent TCu (1972 data only and not NI 43-101 compliant), described as an oxidized low-grade copper deposit which has been locally enriched by exotic copper (Heatwole, 1978). Anaconda's resource calculations were developed into the mine plan supporting the 5.5 million tons at 0.30 percent Cu mined from the MacArthur pit by Arimetco during 1995-1997. A discussion of Anaconda's drilling program with sampling protocol is presented in Appendix B.

During 1987 to 1991, Pangea located 304 unpatented lode claims and conducted an aggressive gold evaluation of the MacArthur area from the present day MacArthur pit westerly to the Gallagher area. Pangea's program included over 549 rock chip samples, geologic and alteration mapping, followed by trenching two target areas (Adams, 1987). Eight trenches for 1,420 were cut and sampled in the Gallagher area and four additional trenches for 720 located in an undefined "north target". TABLE 6-4 details some of Pangea's exploration drilling results. Anomalous gold values (41 samples exceeding 0.015 Au oz/ton) led to a 15-hole / 2,110-foot reverse circulation drilling program with 1,310 feet in seven holes testing the Gallagher area. Pangea found the drilling results discouraging (best assay value of 0.026 Au oz/ton over 5 feet) and abandoned the property thereafter.

TABLE 6-4: PANGEA EXPLORATION 1987-1991 DRILLING HIGHLIGHTS
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Hole ID	Interval (ft)	Interval Length (ft)	Gold Grade (Au oz/ton)
MAC 91-1	20-45	25	0.012
	165-175	10	0.013
MAC 91-2	100-110	10	0.012
	130-145	15	0.016
MAC 91-3	75-90	15	0.013
MAC 91-4	45-55	10	0.011
	145-155	10	0.015
MAC 91-5	90-100	10	0.011
MAC 91-6	85-95	10	0.021
	100-110	10	0.014
	85-110	25	0.014
MAC 91-7	5-15	10	0.015
	55-75	20	0.016
MAC 91-8	105-115	10	0.016
MAC 91-9	75-85	10	0.015
MAC 91-10	60-80	20	0.014
MAC 91-11	20-30	10	0.011

During the late 1980s through the late 1990s, Arimetco consolidated a major land position in the Yerington mining district consisting of over 8,500 acres including 85 patented claims. Arimetco entered the district to extract copper by heap leaching methods, with initial production from the Anaconda Yerington mine oxide stockpile and Yerington mine vat leach tailings. Arimetco's leach pads were located on the Yerington mine dump and tailings sites approximately five miles south of the MacArthur property. During evaluation and mining of the MacArthur mine, Arimetco drilled an unknown number of holes as a check on Anaconda's 1972 to 1973 drilling. Anaconda's drilling and resource calculations provided the mine planning data for Arimetco's MacArthur mine. Due to rising costs and depressed copper prices, Arimetco was forced to abandon their claim position and file for bankruptcy in 1999.

In 2004, North located unpatented claims covering portions of the MacArthur property and the MacArthur pit that were leased to Quaterra in 2005. Quaterra's current land position is displayed on FIGURE 4-2.

6.3 Historic Mining

The MacArthur project area has seen limited historic mining activity, and there is no indication of any historic, small-scale, artisanal mining activity. The most recent activity occurred between 1995 and 1997, when Arimetco mined a limited tonnage of surface oxide copper for heap leaching at the historic Yerington Mine site. No consistent, large-scale mining has occurred on the site.

6.4 Historic Metallurgical Testwork and Mineral Processing

The metallurgical testwork performed on material from the MacArthur property is dated and focused on leach performance of material typical of what was historically mined from the MacArthur pit. Anaconda, Bateman Engineering (Bateman), and Mountain States R&D International (Mountain States) have all performed various metallurgical testwork for the MacArthur property.

Anaconda completed bottle roll and vat leaching tests on crushed ore. Anticipated recoveries ranged from 82 to 85 percent of total copper while consuming 4 to 5 pounds acid per pound copper. Bateman ran 18 and 24-inch diameter 20-foot high column leach tests on run-of-mine ore and achieved 50 to 60 percent recovery of total copper while consuming 3 to 4 pounds acid per pound copper. Mountain States testing consisted of crushed un-treated ore and acid-cured ore column leach testing at 1.5 and 2.5 inch sizes. Mountain States estimated recoveries for the un-treated ore at approximately 70 percent of soluble copper at a 2.5 inch crushed ore size with only slightly better recovery at a 1.5 inch size. Acid consumption was approximately 3 pounds acid per pound copper. Recoveries for the acid-cured ore were increased by 5 to 10 percent, and the indicated acid consumption was reduced by approximately 1 pound acid per pound copper. Acid-cured ore also leached faster than the un-treated ore, with recovery times going from 30 to 60 days down to less than 30 days.

Historic production reports from both Anaconda and Arimetco indicate that there were some issues with leaching the copper from the oxidized ore. Specifically, these reports reference longer than expected leach times and lower than expected solution head grades. The extended leach times of Anaconda's studies are believed to be a function of caliche present in the surface samples and may not reflect the character of ore (later) exposed in the pit. Arimetco also began an investigation of this issue, which was thought to be attributed to crush size, but went into receivership before concluding the work. It is also possible that the extended leach times and low solution head grades are due to the presence of different copper minerals; specifically, chalcocite. In order to test this hypothesis, Tt selected 173 sample interval coarse rejects to be re-assayed using a sequential copper leach analytical procedure. The results of this re-assay program are discussed fully in SECTION 13-4.

7.0 GEOLOGICAL SETTING

7.1 Regional Geologic Setting

The MacArthur project area is located within the western Basin and Range Province in Nevada on the east side of the Sierra Nevada Mountains. Within the Basin and Range, north trending normal faults have down-dropped basins on either side of upland ranges. In a similar setting in Lyon County, Nevada, the Singatse Range and Wassuk Range form the western and eastern boundaries, respectively, of the Mason Valley. The MacArthur property, in the Yerington mining district, is located in the west-central portion of the Mason Valley.

The regional geology is displayed on FIGURE 7-1 (Proffett and Dilles, 1984). The oldest rocks in the Yerington area of Mason Valley are an approximate 4,000-foot section of Late Triassic, intermediate and felsic metavolcanics and lesser sedimentary rocks, the McConnell Canyon Formation, associated with volcanic arc development along the North American continent during the Mesozoic.

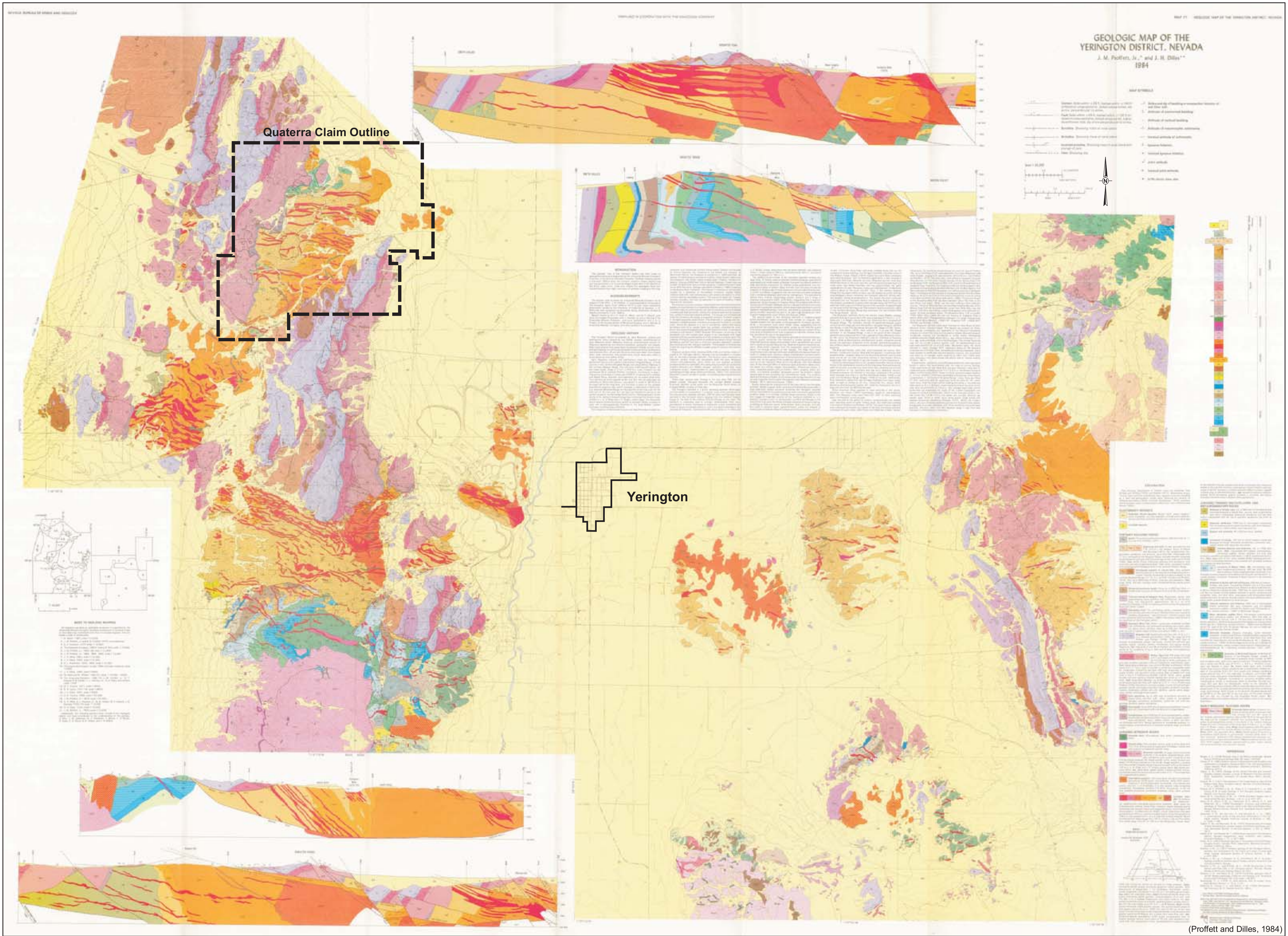
This sequence is disconformably overlain by a series of Upper Triassic carbonates, clastic sediments, and volcaniclastics that are in turn overlain by the Norian Limestone, a massive limestone nearly 1,000 feet thick. During the Upper Triassic – Lower Jurassic, a section of limestones, clastic sediments, tuffs, and argillites, in part correlative with the Gardnerville Formation, were deposited. The Ludwig Limestone, containing gypsum, sandstone, and arkose, overlies the Gardnerville Formation.

Mesozoic plutonism, possibly related to the igneous activity that formed the Sierra Nevada Mountains, followed during the Middle Jurassic with emplacement of the Yerington batholith of granodioritic composition and the Bear batholith of quartz monzonitic composition. Mesozoic plutonism, emplaced approximately 169 Ma (Proffett and Dilles, 1984), was closely followed by Middle Jurassic quartz monzonite porphyry dikes and dike swarms. Andesite dikes represent the final phase of Mesozoic igneous activity.

Mesozoic rocks were deeply eroded and then overlain by Mid-Tertiary tuffs and lesser sedimentary rocks. Coarser grained andesite dikes are tabbed as Tertiary. The entire package was subsequently faulted along north-trending, down-to-the-east dipping faults that resulted in extension and major westerly tilting.

7.2 Local Geology

The MacArthur Copper Property is one of several copper deposits and occurrences hosted in Middle Jurassic intrusive rocks within the Yerington Mining District, Lyon County, Nevada. The Yerington area is underlain by early Mesozoic volcanic and sedimentary rocks now exposed along uplands in the Singatse Range in the west and the Wassuk Range to the east. These Mesozoic rocks were intruded by two Middle Jurassic batholiths, an older granodiorite (Yerington Batholith) and younger quartz monzonite (Bear Quartz Monzonite) that comprise the majority of outcropping rocks in the district. These batholiths were themselves intruded by another Middle Jurassic quartz monzonite event moderately to steeply north dipping quartz-biotite-hornblende porphyry dike swarms, associated with copper mineralization, striking north-northwesterly across the entire mining district.



(Proffett and Dilles, 1984)

Issued by:	Drawing Provided by/Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	Fig7-1.cdr	**Figure 7-1 Regional Geology Map Yerington District, Nevada**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 12/01/2008	

Early to middle Tertiary volcanics followed, including older basalts and abundant ash flow tuffs, now exposed in the upland ranges.

During advent of Basin and Range normal faulting, ca 18-17 Ma, this entire package of rocks was down-dropped to the east along northerly striking, east dipping, low-angle faults that flatten at depth creating an estimated 2.5 miles of west to east dilation-displacement (Proffett and Dilles, 1984). Such extension rotated the section such that the near vertically-emplaced batholiths were tilted westerly to an almost horizontal position. Pre-tilt, flat-lying younger volcanics now crop out as steeply west dipping units in the Singatse Range west of the MacArthur property. Easterly extension thus created a present-day surface that actually represents a cross-section of the geology as it was when it was originally emplaced.

7.3 Property Geology

The MacArthur property is underlain by Middle Jurassic batholiths, granodiorite intruded by quartz monzonite both of which are intruded by Middle Jurassic quartz porphyry hornblende and quartz porphyry biotite (hornblende) dike swarms. The steeply north dipping porphyry dike swarms follow a penetrative north-northwest (S60°E to S80°E) structural fabric. Narrow (<10 feet) fine grained andesite dikes, post porphyry diking, follow the same NNW structural fabric.

Older granodiorite weathers as an irregularly orange stained, medium olive green, fine to medium grained rock underlying most of the northern and western parts of Quaterra's claim block. Greenish epidote and minor orange limonite staining are present to common. Megascopic rock constituents include ~50 percent plagioclase, ~20 percent orthoclase, <20 percent quartz, 5 to 20 percent mafics (hornblende), 1 to 10 percent epidote, (and minor magnetite and other opaques) overprinted by irregular orange limonite alteration.

The quartz monzonite, cropping out along the east part of the claim block and underlying the MacArthur pit, is beige to light gray to off white, fine to medium grained, hard but well-fractured, with minor textural variants. Megascopic constituents include ~30 percent orthoclase, ~30 percent plagioclase, ~ 20 percent quartz, and 5 to 10 percent hornblende. In bench walls at the MacArthur Pit, quartz monzonite hosts conspicuous light brown limonite alteration banding (averaging 4 to 6 per foot) sub-parallel to the steeply north dipping, west-northwest trending quartz porphyry dikes. Along the eastern portions of the property, including the eastern third of the MacArthur pit, quartz monzonite assumes a light gray color due to widespread sodic-calcic alteration.

A phase referred to as the "border-phase quartz monzonite" commonly lies at the contact between the granodiorite and the quartz monzonite. The border-phase quartz monzonite is finer-grained than the quartz monzonite and has more abundant potassium feldspar. The border-phase may represent a contact zone between the quartz monzonite and granodiorite or may represent another Middle Jurassic intrusive event.

Quartz porphyry dikes intrude both granodiorite and quartz monzonite at the MacArthur property and are recognized in dike swarms regionally throughout the Yerington mining district. Quartz porphyry dikes hosted a large portion of the primary copper mineralization at Anaconda's Yerington mine and are associated with all copper occurrences in the district. Not all porphyry dikes host copper mineralization, be it sulfide or oxide. At the MacArthur property, porphyry dikes strike west-northwesterly, dipping steeply north, typically as ridge-formers with widths to 50 feet. Porphyry dikes at MacArthur are classified by dominate mafic minerals into quartz biotite porphyry and quartz hornblende porphyry, each subdivided further based on composition and alteration. Dikes contain feldspar crystals and either hornblende or biotite crystals set in an aphanitic matrix. MacArthur pit walls offer excellent exposures of the dikes that host (fracture-controlled) oxide copper mineralization. The following descriptions originate from Quaterra's surface mapping and from core and chip logging:

- Quartz biotite porphyry: contains 2 to 4 mm, generally euhedral, blackish biotite "books" (5 to 10 percent) and 2 to 8 mm cloudy quartz phenocrysts ("quartz eyes") 2 to 5 percent. Hornblende is rare to absent. Feldspars commonly 3 to 5 mm. May host sulfide or oxide copper. May or may not have indigenous limonite. If hornblende is present and altered to secondary biotite, the dike is mapped as QMph-2, otherwise mapped as QMph-1.
- Quartz hornblende porphyry: contains acicular hornblende crystals, typically thin, "needle-like" to 5 mm long, feldspars vary from 2 to 5 mm. Variety QMph-1 contains 1-5 percent sulfide (mostly pyrite) with or without indigenous limonite and 3-5 percent quartz phenocrysts (2 to 5 mm). Variety QMph-2 contains 2-3 percent sulfides (common) and must have indigenous glass (resinous) limonite derived from primary oxidized chalcopyrite, contains oxide copper, and quartz phenocrysts (2-5 mm) present to 2-5 percent. Variety QMph-3 commonly contains large (to 10 mm) epidote "splotches" (phenocrysts) with 0 percent to trace, fine grained (~1 mm) quartz phenocrysts, no to trace sulfides. Any oxide copper is transported and not oxidized from the porphyry itself.

The best exposures of Jurassic age andesite dikes are found in the walls of the MacArthur Pit where the typically soft- to medium-hard, recessive, olive-greenish dikes can be traced from bench to bench, projected across the pit floors. Andesite dikes are commonly very fine grained, dactylitic plagioclase-bearing porphyries that pinch and swell as they fill fractures. Fist-sized pillows may be a weathering product. Andesite dikes intrude the hornblende and biotite quartz porphyry dikes, again best exposed in MacArthur pit walls.

Tertiary hornblende andesite dikes have also been identified on the MacArthur property. These dikes are similar, but coarser grained than the Jurassic andesite dikes, containing abundant, acicular, black hornblende phenocrysts and occasionally plagioclase phenocrysts up to 5-10 mm in long dimension.

The Mesozoic intrusive rocks are unconformably overlain by a series of nine Mid-Tertiary ash flow tuff units. Quaterra's claims partly cover one of the units, the Guild Mine Member, a crystal rich ash flow tuff dated at 27.1 to 25.1 Ma (Proffett and Proffett, 1976).

The dominant north-northwest (S60°E to S80°E) structural fabric recognized throughout the Yerington District is manifested at the MacArthur property as porphyry dike swarms and as high angle shears, faults, and joints along which andesite dikes developed. Structure played a key role in localizing copper oxide mineralization around the historic pit area, principally along the north-northwest fabric and, secondarily, along generally orthogonal northeast structure bearing N20°E to N40°E.

The MacArthur fault, a low angle, easterly striking, north dipping, normal fault is the largest structure recognized on Quaterra's claims. The hanging wall of the fault displaces the basal unit of the Tertiary ignimbrite sequence approximately 2,000 feet to the east. The displacement of Jurassic intrusives as defined by the offset of the contact of the border quartz monzonite with granodiorite is on the order of 4,000 feet to the east. The MacArthur fault is one of few faults in the Yerington district known to have been active in both Jurassic and Tertiary time.

Chalcocite/oxide mineralization has a close spatial relation to the trace of the MacArthur fault north and west of the MacArthur pit. Gouge in the fault frequently contains chalcocite and/or copper oxide. Much of the copper mineralization associated with the fault is due to enhanced permeability of the fault zone to supergene fluids. However, it is possible that the fault was a locus for vein-type primary mineralization associated with the Jurassic intrusives.

7.3.1 ALTERATION

Alteration types recognized at the MacArthur property represent those found in mineralized porphyry copper systems. A generalized distribution of the MacArthur alteration types is displayed in FIGURE 7-2. The following descriptions are derived from field observation and from drill core and chip logging.

7.3.1.1 Propylitic

Propylitic alteration is common throughout the MacArthur property in the granodiorite, quartz monzonite, quartz monzonite porphyries, and in the Jurassic andesite. This alteration type occurs as chlorite replacing hornblende, but seldom more than 50 percent of hornblende sites. Feldspar and biotite sites are commonly unaltered and fresh. No other characteristic minerals associated with propylitic alteration have been identified. Propylitic alteration frequently overprints or occurs with the alteration types described below.

7.3.1.2 Quartz-Sericite-Pyrite (QSP)

Quartz-Sericite-Pyrite alteration is most frequently characterized by tan sericite partially or completely replacing hornblende and/or biotite sites. When QSP alteration becomes more intense, plagioclase and/or K-feldspar sites are also replaced by sericite. Maroon limonite, hematite, and trace sulfide (chalcocite, pyrite, and chalcopyrite) accompany sericite in QSP alteration; however, these minerals do not replace mafic or felsic sites.

QSP alteration is most pervasive and intense in the Gallagher area and in the northeastern part of the deposit, around hole QM-072. Weak and less pervasive QSP alteration is found just west of the MacArthur pit and in limited areas around the MacArthur fault. The alteration type does not show preference with rock type and has been described in the granodiorite, quartz monzonite, and quartz monzonite porphyries.

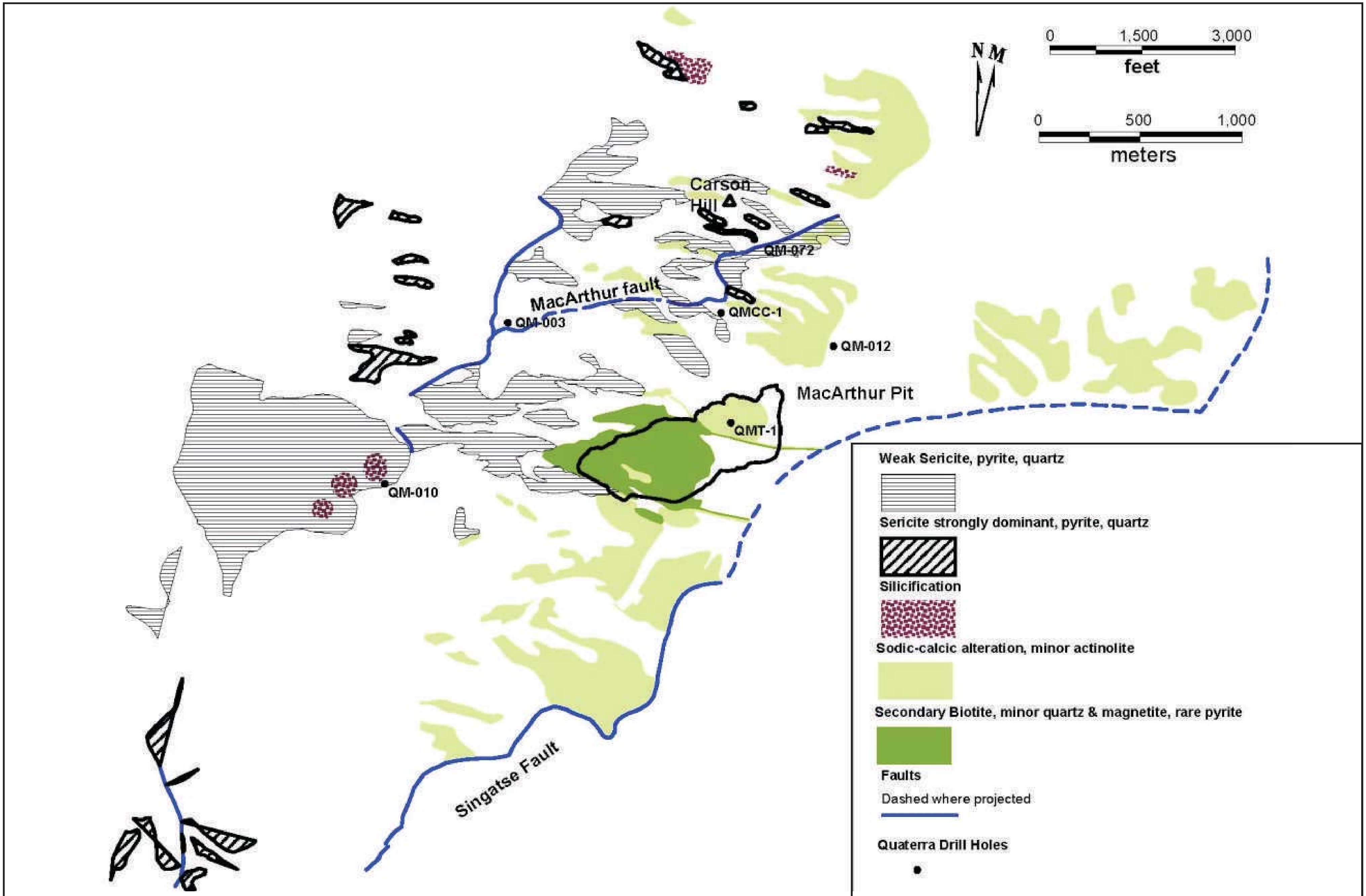
7.3.1.3 Potassic Alteration

Potassic alteration occurs as shreddy, fine-grained biotite replacing hornblende. The biotite is occasionally accompanied by magnetite within the hornblende site. K-feldspar replacing plagioclase is rarely identified. However, K-feldspar does occasionally replace plagioclase in vein haloes.

Potassic alteration is most obvious in the western and central areas of the MacArthur pit. However, there is occasional biotite replacing hornblende in the northwestern and western portions of the MacArthur property, but is usually less than 20 percent. This alteration type has been identified in the granodiorite, quartz monzonite, and quartz monzonite porphyries.

7.3.1.4 Sodic-Calcic Alteration

Sodic-calcic alteration has been identified in the far northeastern portion of the district and south of the MacArthur pit. This type of alteration most frequently occurs as albite replacing K-feldspar and chlorite replacing hornblende in the quartz monzonite, however, has also been identified in the granodiorite and quartz monzonite porphyries. Epidote staining and phenocrysts as well as sphene crystals are ubiquitous. Actinolite replaces hornblende in the more intense zones of sodic-calcic alteration the eastern portion of the MacArthur pit and east into the albite hills.



Issued by:	Drawing Provided by/Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	***QUATERRA ALASKA, INC.***	Fig7-2.cdr	**Figure 7-2** **Generalized Alteration Types**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2008	

7.3.1.5 Silicification

Silicification occurs as a wholesale replacement of the rock, but only occurs as small and irregular zones that are less than 200 feet across. Silicification is present in the western portion of the district, around the Gallagher area and as isolated occurrences within the MacArthur pit.

7.3.1.6 Multiple alteration types

Multiple alteration types are common throughout the area and tend to occur together. Shreddy chlorite has been identified in the MacArthur pit, which likely represents propylitic alteration overprinting potassic alteration. Zones of QSP and propylitic alteration have been identified between the Gallagher area and the MacArthur pit.

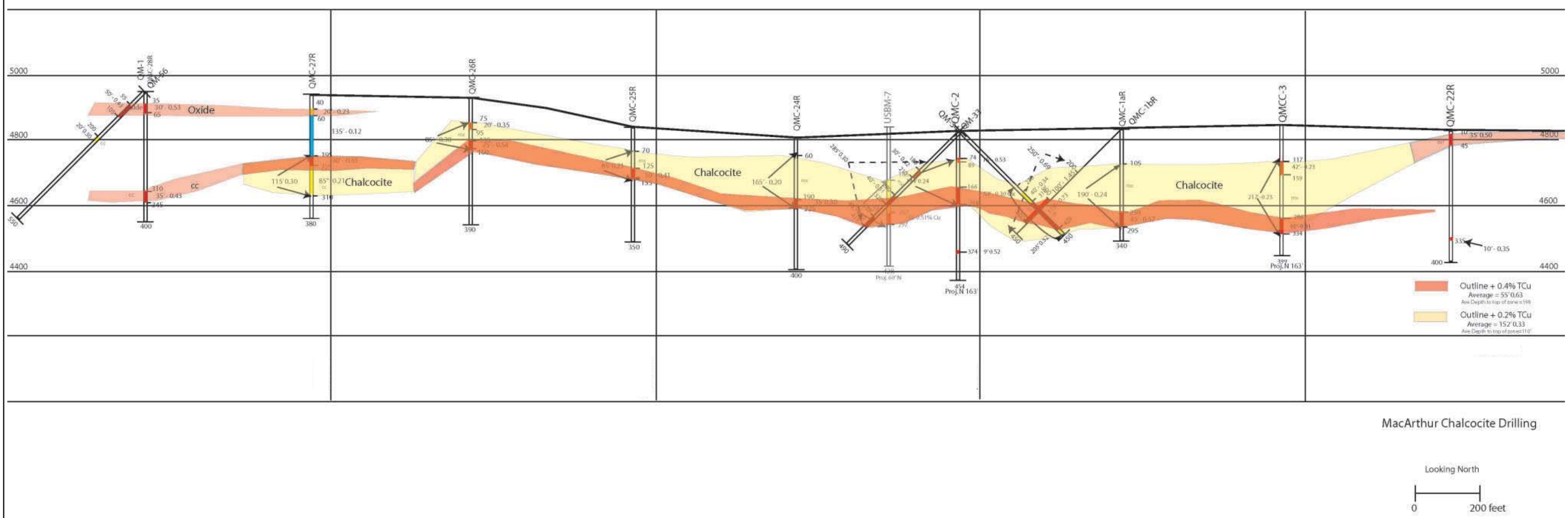
8.0 DEPOSIT TYPES

The MacArthur project contains an outcropping copper oxide deposit. Anaconda described the deposit (from pre-mining drilling data) as "an oxidized low grade porphyry copper deposit which has been locally enriched by exotic copper" (Heatwole, 1978). Although the MacArthur porphyry copper system likely developed in near-vertical geometry, regional studies by Proffett and Dilles (1984) suggest the MacArthur area, from its original vertical position, is now tilted westerly and extended to the east so that the map view is actually a cross sectional representation.

The structural complexity of the region has generated considerable debate as to the formation of the deposit geometry. Copper oxide mineralization at the MacArthur property is believed to have been remobilized from the in-place oxidation of a now eroded primary sulfide copper ore shell of the porphyry system located west of the MacArthur property. The hydraulic gradient was such that copper followed fractures to deposit exotic copper, in an irregular flat-lying shape, in the area presently being explored as the MacArthur property. Further, mixed with, and below the oxide mineralization, chalcocite (Cu_2S), a secondary copper sulfide mineral, developed as a flat, tabular "blanket" up to 50 feet thick possibly as a second cycle leaching of an earlier formed chalcocite blanket. Predominantly below, but commonly mixed with chalcocite mineralization, drilling has intersected primary copper sulfide mineralization as chalcopyrite ($CuFeS_2$) over drill thicknesses up to 100 feet. Typical drillhole cross sections displaying oxide and secondary chalcocite with or without primary chalcopyrite mineralization are displayed in FIGURE 8-1 and FIGURE 8-2.

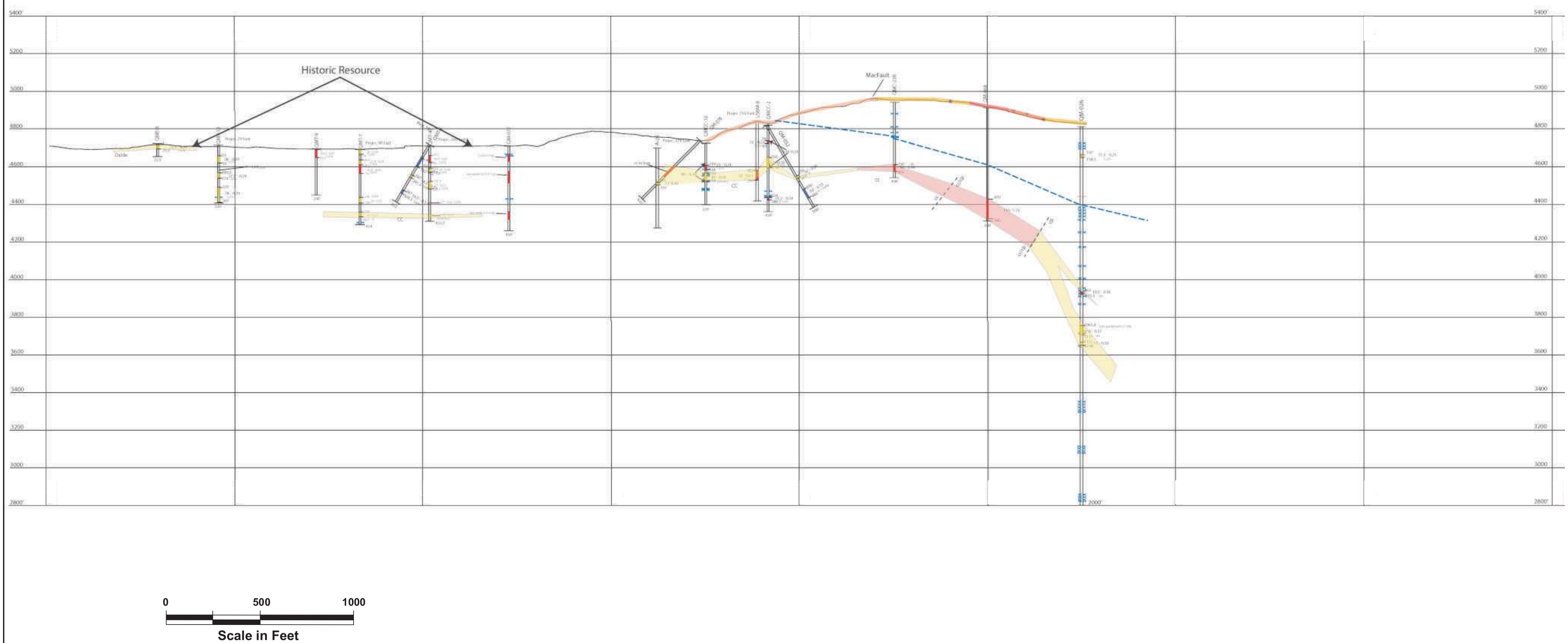
An alternative that remains in discussion is that the deposit has a more classic origin with supergene chalcocite mineralization having developed from first cycle of leaching of a primary sulfide copper ore shell. Under this scenario, supergene enrichment of primary sulfides within a porphyry copper system would form an enriched chalcocite blanket above the contact with the chalcopyrite mineralized protore. Weathering and oxidation of the chalcocite blanket produced an upper zone of oxide copper and limited lateral migration of copper produced by the fracture controlled mineralization now exposed in the MacArthur pit.

Regardless of the nature of deposition and extent of remobilization, copper mineralization has been identified across nearly the entire area investigated by Quaterra's drilling program and gives every indication of extending well beyond. As currently defined by drilling, the mineralization covers an area approximately 1.5 square miles based on drillholes spaced at 500 feet outside of the MacArthur pit and at approximately 150 feet within the pit.



0 200 400 Scale in Feet	Issued by: TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	Drawing Provided by/Prepared for: *QUATERRA ALASKA, INC.*	File Name: Fig8-1.cdr
		Project: MacArthur Copper Project	Project Number: 114-310920
		Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009

Figure 8-1
2007-2008 Chalcocite & Oxide Drilling
Section 4,691,000N (Looking North)



Issued by:

TETRA TECH
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Drawing Provided by/Prepared for:
QUATERRA ALASKA, INC.

Project: MacArthur Copper Project

Project Location: Lyon County, Nevada

File Name: Fig8-2.cdr

Project Number: 114-310920

Date of Issue: 02/09/2009

Figure 8-2
2007-2008 Chalcocite & Oxide Drilling
Section 2,438,324E (Looking West)

9.0 MINERALIZATION

Copper mineralization on the MacArthur property is hosted in both granodiorite and quartz monzonite, and within quartz biotite-hornblende (monzonite) porphyry dikes all of middle Jurassic age. Oxide copper is also hosted in northwest striking andesite dikes zero to ten feet wide with contacts as favorable loci for mineralization. Andesite dikes make up less than approximately one to two percent of the host rocks on the property. Fracturing and ground preparation supplied the passage ways for the copper to migrate as exotic mineralization.

Copper oxide minerals are particularly well exposed in MacArthur pit walls and include green and greenish-blue chrysocolla ($CuSiO_3.2H_20$) with minor malachite ($Cu_2(OH_2)CO_3$), azurite ($Cu_3(OH_2)(CO_3)$) and black neotocite, aka copper wad (Cu,Fe,Mn)SiO_2 whilst tenorite (CuO) was identified with the electron microprobe (Schmidt, 1996). Copper-enriched limonite was identified by Anaconda as containing delafossite ($CuFeO_2$). The sulfides diginite (Cu_9S_5) and covellite (CuS) were identified petrographically in drill cuttings from the western part of the property.

The oxide copper mineralization is strongly fracture controlled along joint and fracture surfaces and within shears and faults. Both green and black copper oxides are frequently found on 1-5 millimeter fractures, as coating and selvages and may be mixed with limonite. The fractures trend overall N60°W to N80°W (bearing 300° to 280° azimuth) and generally dip to the north. Limited turquoise is found on the property, mainly in one- to five-millimeter veinlets. On a minor scale, oxide copper mineralization replaces feldspar phenocrysts in the igneous host units, favoring andesite.

A significant amount of chalcocite has been intersected in drillholes. Chalcocite is seen on drill chips coating pyrite and chalcopyrite as weak to strong coatings and is strongest when pooled around the MacArthur fault. Chalcopyrite is present as disseminations and veinlets, with or without chalcocite. As much of the historic drilling was stopped at shallow (<400 foot) depths, the scope and extent of chalcopyrite mineralization has not been fully defined. Hole QM-040, drilled at the western end of the northern most section of drillholes intercepted a drilled thickness of 260 feet of predominantly chalcocite mineralization (with moderate amounts of chalcocite coating chalcopyrite) below the MacArthur fault averaging 0.38 percent TCu at a depth of 140 feet, including 20 feet assaying 1.48 percent TCu. The hole bottomed in mineralization at a total depth of 400 feet.

Both copper oxide and chalcocite mineralization occur over approximately 9,000 feet east-west by 4,500 feet north-south. Copper oxides are structurally controlled coating fractures, joint surfaces, and developed as green or black "streaks" within shears and faults over several feet. Oxide mineralization occurs as a general, flat-lying geometry extending down as much as 150 feet or deeper below surface. Chalcocite mineralization forms a flat-lying blanket, up to 50 feet thick, mixed with and below oxide mineralization.

Primary chalcopyrite mineralization occurs irregularly with chalcocite and as porphyry style disseminations or as veinlets in quartz monzonite below both the oxide and chalcocite mineralization where it is associated with potassic alteration. Quaterra's drilling program in the Gallagher area has delineated a zone of chalcopyrite mineralization that extends over a north-south distance of 2,500 feet. The primary sulfide zone has a defined width of 500 feet and extends to a depth of approximately 650 feet.

Chalcopyrite mineralization has also been identified north of the pit in association with pervasive sericite and magnetite in quartz monzonite. The chalcopyrite mineralized zone (partially enriched with chalcocite) in hole QM-068 averages 1.15 percent TCu over a drilled thickness of

115 feet at a depth of 470 feet. The zone is believed to have the potential of developing down-dip to the north toward a possible porphyry center at depth.

10.0 EXPLORATION

Starting in April 2007 and continuing through October 2008, Quaterra completed an extensive reverse circulation and core drilling program. The results of this exploration drilling, coupled with 1972-1973 Anaconda drilling at the present day MacArthur deposit, form the basis for the mineral resource presented in this document.

There are three different mineralization zones encountered at MacArthur. All three mineralization zones: oxide, mixed chalcocite/oxide, and primary sulfide, are targets whose size can be increased by additional drilling and exploration.

10.1 Oxide Zone Exploration

The historic MacArthur oxide resource is open in all directions, but is somewhat limited to the north. The south extents of the Anaconda N30°E cross sections, which run across the resource, commonly end with drillholes containing 0.2 to 0.3 percent Total Copper (TCu). The oxide resource to the west is limited on its north side but open on the south. Additional drilling is expected to expand this resource.

Quaterra holes QME-79 & -80 drilled approximately 1,500 feet from the southeast limit of the historic resource both encountered intercepts of greater than 0.3 percent TCu oxide mineralization. The connection of these intercepts to the historic oxide resource area forms targets for additional exploration drilling.

10.2 Chalcocite/Oxide Zone Exploration

The chalcocite/oxide mineralization remains open for expansion to the west, north and south of Quaterra's recent drill grid. Quaterra drillhole QM-067, the southern-most drillhole in the center of the grid, intercepted 30 feet of 0.58 percent TCu. Drillholes QM-058 and QM-060 in the northwest corner of the grid showed intervals of 135 feet of 0.42 percent TCu and 50 feet of 0.80 percent TCu, respectively. In addition, Quaterra's recent twin drilling in the MacArthur pit has shown the chalcocite/oxide blanket occurs beneath the historic oxide resource, as well. Additional drilling is also expected to expand this resource.

10.3 Primary Sulfide Zone Exploration

Primary, porphyry-style copper mineralization has been encountered in both the Gallagher area and in a porphyry dike system some 2,500 feet north of the existing pit area. The northern area presents an attractive target for a porphyry copper center.

In the Gallagher area, hole QM-010 intercepted 60 feet of 0.73 percent TCu including 15 feet of 2.46 percent TCu at a depth of 470 feet. A second mineralized zone at 575 feet assayed 0.40 percent copper over 50 feet, including 20 feet of 0.79 percent TCu. The mineralization in both intercepts occurs as disseminations and veins of chalcopyrite in quartz monzonite. The copper zone includes scattered anomalous gold values up to 370 ppb.

Quaterra's drilling program along the northern margins of copper oxide deposit, north of the MacArthur pit encountered high grade primary copper mineralization (partially enriched with chalcocite) at a depth of 470 feet. Hole QM-068 intercepted 115 feet averaging 1.15 percent TCu at a depth of 470 feet. A similar section of mineralization in QM-070 (500 feet east of QM-068) averaged 1.02 percent TCu over a thickness of 45 feet at a depth of 435 feet. Together with mineralized intercepts in QM-072, (500 feet east of QM-070) which cut 15 feet of 1.2 percent TCu, the results point to a possible porphyry center in the foot wall of the MacArthur fault where it is "blind" except for a small patch of pervasive sericite alteration exposed on the surface immediately south of holes QM-070 and QM-072. The source of this porphyry type mineralization has not been determined. Additional detailed surface mapping, computer modelling, and geophysical surveys will determine additional areas for drill testing.

10.4 GEOPHYSICS

10.4.1 Aeromagnetic Data

In November 2007, Quaterra contracted EDCON-PRJ to conduct a high-resolution, helicopter-borne aeromagnetic survey over a portion of the Yerington mining district including the MacArthur Copper Project. The survey was designed and conducted such that historic aeromagnetic surveys conducted on behalf of Anaconda could be merged with the new data. The historic surveys were recovered from the Anaconda Archive collection maintained by the American Heritage Center, University of Wyoming. EDCON-PRJ digitized the historic survey data from the paper maps, as no digital data was available for those surveys.

The new high-resolution survey consisted of north-south flown lines with a line spacing of 100 m, except in some areas where greater spatial resolution was deemed necessary the line spacing was 50 m. The MacArthur project area was included in the 50m line-spacing flight block. A total of 2,685 miles of new data was acquired and 4,732 miles of historic data was digitized from the paper maps, resulting in an aeromagnetic data set consisting of 7,417 line-miles of data covering an area exceeding 1,000 sq. miles, encompassing the entire Yerington mining district.

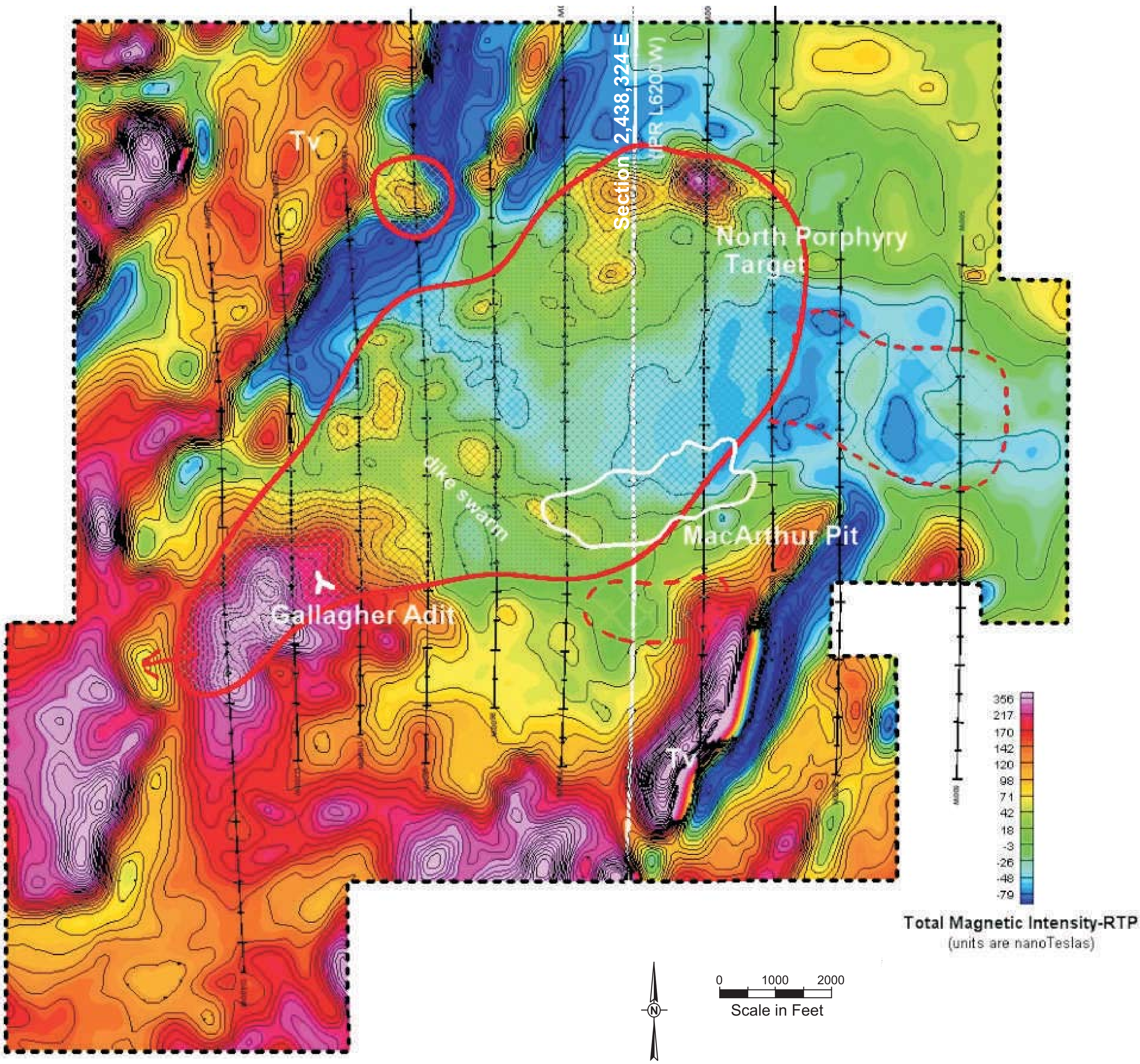
EDCON-PRJ began survey operations on December 14, 2007, and delivered the final product on January 23, 2008, including both the digitized historic survey data and merged data.

FIGURE 10-1 is a color image with contours of the Total Magnetic Intensity – Reduced to Pole. The units are nano-Teslas (nTeslas), formerly and more commonly known as "gammas". "Reduced to pole" is a procedure that transforms the magnetic data so that it appears as if the survey was done at the North magnetic pole; i.e. the Earth's magnetic field is vertical. The result of this transformation shifts the magnetic anomalies such that they are directly over the magnetic body causing the anomaly. Generally there is no loss of spatial resolution with this procedure. The reduction-to-pole transformation was performed using an inclination of 63.06 degrees and declination of 14.4 degrees for the Earth's magnetic field in the Yerington, Nevada area at the time of the survey.

10.4.2 Aeromagnetic Interpretation

FIGURE 10-1 illustrates several interesting features that correlate to the geology, alteration and mineralization at MacArthur. The magnetic field in the MacArthur area, and much of the Yerington Mining District, is dominated by intense highs and lows caused by Tertiary volcanic rocks. At MacArthur the northwest quarter of the claim block and the southeast corner contain highly magnetic volcanic units. These areas are denoted in the figure by "Tv".

The area between the two Tertiary volcanic "fronts" contains the altered and mineralized MacArthur hydrothermal system. This zone is approximately 3 miles long, NE-SW and 2 miles wide, NW-SE. Alteration, favorable Jurassic dikes, and mineralization extend to the edges of Tertiary volcanic rocks, and likely continue under the post-ore 'cover' in some areas. This motivated Quaterra to acquire a high-resolution aeromagnetic data set and to fund on-going interpretation of this data to look at targets covered by the highly magnetic volcanic rocks.



Issued by:	Drawing Provided by/Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	*QUATERRA ALASKA, INC.*	Fig10-1.cdr	**Figure 10-1** **Magnetic Field and Anomalous IP Zones Within Quaterra Claims Boundaries**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 02/09/2009	

Data interpretation is currently underway, including a 3-dimensional computer model which will yield a subsurface distribution of magnetic susceptibility. The first draft model for the MacArthur area has been completed and is currently under evaluation. It has been built with a voxel size of 164 feet (50 m) by 164 feet (50 m) horizontally and 82 feet (25m) vertically, providing a detailed view of the magnetic bodies below the MacArthur area.

Further discussion of the features in the magnetic data of FIGURE 10-1 will be discussed in combination with the other data sets discussed below.

10.4.3 Induced Polarization and Resistivity Data (IPR)

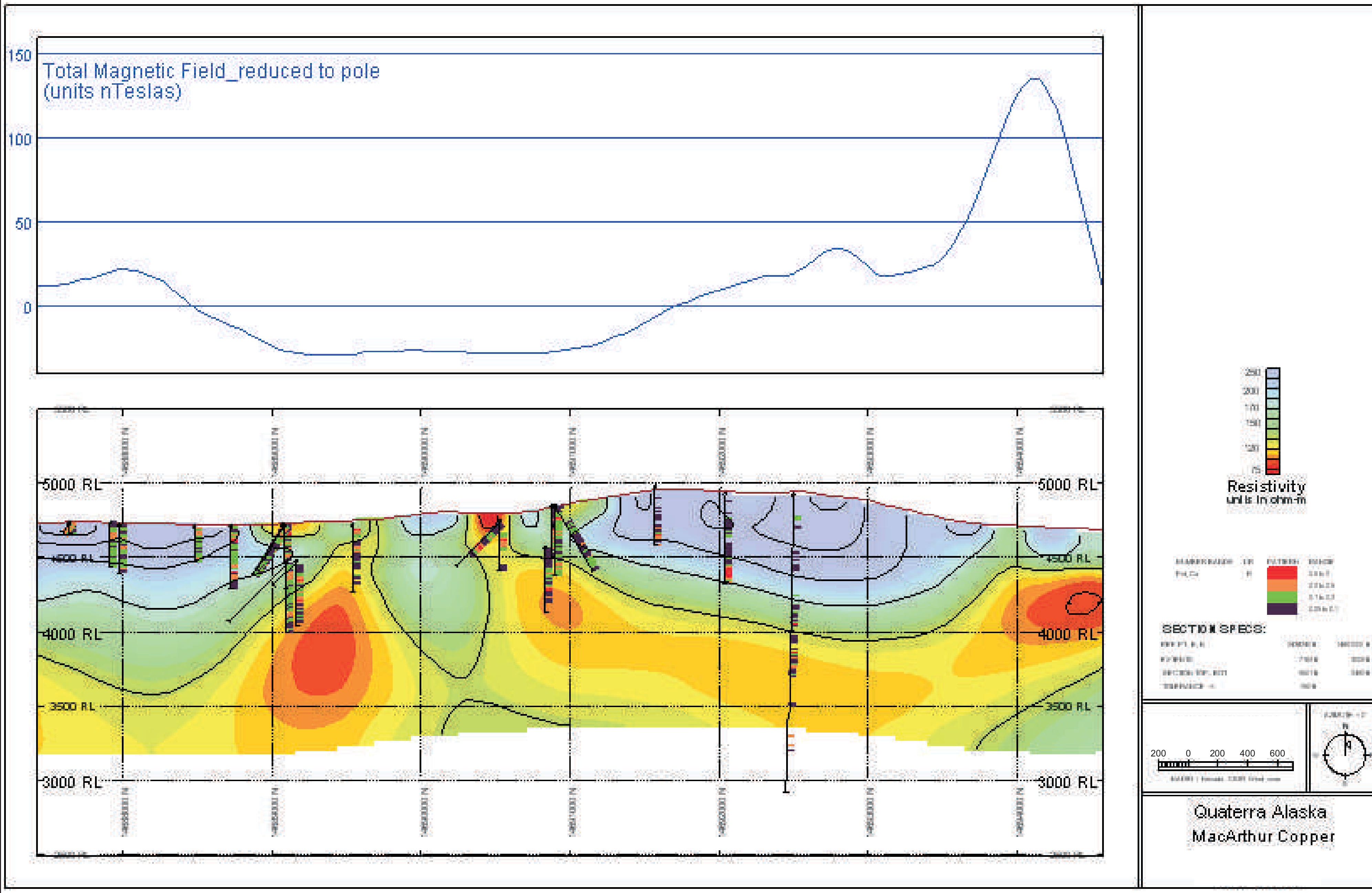
Also shown in FIGURE 10-1 are the lines of an IPR survey conducted in the period 1963-64 by Kennecott Exploration Services (KES) on behalf of their sister company, Bear Creek. KES collected 11 lines of IPR data using the dipole-dipole array, with a dipole size of 500 feet and dipole separations from N=1 to 6, which resulted in an effective “depth of investigation” of approximately 1,000 feet below ground surface. The furthest west line was run with a dipole size of 1,000 feet, resulting in a depth of investigation exceeding 1,500 feet below surface.

The KES survey was conducted in the early days of exploration for disseminated sulfide mineralization with IPR. However, judging by the consistency of the data of overlapping stations and the coincidence with primary metallic sulfides in the drill holes which were drilled sufficiently deep to intersect IP anomalies, the MacArthur data set looks to be of good quality. Since the early days of applying IPR surveys in the search for porphyry copper mineral deposits, a great deal has been learned and many advances achieved in equipment, processing and interpretation. High quality IPR surveys have been shown to be capable of sensing and mapping metallic sulfide concentrations of pyrite and/or chalcopyrite as low as 1-2 percent by volume. A significant volume of rock containing 3-5 percent pyrite/chalcopyrite will most likely result in an IP anomaly exceeding 30-40 milliradians response whereas 7-10 percent metallic sulfides will result in anomalies exceeding 75 milliradians. (Nelson and Van Voorhis, 1983)

Significant value can be added to the interpretation of data from modern surveys as well as historic IPR surveys. Computers algorithms have been developed that can “invert” the IPR data. Inversion algorithms digitally create a subsurface model populated by cubes with specific physical properties, which in the case of IPR data are IP phase and resistivity. As noted by Nelson and Van Voorhis, these physical properties can be transformed to weight per-cent metallic sulfides.

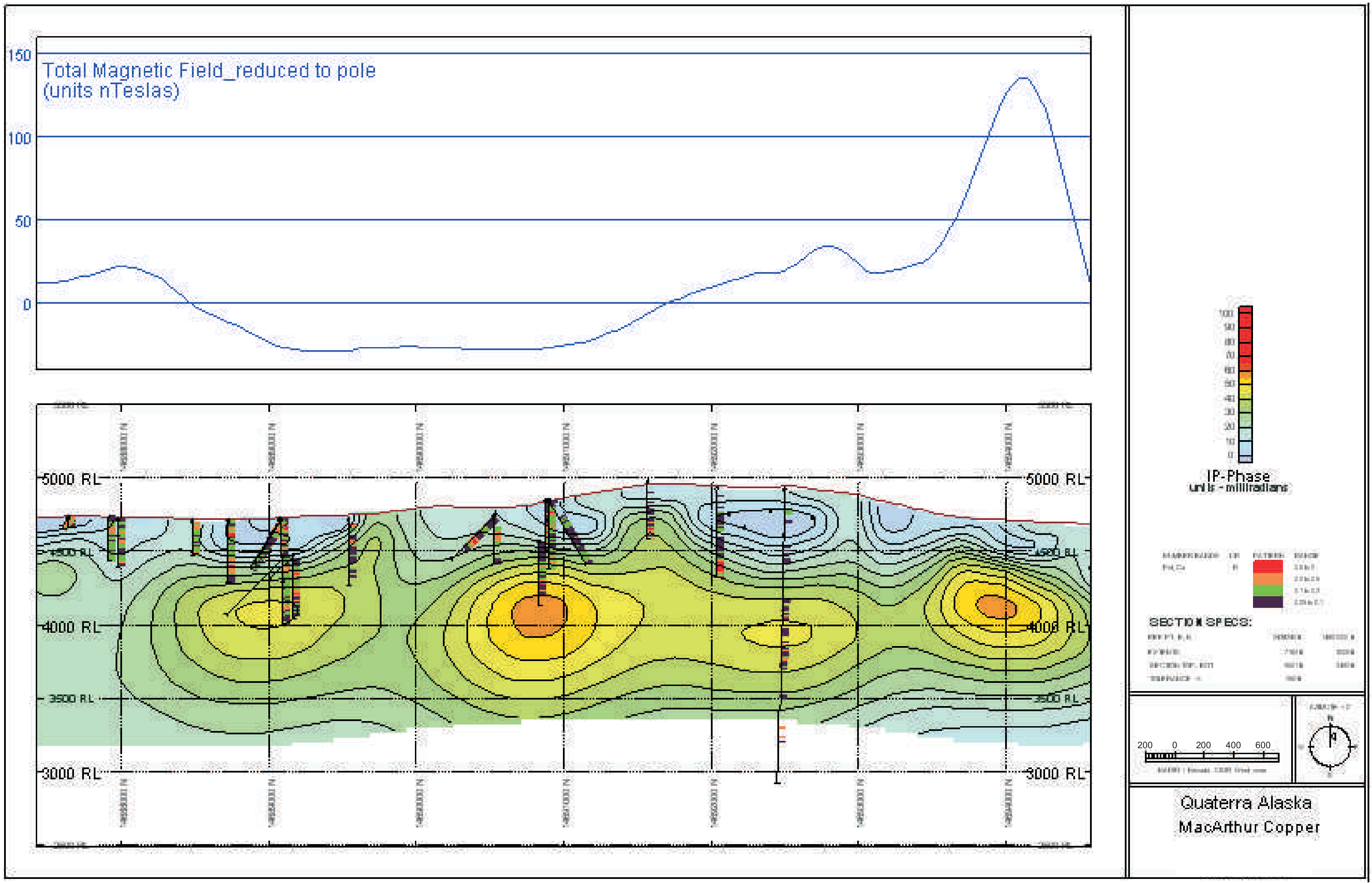
The result of applying a 2-dimensional inversion algorithm to the IPR data at MacArthur collected on Line L6200W (shown on FIGURE 10-1) is shown in FIGURES 10-2 and 10-3, which are cross sections of resistivity and IP response, respectively. These sections correlate with mineralization in section 2,438,324E (FIGURE 8-2). Both cross-sections show the subsurface distribution of resistive and IP properties in a color and contour presentation trimmed to topography and in true elevation. Since the introduction of these techniques in the late 1980’s and early 1990’s, targeting drill holes to test specific anomalies has been greatly enhanced. It is important to note that the horizontal layer of anomalous response, particularly the IP response in Figure 10-3, is more apparent than real. The explanation for this being that the base of this anomalous response is likely not resolved by the IPR survey using 500 foot dipoles. It is more likely that the response continues to greater depths in some areas.

The distribution of anomalous IP response can be seen in FIGURE 10-1. The areas of fine cross-hatching with a solid red perimeter are areas of moderate to strongly anomalous IP response. The areas bound with a dashed red line and larger cross-hatching are weakly anomalous. As can been seen in this figure, there is a large area of anomalous response indicating strongly altered rock containing at least 3-5 percent metallic sulfides is present.



Issued by:	Drawing Provided by/Prepared for:	File Name:
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	Fig10-2.cdr
	Project: MacArthur Copper Project	Project Number: 114-310920
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009

Figure 10-2
Section 2,438,324 E - 2D Inversion
(State Plane, Nad83)



Issued by:

TETRA TECH
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Drawing Provided by/Prepared for:	File Name:
QUATERRA ALASKA, INC.	Fig10-3.cdr
Project: MacArthur Copper Project	Project Number: 114-310920
Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009

Figure 10-3
Section 2,438,324 E - 2D Inversion
(State Plane, Nad83)

Most of the anomalous response begins at a depth of 500 feet below surface, which in the MacArthur area is typically 4,500 feet in elevation.

10.4.4 Gallagher Area

Referring to FIGURE 10-1, the Gallagher Adit is located on the northeast edge of a large magnetic high. There are no Tertiary volcanic rocks coincident with this feature. The IPR survey also indicates that a moderately anomalous source for this anomaly occurs at a depth of approximately 1,000 feet below surface. Limited deep drilling in this area intersected a zone of primary chalcopyrite (QM-046 and QM-049). The strongest part of the anomaly remains untested and the anomaly extends beyond the IPR survey coverage to the southwest.

10.4.5 MacArthur Pit and West

Northeast of the Gallagher is a large area of subdued magnetic response in the central portion of Quaterra's claim block. This area includes the MacArthur pit as well as the area northwest and north of the pit, extending more than 8,000 feet NW-SE and 3,500 feet NE-SW. In general, it is an area of subdued topography where much of the oxide and mixed oxide/chalcocite has been delineated. The magnetic response is due partially to the intense leaching of the near surface rocks that resulted in the formation of the oxide copper and chalcocite zones.

Much of this central area falls within a large region of moderate to strong IP anomalies (FIGURE 10-1). Section 2,438,324E (FIGURE 10-2 and FIGURE 10-3) show the resistivity and IP response of a portion of this area on the south half of the section. This IP and resistivity response extracted from line L6200W, shown in white in FIGURE 10-1, has been pasted into the drill section for Section 2,438,324E. The response in this area is typical of the response on many of the other IPR lines that cross the region extending at least 5,000 feet to the west and at least 2,000 feet to the east. The top surface of the stronger IP anomalies in this area occurs at an elevation of 4,500 feet, and at a depth below surface of 200-300 feet. Many of these zones of anomalous IP response have not been significantly tested with deeper drilling since the initial focus has been to delineate and extend the oxide copper/chalcocite mineralized zone. Some of the holes drilled above the IP anomalies had significant chalcocite and chalcopyrite near the bottom of these holes. Future drilling efforts will test these targets.

10.4.6 North Porphyry Target

Northeast from the area of oxide copper/chalcocite mineralization (including the MacArthur pit) is a topographically higher area, that includes Carson Hill, which is similar to the Gallagher area in that the leaching is less intense. This area is referred to as the North Porphyry target area and is characterized by a magnetic anomaly with a relatively moderate amplitude of approximately 30 nTeslas or more and spatial dimensions of 4,500 feet NE-SW by 3,000 feet NW-SE. Within this broad magnetic high are at least three distinct magnetic anomalies that generally exceed 100 nT. One of these features, shown in FIGURE 10-1, occurs at the north edge of the broader feature, trends generally E-W for a distance exceeding 3,000 feet, and is coincident in part with one of the favorable quartz porphyry dikes. In FIGURES 10-2 and 10-3, this anomaly is the 100 nT magnetic anomaly on the north end of the section (right side). This is a compelling target by any standard. Both the IP and resistivity sections indicate coincident IP and low resistivity anomalies coincident with the magnetic anomaly. IPR lines east and west of section 2,438,324E indicate this magnetic feature has coincident anomalous IP response. The nearest Quaterra drillhole to this target is more than 1,500 feet to the south. This hole, QM-026 shown in FIGURES 10-2 and 10-3, encountered a zone of chalcopyrite within the center of the anomalous IP zone at a depth of approximate 900 feet.

There are two other magnetic anomalies within the broader North Porphyry magnetic high. One of the magnetic highs falls due west of hole QM-026 but lies between the IPR lines so it is not known whether there is an IP response associated with this magnetic high. However, it falls in line with the quartz monzonite porphyry dikes and since there is an anomaly on the line L6200W (Section 2,438,324E) and on IPR line L7400W to the west, it is reasonable to assume the IP anomaly tested by QM-026 may increase in strength to the west. The other magnetic anomaly occurs near the southwest edge of the magnetic high and is coincident with a strong IP anomaly. It is interesting to note that the deeper IP anomaly coincident with the magnetic anomaly is the downdip portion of a strong, near-surface, IP anomaly that is SSE of the magnetic anomaly. A number of angle holes were drilled from this site including holes QM-058, QM-059 and QM-060. Hole QM-060 intercepted strongly mineralized zones consisting of chalcocite and chalcopyrite and was mineralized over its entire length. Abundant magnetite was also reported near the bottom of this hole. Yet, it appears the IP anomaly remains untested downdip where it is larger and stronger. Several deep drill tests are warranted in this area.

10.4.7 Summary

The current geophysical interpretation supports the mineralization presently identified on the MacArthur project. It also indicates that there is potential for growth of the deposit though additional drilling. High magnetic anomalies located at the southwest and northeast margins of the drill-investigated areas present attractive targets for the discovery of primary sulfide mineralization. The North Porphyry Target to the northeast is further substantiated by both coincident IP and low resistivity anomalies. Limited drilling near both the North Porphyry Target and in the Gallagher Prospect Area to the southwest have intersected significant widths of chalcopyrite mineralization. The strongest portions of both anomalies remain untested, as does a large area of subdued magnetic response, due partially to the intense leaching of the near surface rocks in the central portion of Quaterra's claim block that falls within a region of moderate to strong IP anomalies.

11.0 DRILLING

From April 2007 through October 2008, Quaterra completed an extensive drilling program of 80,136.6 feet in 173 holes including 23,921.6 feet of core over 49 holes and 56,215 feet of reverse circulation drilling over 124 holes. Quaterra's initial objective was to verify and expand the MacArthur oxide resource, as defined by the 1972 -1973 Anaconda drilling. Taking into account minor secondary chalcocite intersected in the few Anaconda drillholes that reached depths greater than 300 feet, Quaterra successfully targeted a deeper chalcocite zone in step-out holes from the pit. The program expanded the oxide mineralization, and encountered a large, underlying tabular blanket of mixed oxide-chalcocite mineralization that remains open for extension by additional drilling to the north, west and south of the MacArthur pit. Quaterra's deeper drillholes testing the western and northern margins of the chalcocite mineralization encountered primary copper sulfide mineralization below the chalcocite blanket. All three modes of mineralization were targeted throughout the remainder of the drilling program.

Quaterra's drillhole information is listed in APPENDIX C. Drillhole locations are shown on FIGURE 11-1.

TABLE 11-1: QUATERRA 2007-2008 DRILLING HIGHLIGHTS
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
QM-010	0º/-90º	870	480.0	495.0	15	2.46
QM-046	15º/-50º	1,502	1283.0	1300.0	17	2.27
QM-042	0º/-45º	400	210.0	225.0	15	2.26
QM-048	270º/-60º	1,000	660.0	680.0	20	2.17
QMC-23R	0º/-90º	400	340.0	355.0	15	1.97
QMT-7	0º/-90º	424	77.3	93.2	15.9	1.77
QMC-1bR	270º/-45º	450	300.0	395.0	95	1.56
QM-033	270º/-45º	490	405.0	415.0	10	1.53
QM-060	270º/-45º	400	140.0	160.0	20	1.48
QM-068	0º/-90º	600	485.0	580.0	95	1.36

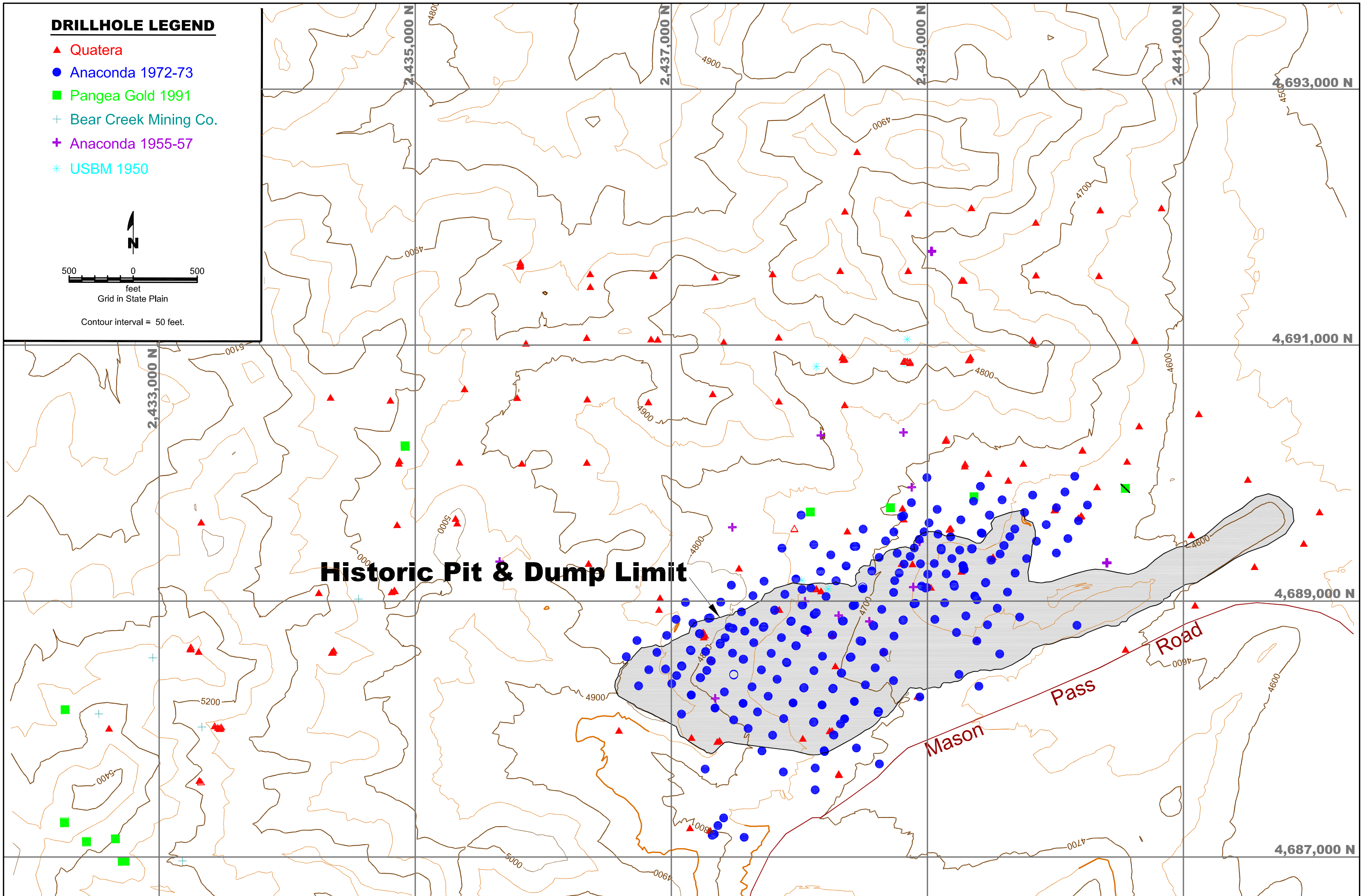
11.1 Surveying Drillhole Collars

During 2007 and into 2008, Quaterra's drillhole coordinates and elevations were surveyed with hand-held GPS. In order to determine firm and precise drillhole coordinates and elevations, Quaterra commissioned Telesto Nevada Inc. (Telesto), Reno, Nevada, to conduct a real time kinematics GPS survey of drillhole locations and elevations in June 2008. Telesto surveyed a total of 104 drillholes in the Nevada State Plane Coordinate System West Zone and the NAVD88 Vertical Datum. Selected bench profiles in the MacArthur pit and various claims corners were also surveyed by Telesto at this time. Telesto used Nevada Department of Transportation (NDOT) benchmarks as control points.

Quaterra then compared Telesto-surveyed coordinates with a more sophisticated in-house GPS unit, a Trimble XHT put into use in June 2008. Quaterra's Trimble check of the NDOT control points and of several drillhole coordinates matched Telesto within 6 to 10 inches and within one to three feet in elevation. Therefore, with the positive correlation between the Trimble and the Telesto numbers, all Quaterra drillholes thereafter were surveyed with the Trimble.

11.2 Downhole Surveys

All core holes and a small portion (deepest intervals) of the reverse circulation drillholes were downhole surveyed. Twenty-four core holes were surveyed with a Sperry Sun Single Shot tool by the drill crew upon completion of the hole. The instrument was rented from International Directional Services (IDS), Elko, Nevada USA. The downhole survey method was changed in 2008 to a Surface Recording Gyro operated by IDS personnel for six core and eight reverse circulation holes.



Issued by:

TETRA TECH
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Prepared for: **QUATERRA ALASKA, INC.**	File Name: DH-Maps.dwg	
Project: MacArthur Copper Project	Project Number: 114-310920	
Project Location: Lyon County, Nevada	Date of Issue: 02/09/2009	

Figure 11-1
Drillhole Location Map

12.0 SAMPLING METHOD AND APPROACH

12.1 Sample Method and Details

Quaterra is exploring the MacArthur property with both reverse circulation (RC) and diamond core drilling methods. Diversified Drilling LLC, Missoula, Montana, USA has drilled all reverse circulation holes. The core drilling was contracted to Kirkness Diamond Drilling of Dayton, Nevada, USA and Kirkness Brothers Diamond Drilling (aka KB Drilling Co, Inc) of Carson City, Nevada, USA. The RC crews ran one 10-12 hour shift per day; Kirkness Diamond Drilling and Kirkness Brothers Diamond Drilling ran 24 hours per day.

Total RC and core footage drilled amounts to 80,136.6 feet in 173 holes comprised of 49 core holes for 23,921.6 feet and 124 RC holes for 56,215 feet. Over 15,000 samples were taken from these drillholes to assay for copper and gold, calculate rock quality designation (RQD), measure bulk density, and support planned metallurgical testing. The total area covered by the drilling is approximately 9,000 feet east-west by 4,500 feet north-south at approximate drill spacing of 500 feet. Drill spacing reduces to approximately 250 feet within an approximate 1,500 feet east-west by 1,000 feet north-south along northeast the side of the MacArthur pit.

12.2 RC Drilling Sampling Method

All reverse circulation drilling is conducted with water added to eliminate dust. Diversified Drilling LLC uses a percussion hammer with interchange sampling system. Samples are collected in a conventional manner via a cyclone and standard wet splitter in 17-inch by 26-inch cloth bags placed in five-gallon buckets to avoid spillage of material. Sample bags are pre-marked by Quaterra personnel at five foot intervals and also include a numbered tag bearing the hole number and footage interval. Collected samples, weighing approximately 15 to 20 pounds each, are wire tied, and then loaded onto a ten-foot trailer with wood bed allowing initial draining and drying. Each day, Quaterra personnel haul the sample trailer from drill site to Quaterra's secure sample preparation warehouse in Yerington, Nevada. Geologic logging samples are collected at the drill site in a mesh strainer, washed, and placed in standard plastic chip trays collected daily by Quaterra personnel.

12.3 Core Drilling Sampling Method

Core diameter was HQ (approximately 2.75-inch diameter), reduced to NQ (approximately 2.5-inch diameter) in one instance. Following convention, the drill crew at the drill site placed core samples in waxed, ten-foot capacity cardboard boxes. Sample boxes were delivered to Quaterra's secure sample warehouse in Yerington, Nevada by the drill crew following each 12-hour shift.

12.4 Drilling, Sampling, or Recovery Factors

No factors were shown that could materially impact the accuracy and reliability of the above results. With few exceptions, core recovery exceeded 80 percent whilst RC recovery is estimated to be greater than 95 percent.

12.5 Sample Quality

It is Tt's opinion that Quaterra's samples of the MacArthur project are of high quality and are representative of the property. This statement applies to samples used for the determination of grades, lithologies, densities, and for planned metallurgical studies.

It is the opinion of the author that during the period in 1972 to 1973 when Anaconda explored and drill tested the MacArthur property, the drill samples taken by Anaconda were representative of the deposit and the methodologies commonly used by the industry at that time. This statement applies to samples used for the determination of grades, lithology, and densities, as well as metallurgical performance, supported by similar determinations and conditions being carried out at that time at Anaconda's Yerington mine operation and as referenced below in an internal Anaconda report (Heatwole, 1972), portions of which follow:

"*From March to November, 1972, over 225 holes were drilled….. Approximately 33,000 feet of vertical hole and 13,000 feet of angle hole were drilled using percussion and rotary methods."*

The majority (62 percent) of the drilling, which was supervised by Anaconda's Mining Research Department, was accomplished using Gardner-Denver PR123J percussion drills. The percussion drill was fitted with a sampling system designed by the Mining Research Department, which collected the entire sample discharged from the hole. The remainder of the drilling was done by Boyles Brothers Drilling Company using rotary and down-the-hole percussion equipment. The sampling system used by Boyles, especially during the early stages of drilling is not considered to be as accurate as the system designed by Mining Research"

While no details are available regarding Anaconda's exact assaying protocol and quality control during drilling at the MacArthur property, an interview conducted by Quaterra personnel in October 2008 with Mr. Henry Koehler, Anaconda's Chief Chemist during the 1960s and 1970s, confirmed that the techniques and procedures implemented conformed to industry standards for that era. Mr. Koehler was employed in Anaconda's analytical laboratory from 1952 to mine closure in 1978. He currently resides in Yerington, Nevada.

FIGURE 12-1: LETTER FROM MR. HENRY KOEHLER

October 24, 2008

I am Henry Koehler. I was employed at the analytical laboratory of the Anaconda Company in Yerington, Nevada during the years 1952 through 1978, and was Chief Chemist during the years of exploration on the MacArthur project.

From 1971 through 1973, samples were delivered from the MacArthur prospect for assay.

Samples were delivered to the laboratory where they were blended, pulverized, and a 2gm sample was extracted for assay.

Samples were received and assayed for total copper and oxide copper, according to standard wet chemistry procedures.

Reports were hand written and issued over my signature with 3 carbon copies and one original, which was given to management.

Henry Koehler
425 Pearl St.
Yerington NV.

13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Tt has reviewed all of the Quaterra sample preparation, handling, analyses, and security procedures. It is Tt's opinion that the current practices meet NI 43-101 and CIM defined requirements. After conducting a site visit Tt was concerned because standard samples were being stored in an unsecured area. Tt recommended that the standards be placed in a locked, secure area. Quaterra has since prepared such an area.

13.1 Reverse Circulation Sample Preparation and Security

RC sample bags, having been transported on a ten-foot trailer by Quaterra personnel from the drill site to the secure sample warehouse, are unloaded onto suspended wire mesh frames for further drying. Diesel-charged space heaters assist in drying during winter months. Once dry, sets of three samples are combined in a 24- by 36-inch woven polypropylene transport ("rice") bag, wire tied, and carefully loaded on plastic lined pallets. Each pallet, holding approximately 13 to 15 rice bags, is shrink-wrapped and further secured with wire bands. Quaterra's samples are shipped via UPS Freight to Skyline Assayers & Laboratories (Skyline), Tucson, Arizona USA. A chain of custody form is signed by the UPS driver during pickup at the warehouse in Yerington, and by a representative of Skyline upon delivery in Tucson.

After reviewing the above procedures, Tt recommended that:

- the samples be categorized and shipped in 40-sample lots;
- each lot be weighed both prior to departure from the site and upon arrival at the Skyline lab; and
- the two lot weights be checked for consistency.

13.2 Core Sample Preparation and Security

Drill core, having been transported at end of each shift by the drill crew to Quaterra's secure sample warehouse, is logged by a Quaterra geologist who marks approximate five-foot sample intervals with colored flagging tape. Each core box, bearing a label tag showing drillhole number, box number, and box footage interval, is then photographed. Rock quality designations (RQD), magnetic susceptibility, and recovery measurements are taken. Core is then split in half using a hydraulic powered blade at the warehouse by Quaterra personnel (for approximately six months through core hole QMCC-20, core was sawed rather than hydraulically split). One half of the split was bagged in 11- by 17-inch cloth bags for assay whilst the other half is returned to the appropriate core box for storage in the sample warehouse. Approximately five to six cloth sample bags are combined in a larger 24- by 36-inch transport polypropylene ("rice") bag, wire tied, and carefully loaded on plastic lined pallets. Each pallet, holding approximately 13 to 15 rice bags, is shrink-wrapped and further secured with wire bands for shipment to Skyline in Tucson. The same chain of custody protocol is used for both RC and core samples.

13.3 Sample Analysis

During 2007, 12 drillholes (core) were analyzed at American Assay Laboratories (AAL) in Sparks, Nevada, USA. AAL is ISO/UEC 17025 certified as well as a Certificate of Laboratory Proficiency PTP-MAL from the Standards Council of Canada.

With sample submission-to-reporting time exceeding two months at AAL, Quaterra elected to use Skyline Assayers & Laboratories (Skyline) and ISO certified assay lab in Tucson, Arizona, USA for all further analytical work. Samples submitted to AAL were re-assayed (rejects) by Skyline for consistency of the data set.

Quaterra samples arrive at Skyline via UPS truck freight. A Quality Assurance and Quality Control Assay Protocol have been implemented by Quaterra where blanks and standards are inserted into the assay stream. The Skyline sample procedures are as follows:

- For Total Copper: a 0.2000 to 0.2300 gram (g) sample is weighed into a 200-milliliter (ml) flask in batches of 20 samples plus two checks (duplicates) and two standards per rack. A three-acid mix, 14.5 ml total is added and heated to about 250°C for digestion. The sample is made to volume and read on an ICP/AAS using standards and blanks for calibration.
- For Acid Soluble Copper: a 1.00 to 1.05 g sample is weighed into a 200 ml flask in batches of 20 samples plus two checks (duplicates) and two standards per rack. Sulfuric acid (2.174 l) in water and sodium sulfite in water are mixed and added to the flask and allowed to leach for an hour. The sample is made to volume and read on an ICP/AAS using standards and blanks for calibration.
- For Ferric Soluble Copper (QLT): uses an assay pulp sample contacted with a strong sulfuric acid-ferric sulfate solution. The sample is shaken with the solution for 30 minutes at 75ºC, and then filtered. The filtrate is cooled, made up to a standard volume, and the copper determined by AA with appropriate standards and blanks for calibration.
- For Sequential Copper Leach: consists of four analyses: Total Copper, Acid Soluble Copper, Cyanide Soluble Copper, and the difference, or Residual. Following analysis for Total Copper and Acid Soluble Copper, the residue from the acid soluble test is leached (shake test) in a sodium cyanide solution to determine percent cyanide soluble minerals. The Sequential Copper Leach is a different approach to the Ferric Soluble Copper (QLT) leach, with possible greater leaching of certain sulfides (e.g. chalcocite or bornite) during the cyanide leach step.

Tt has recommended that Quaterra begin to analyze the blanks, duplicates, and standards associated with each assay lot for determination of compliance with accepted quality assurance practices. If any of the blanks, duplicates, and/or standards return results that are outside of accepted statistical error ranges, the entire sample lot is to be re-assayed. It is Tt's understanding that Quaterra will adopt this practice for all sample assaying in the future.

13.4 Sequential Leach Assay Analysis

Sequential copper leach assays, when combined with column leach tests can be indicative of actual heap leach recoveries. Historically, sequential copper leach assays were not performed on samples at MacArthur. SECTION 6-4 discusses the problems encountered by previous operators while leaching ore material from the MacArthur pit. Since previous operators were unable to explain the longer leach times and low solution head grades they encountered, Tt recommended that Quaterra perform sequential copper leach assays on some of the available sample coarse rejects. Tt selected 173 samples in total for Quaterra to submit for re-assay. Of the 173 samples 85 came from intervals identified as the oxide zone, 79 came from the secondary zone, and 9 came from the primary sulfide zone. TABLE 13-1 shows a summary of the total copper, acid-soluble copper (ACu), and cyanide-soluble copper (CNCu) quantities categorized by mineralized zones. The acid-soluble fraction of total copper is greatest in the oxide zone. The cyanide-soluble fraction of total copper is greatest in the chalcocite/oxide zone where the dominant species of copper mineral is chalcocite. In the primary sulfide zone, both acid- and cyanide-soluble fractions of total copper are low due to high levels of chalcopyrite.

TABLE 13-1: SEQUENTIAL COPPER LEACH ASSAY RESULTS QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009							
	Average Values						
Mineralized Zone	**TCu**	**ACu**	**CNCu**	**ACu : TCu**	**CNCu : TCu**	**% Soluble Cu**	**# of Samples**
Oxide	0.271	0.111	0.055	0.41	0.19	60%	85
Chalcocite/Oxide	0.274	0.079	0.086	0.28	0.31	59%	79
Primary	0.085	0.008	0.010	0.04	0.08	12%	9

Tt proposes that Quaterra perform either standard TCU assays, warm H_2SO_4 assay, and QLT or standard sequential copper leach assays on all drillhole samples that exceed 0.10 percent TCu for all future drilling programs. This data will help Quaterra to better understand potential mineralogical differences between the oxide, secondary, and primary mineral zones as well as help link column leach test composites with in situ material to better predict heap leach performance.

13.5 Quality Control

As part of the Quaterra quality control program, 771 standards and 668 blanks were submitted (TABLE 13-2) along with the 15,559 individual drillhole samples. Of the QC samples submitted, 52 were submitted to American Assay Labs and 1,387 were submitted to Skyline Laboratories. Results from the two laboratories are shown below. Lot failure criteria was established as any standard assay outside of +/-15 percent of the reported value for the standard, or any blank assay greater than 0.015 percent TCu. Re-assays of samples from failed lots have not yet been completed. All samples submitted to American Assay Labs have been re-submitted to Skyline.

TABLE 13-2: BLANK AND STANDARD FAILURE RATES BY LABORATORY QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009		
	American Assay Labs	**Skyline Laboratories**
Submitted Blanks	20	648
Failed Blanks	0	16
% Blank Failure	**0.0**	**2.5**
Submitted Standards	32	739
Failed Standards	7	17
% Standard Failure	**21.9**	**2.3**

14.0 DATA VERIFICATION

John Rozelle of Tt conducted a site visit to the MacArthur project area and Quaterra's field office in Yerington, Nevada on September 29 through October 1, 2008. During this time Quaterra staff discussed the history of the project, all available data, answered questions posed by Tt, and presented the current geologic interpretation of the MacArthur deposit. This section details the results of Tt's verification of existing data for the MacArthur project.

14.1 Historic Data Check

Tt did not collect independent samples to corroborate historic data. It is Tt's opinion that the previous owners of the MacArthur project area were competent established companies that followed industry standard practices for drilling, sampling, and assaying according to the industry standards in place at the time of the work. However, Quaterra has completed verification work on the historic data by re-assaying, when material was available, and twin hole drilling.

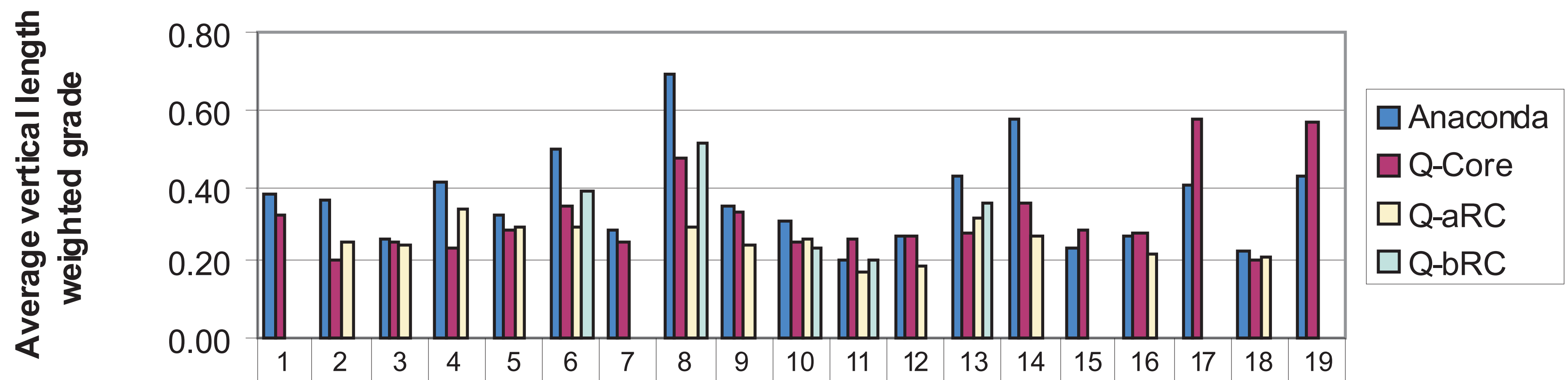
As an assay check on the historic Anaconda drilling within the confines of the current MacArthur pit, Quaterra twinned nineteen Anaconda holes using both reverse circulation and core drilling methods (TABLE 14-1). The attached histogram (FIGURE 14-1) contains information on 57 total holes: 38 Quaterra and 19 Anaconda. It provides a comparison of average copper grades between the 1972-1973 Anaconda drilling (all as dry drilling, capturing 100 percent of the dry sample) and Quaterra's twin holes (wet sample recovery for all Quaterra reverse circulation drilling). Some of the twin holes drilled by Quaterra are angled whereas the corresponding Anaconda hole was drilled vertically. For these twin angle-drilled holes, the intercept displayed in FIGURE 14-1 is the length-weighted average over the projected vertical interval. The abbreviations Q-aRC and Q-bRC are first and second twins of existing holes.

14.2 Current Data Check

Tt has made several data checks and verifications of Quaterra work that has been performed for the MacArthur project. These checks include validation of assays from Skyline and comparing geologic field logs with drillhole data. No discrepancies have been found.

TABLE 14-1: LIST OF TWIN HOLES DRILLED BY QUATERRA QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009				
Twin Group	**Anaconda Hole**	**Quaterra Twin Core Hole**	**Quaterra Twin aRC Hole**	**Quaterra Twin bRC Hole**
1	M120-C50-1	QMT-4		
2	M120-C50-2	QMT-5	QMT-5aR	
3	M165-K-1	QMT-11	QMT-11aR	
4	M172.5-I-1	QMT-8	QMT-8aR	
5	M195-M-1	QMT-13	QMT-13aR	
6	M195-M-2	QMT-14	QMT-14aR	QMT-14bR
7	M205-G-2	QMT-6		
8	M210-K-1	QMT-10	QMT-10aR	QMT-10bR
9	M210-O-1	QMT-15	QMT-15aR	
10	M270-Q-1	QMT-17	QMT-17aR	QMT-17bR
11	M270-S-1	QMT-18	QMT-18aR	QMT-18bR
12	M30-K-1	QMT-12	QMT-12aR	
13	M45-C1-1	QMT-1	QMT-1aR	QMT-1bR
14	M45-C1-2	QMT-2	QMT-2aR	
15	M75-I-1	QMT-9		
16	M90-B-1-2	QMT-3	QMT-3aR	
17	M-90-G-4	QMT-19		
18	M90-O-1	QMT-16	QMT-16aR	
19	M95-G-1	QMT-7		

Vertical Length weighted average grade of intervals >.15%



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Anaconda	0.38	0.36	0.26	0.41	0.32	0.49	0.28	0.69	0.35	0.31	0.20	0.26	0.43	0.57	0.24	0.27	0.40	0.23	0.43
Q-Core	0.33	0.20	0.25	0.24	0.28	0.35	0.25	0.47	0.33	0.25	0.26	0.27	0.27	0.36	0.28	0.27	0.58	0.20	0.57
Q-aRC		0.25	0.24	0.34	0.29	0.29		0.29	0.24	0.26	0.18	0.19	0.31	0.26		0.22		0.21	
Q-bRC						0.39		0.51		0.24	0.21		0.35						

Twin group

Issued by: TETRA TECH, 350 Indiana Street, Suite 500, Golden, Colorado 80401, (303) 217-5700 (303) 217-5705 fax	Prepared for: ***QUATERRA ALASKA, INC.***	File Name: Fig14-1.cdr	**Figure 14-1** **Vertical Length Weighted Average Grade of Intervals >.15**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2008	

15.0 ADJACENT PROPERTIES

The following information is based on data and reports that predate NI 43-101 definitions of mineral resources and reserves and are presented as an indication of the types and magnitude of similar surrounding deposits and mines. The deposits presented are all within a few miles of the MacArthur project and have mineralization that is similar in nature to the MacArthur project. In some cases, extensive mining has occurred and the quantities reported represent historical, actual production. **None of the resources referenced have been classified according to current CIM standards but were classified according to standards in use at the time of the estimate.** It is Tt's opinion that these estimates are indicative of the size and tenor of the mineralization present at the MacArthur project.

TABLE 15-1 lists historic resource estimates for three porphyry copper deposits in the Yerington area.

TABLE 14-1: ADJACENT PROPERTY RESOURCE ESTIMATES
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Adjacent Property Name	Ore Tons (kTons)	Average Grade (% TCu)	Contained Cu (kTons)	Contained Cu (000s lbs)
Yerington Mine	165,000	0.60	990	1,980,000
Ann Mason Deposit	810,000	0.40	3,240	6,480,000
Bear-MacArthur-Lagomarsino Deposit	500,000	0.40	2,000	4,000,000
Total all deposits[1]	**1,475,000**	**0.42**	**6,230**	**12,460,000**

Anaconda's Yerington porphyry copper mine, which was in operation from 1953 until 1978, is one to two miles west of the town of Yerington and was mostly covered by an alluvial plain at the base of the Singatse Range. The original discovery was formerly called the Empire Nevada mine with a reported production of 11,000 tons from 1918-1920.[2] The Yerington Mine has produced more than 162 million tons of ore at an average grade of 0.55 percent copper containing more than one billion pounds of copper.[3] The deposit was contained entirely within a multi-phased granodioritic intrusive (primarily quartz monzonite porphyry). The primary sulfide minerals, pyrite and chalcopyrite, occur as minute grains within the groundmass and as narrow seams.

Mining of the Yerington deposit initially commenced on a defined deposit of 60 million tons of ore averaging 0.9 percent Cu. More than one-half of these reserves were enriched oxide ore with chrysocolla the predominant ore mineral overlying the main sulfide deposit and, by the time the mine shut down, approximately 165 million tons of ore averaging 0.6 percent Cu had been produced. As of 1995, the Yerington deposit still contained proven and developed sulfide

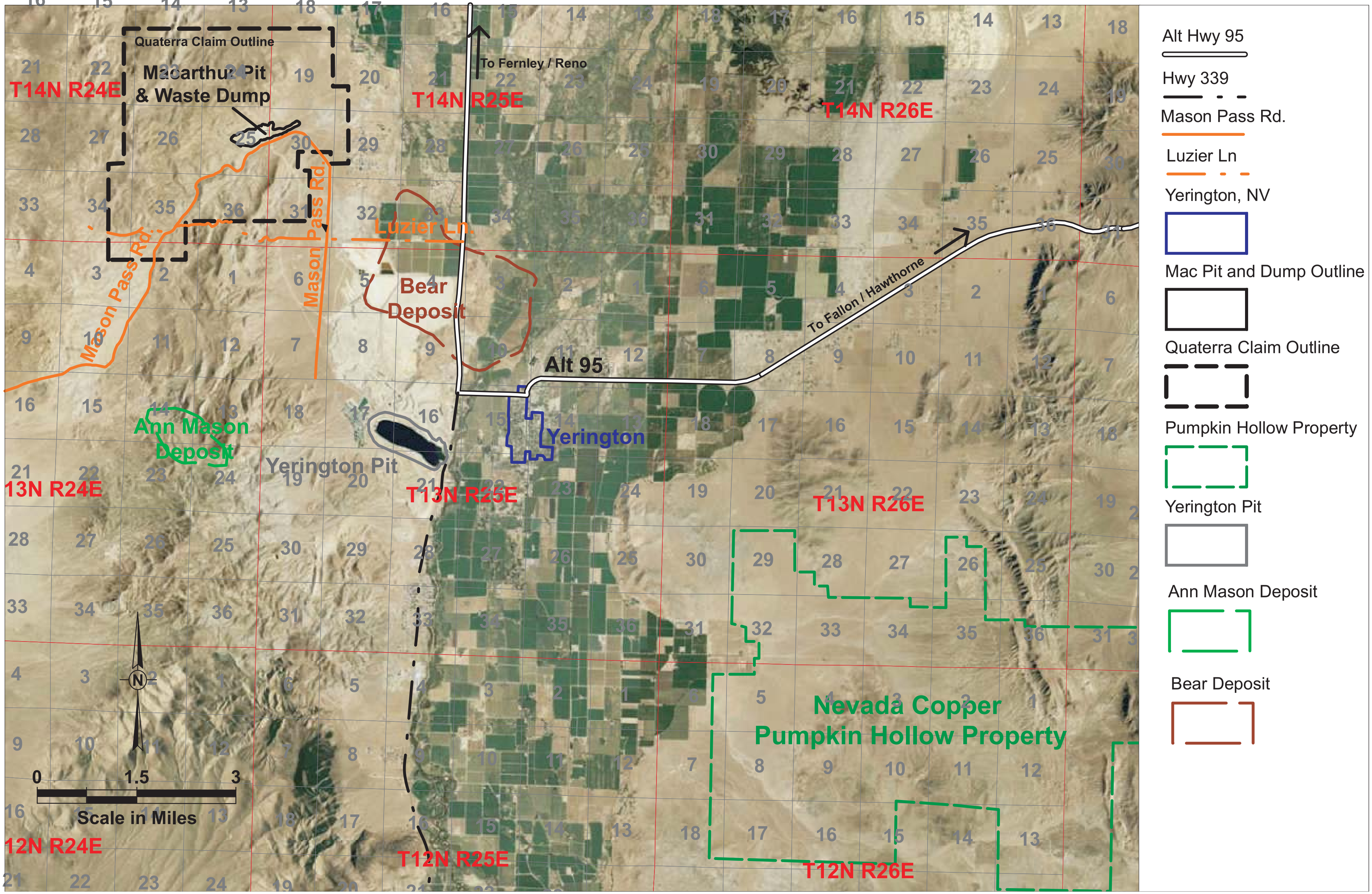
[1] Carten, Richard B., 1986: Sodium-Calcium Metasomatism: Chemical, Temporal, and Spatial Relationships at the Yerington Nevada Porphyry Copper Deposit: Economic Geology, Vol 81, p. 1495-1519.

[2] Moore, James G. and Archibold, N.L., 1969: Geology and Mineral Deposits of Lyon, Douglas and Ormsby Counites, Nevada; Nevada Bureau of Mines, Bulletin 75.

[3] Spencer R. Titley, Editor, 1982: Advances in Geology of the Porphyry Copper Deposits, Southwestern North America, p. 145-148.

resources **(classified at the time of closure and not according to NI 43-101 standards**) of 50 million tons averaging 0.49 percent Cu.[4]

[4] American Mines Handbook: Southam Magazine and Information Group.



Issued by:	Drawing Provided by/Prepared for:	File Name:
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	*QUATERRA ALASKA, INC.*	Fig15-1.cdr
	Project: MacArthur Copper Project	Project Number: 114-310920
	Project Location: Lyon County, Nevada	Date of Issue: 12/01/2008

Figure 15-1
Location of Adjacent Properties

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

As of the date of this report, Quaterra has not completed any mineral processing or metallurgical test work. Historic metallurgical testwork and processing data are presented in SECTION 6.0 of this report.

17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

17.1 Introduction

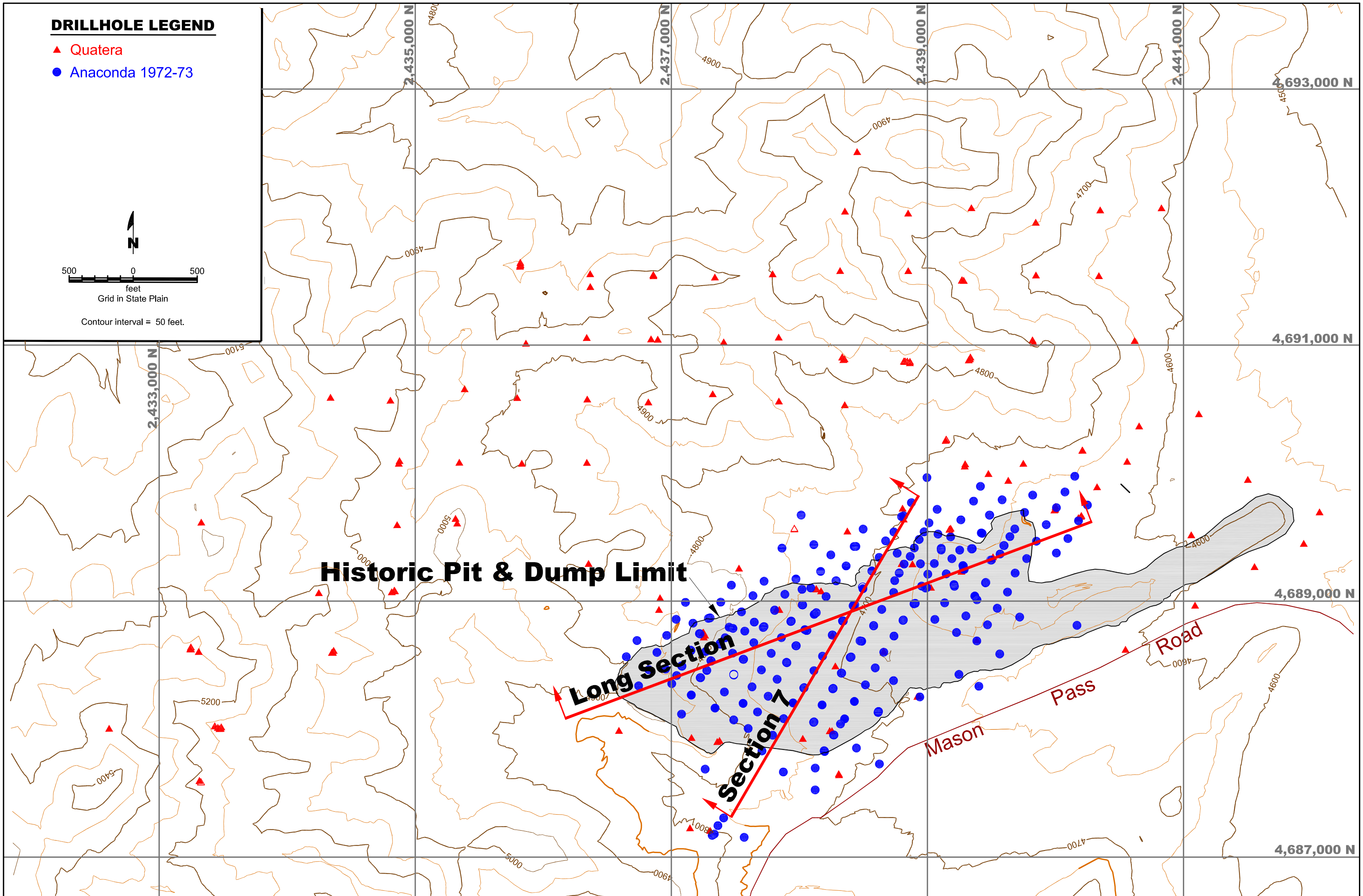
The mineral resource estimates has been generated from drillhole sample assay analyses and the interpretation of a geologic model which relates to the spatial distribution of copper in the MacArthur deposit. APPENDIX A contains a table of the drillholes contained in the MacArthur project database. Interpolation characteristics have been defined based on the geology, drillhole spacing and geostatistical analysis of the data. The mineral resources have been classified by their proximity to the sample locations and are reported, as required by NI 43-101, according to the CIM standards on Mineral Resources and Reserves.

17.2 Resource Estimation

This section describes the methodology in developing the mineral resource estimate for contained copper resources in the MacArthur deposit. Recent drilling on the MacArthur property, which further defines a significant amount of copper coupled with updated geologic and mineral zone interpretations provides the basis for an updated mineral resource estimate. FIGURE 17-1 details the drillholes used in the resource estimation of the MacArthur project.

The MacArthur mineral resource estimate was prepared in the following manner:

- The drillhole database of 534 holes containing historical and recent drilling was provided by Quaterra. From this 85 holes were removed yielding a final drillhole database of 450 holes that were used for the resource estimation. The following bullets highlight the process for inclusion and/or exclusion of drillhole data:
    - 37 holes were determined to be dummy drill positions
    - 24 historical holes had no assay data
        - 11 were holes drilled by Superior and were not permitted to be included in the estimate.
        - 6 were drilled by USBM with no assays located.
        - 7 were drilled by Anaconda 1955-57 with uncertain assay values.
- Of the 450 holes, there are 280 holes from rotary (RC) drilling done by Anaconda. This data is referred to as “Metech” in some tables and figures in this report because the initial data set supplied by Quaterra referred to the data in this way. The electronic data set containing Anaconda drillholes was obtained from Metech in 2005, and has since frequently been referred to by that name. However, these holes were actually drilled by Anaconda and were only compiled by Metech for their 1989 non-CIM compliant resource estimate. These holes will be referred to as Anaconda drillholes in this report, but are sometimes labeled as Metech drillholes. There are 49 core holes and 121 RC holes drilled by Quaterra.
- Data from three additional Quaterra holes (QM-083, QM-084 and QM-085) were received after the resource was completed. These holes were not used for the resource estimation, but were used to help validate the model.
- The density values for each rock code are based on previous studies.
- The resource estimate was broken into the south-east historical pit area (variously called SE or SE-Pit area in this report). The remaining model has been called the northwest area or NW.



Issued by:

TETRA TECH
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Prepared for:	File Name:
QUATERRA ALASKA, INC.	DH-Maps.dwg
Project: MacArthur Copper Project	Project Number: 114-310920
Project Location: Lyon County, Nevada	Date of Issue: 02/09/2009

Figure 17-1
Drillholes Used in MacArthur Resource Estimation

Quaterra provided cross-sections with interpreted geology, lithology units and mineral zones (MinZone). The MinZone were digitized by Quaterra and Tetra Tech (Tt) to produce three-dimensional wireframes.

- These MinZone codes were defined for each of the drillhole intercepts by Quaterra's geologists.
- Statistics for drillhole five-foot interval assays were analyzed for each of the MinZone code broken out by the SE and NW areas and by Anaconda and Quaterra drillholes.
- The interval assays were composited to a twenty-foot bench height. Statistics for the composites were analyzed for each of the rock codes within the SE and NW areas. As with the five-foot interval data, analysis was done separately on the Anaconda and Quaterra data.
- An analysis of twinned drillhole data was done. It confirmed that the Anaconda rotary drillhole (RC) data was statistically comparable to the Quaterra drillhole data. The study also confirmed that the Quaterra core drillhole data was statistically similar to Quaterra RC drillhole data. Hence, the resource estimation was done using the data that combined Quaterra and the Anaconda drillholes.
- Geostatistical analysis was done on the twenty-foot composite data. Unitized General Relative variograms (UGR Variograms) were generated. The directional variograms were modelled with the spherical function using a nugget and up to three nested structures.
- The quality of the variogram models were checked using a model-validation technique called "jackknifing". The method helps determine the best variogram parameters to be used for the theoretical model, and what the best kriging parameters (range, direction and search parameters) to use.
- The resource model used multiple pass ordinary kriging (OK) to estimate percent total copper (%TCu) within each MinZone. The kriged grades were checked by comparing block, composite and assay histograms.
- The block model values were visually inspected in multiple sections and plan maps. These values were compared to the drillhole traces containing both interval assay data and composite data;
- Values from three drillholes drilled subsequent to the grade estimation process were employed as a second validation test. The new data was compared to the block model shown in section.
- A resource classification of measured, indicated and inferred was developed based on a combination of jackknifing and kriging error analysis.
- The MacArthur total copper resource was tabulated for volume, tonnage and contained metal for the measured, indicated and inferred classes.

17.3 MacArthur Block Model

Block model parameters for MacArthur were defined to best reflect both the drill spacing and current geologic interpretations. TABLE 17-1 shows the MacArthur block model parameters.

TABLE 17-1: MACARTHUR MODEL PARAMETERS QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009			
MacArthur Model Parameters	**X (Columns)**	**Y (Rows)**	**Z (Levels)**
Origin (lower left corner):	2,431,900	4,686,900*	2,900
Block size (feet)	25	25	20
Number of Blocks	384	288	132
Rotation	0 degrees azimuth from North to left boundary		
Composite Length	20 feet (Bench)		
*10,000,000 was subtracted from Y (Northing).			

The Excel database provided by Quaterra contained the pertinent drillhole and assay information for the MacArthur deposit. The database contained 537 drillholes, of which 450 drillholes from Quaterra and Anaconda were used. The 88 holes removed were 48 older holes with limited or no information on the assays (Pangea Gold 1991, Superior, USBM 1952, Anaconda 1955-57), 37 dummy holes entered into the database for planning purposes, and 3 new Quaterra Holes that were still awaiting assay data from the assay laboratory at the time resource modelling began. Of the 450 drillholes used, there are 280 Anaconda RC drillholes and 170 Quaterra drillholes (49 core and 121 RC holes). These drillholes covered a total of 134,255.6 feet, producing 26,727 samples at nominal 5-foot lengths. A list of drillholes used in this resource estimate is provided in APPENDIX C.

The variables in the database are for total copper from Quaterra and Anaconda intervals and acid-soluble copper from Quaterra holes. Sample lithology (TABLE 17-2) was described and recorded by Quaterra geologists and placed in the database.

TABLE 17-2: LITHOLOGY CODE QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009	
Lithology Code (RX)	**Description**
NS	no sample
CSG	casing
AND	andesite
ANDh	andesite with larger hornblende phenocrysts
ANDP	andesite porphyry
BQM	Border quartz monzonite
GD	granodiorite
PBX	pebble breccia
QM	quartz monzonite

QMPb	qm porphyry with biotite
QMPh	qm porphyry without biotite-generally hornblende phenocrysts
QTZ	quartz
RHYP	rhyolitic porphyry
SKN	skarn
TV	tertiary volcanics
UNK	unknown

FIGURES 17-2 and 17-3 are bar graphs showing the record count and total copper statistics of each lithologic unit at no cutoff and at 0.2 percent TCu cutoff respectively. Note that there is not a great deal of variability of average grade between the more common lithological units. Further the issue of metallurgical recovery is more a function of the mineralogical species of copper. With this in mind, the Quaterra geologists interpreted the deposit according to mineral zones (MinZone) shown in TABLE 17-3. Along with interpreted mineral zones, the recovery of copper is best measured using total copper grades in conjunction with acid soluble and cyanide soluble copper assays (discussed in SECTION 12). The Anaconda data did not contain any acid or cyanide soluble assay data. Future drill programs will include sequential copper leach assay data (includes acid and cyanide soluble copper assays), but for this report the remaining statistical and geostatistical work will focus on the interpretation of total copper grades as partitioned by MinZone.

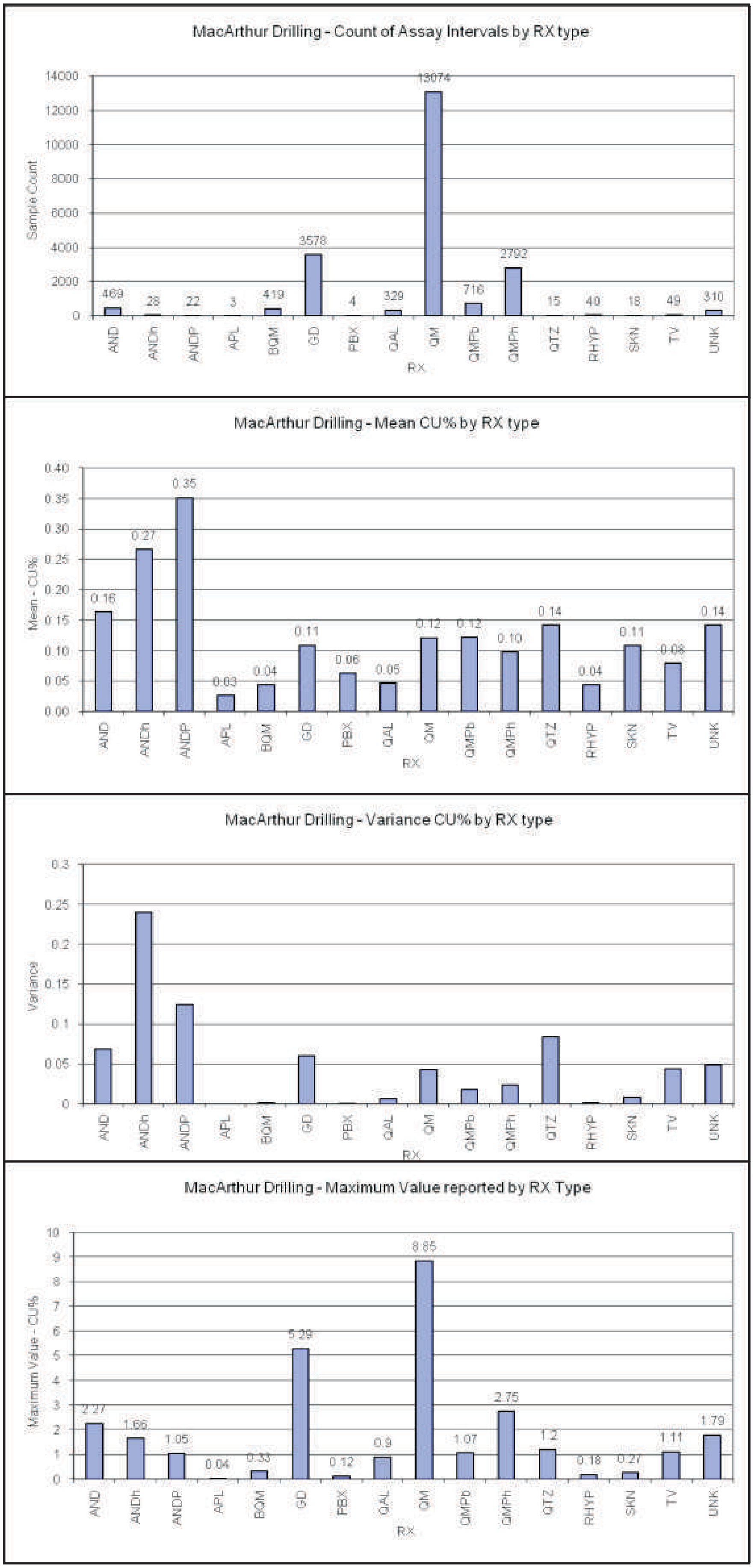
TABLE 17-3 shows the MinZone Codes, which can be considered levels of oxidation from the topography changing with depth. In idealized terms, the top zone is the oxide zone, followed by the chalcocite mix zone, and the sulfide zone at depth.

These zones were modelled as strata determined by Quaterra geologists by inspecting the mineralogy of samples from core and RC cuttings. Section plots were created and interpreted looking at a number of drillholes simultaneously. The transition from air (MinZone 0) to the oxide zone/chalcocite mix transition was modeled as MinZone 10. The transition from the oxide zone to the sulfide was modeled as MinZone 20. The MinZone code below the chalcocite to sulfide zones was given the code MinZone 30. Finally any undefined zones were given the code 90 or a 9999.

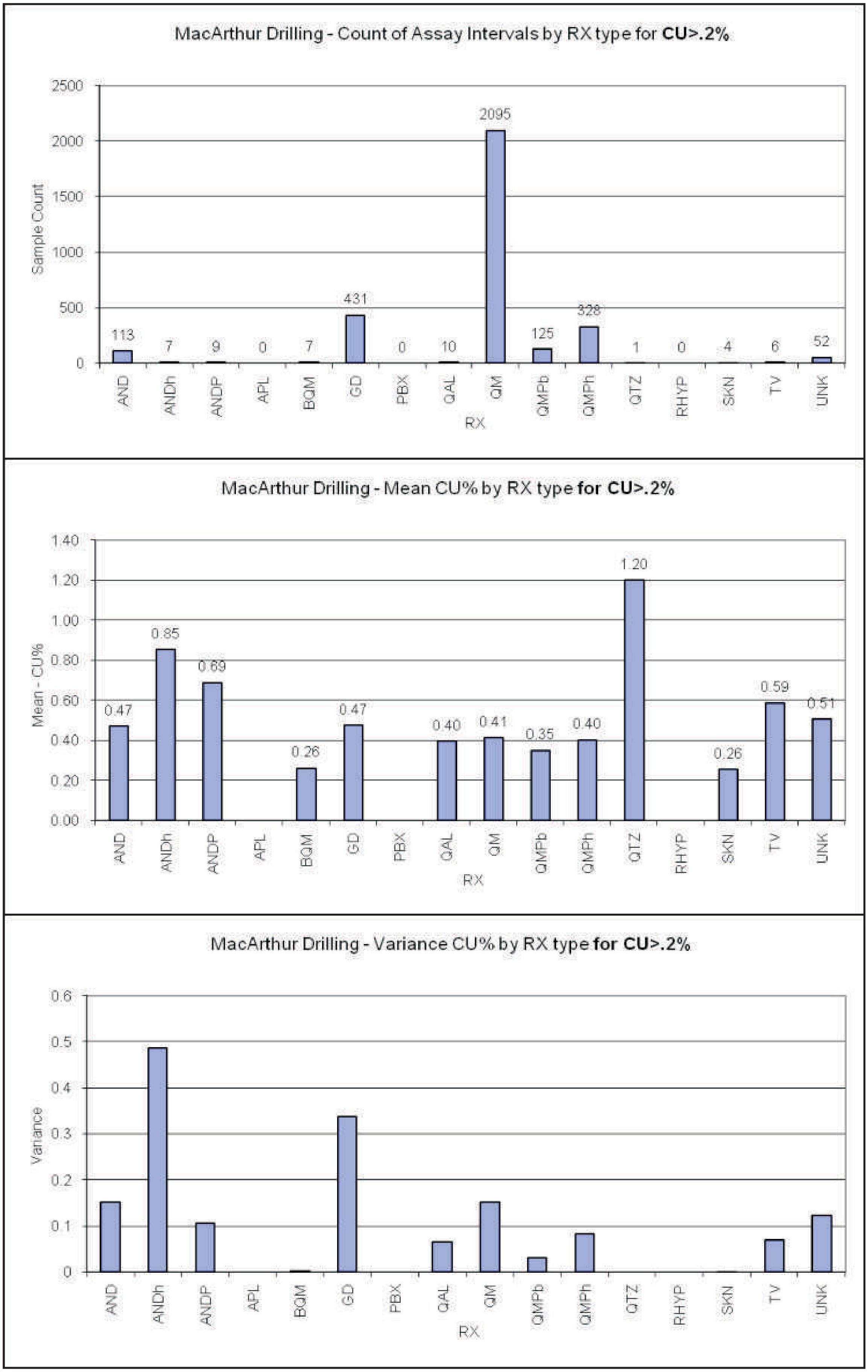
By combining several sections, these transition lines were used to generate MinZone transition surfaces. Using wireframe techniques, with Tt utilizing Gemcom© GEMS™ and Quaterra using DataMine© software, MinZone volumes produced.

TABLE 17-3: MINZONE CODES AND DENSITY
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

MinZone Code	Description	Bulk Density (cu Ft/ton)
0	AIR	0
10	OXIDE ZONE	12.5
20	CHALCOCITE MIX / OXIDE ZONE	12.5
30	PRIMARY SULFIDE ZONE	12.5
90 or 9999	UNDEFINED	12.5



Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	***QUATERRA ALASKA, INC.***	Fig17-2.cdr	**Figure 17-2** **Copper Statistics by Lithology (all)**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009	



Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	***QUATERRA ALASKA, INC.***	Fig17-3.cdr	**Figure 17-3** **Copper Statistics by Lithology** **(Cu>0.2%)**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009	

TABLE 17-4 shows the count of the described MinZones of the 5-foot intervals. The table is broken into four parts. The top section gives the count number of the data from the combined Quaterra and Anaconda (labeled as Metech) data. Note that the drillhole class "Quaterra & Metech Class" is composed of drillhole categories Quaterra RC, Quaterra Core, Metech RC, Metech RC-Twin, QMT-Core-Twin, and QMT-RC-Twin. The categories which contain the word "Twin" were drilled in close proximity to an existing hole, i.e. twinned. These special holes will be statistically analyzed in SECTION 17-6. Note that the term "POLYGON LIMITING FILE USED" designates if a subset of the drillholes have been isolated for statistical work. In the case of the second section of TABLE 17-4, shown in a blue font, the drillhole data from the "NW-out Area" (NW area) has been segregated for the count. To read TABLE 17-4, within the NW Area, there are 3414 5-foot assays with the MinZone code of 10 from only Quaterra data. It should be noted that no Anaconda holes explored the NW area, nor were drilled deep enough to explore MinZone 30. Note also that the Anaconda holes within the polygon designated "SE – Historical Pit Area" (SE area) has almost two times the assays as Quaterra. This is a significant amount of additional data and a study of whether the two data sets can be mixed is in a following section.

Finally, the term "Historical Pit Area" means that Anaconda and Arimetco mined a portion of the area in the past. Some of the counted assays are now above the current post-mine topography. Sections showing the drillhole traces in FIGURES 17-12 through 17-15 show some of the traces that are in the mined out area. Even though these particular samples are above the current topography, it was decided that for this study that the grade and geostatistical information they contain is useful in estimating remaining resources.

17.4 Assay Data

TABLE 17-5 shows the statistics for all TCu assay data, from NW and SE areas. The table is divided into several sections. The first section indicates the type of data (Sample = original assay data); the analyte (Cu); which drillhole classes are used (Quaterra and Anaconda); whether there is a limiting polygon (no polygon); the drillhole count (450) and the number of assay data (26727). The second section gives the statistics for the MinZone (Rock Types 10, 20, 30, and 9999). In this case the mean percent TCu grade in MinZone 10 is 0.17631, with an average for all zones of 0.1580. The third section is a table of the cumulative grade statistics, and the fourth section is a classic histogram plotted with a log scale. In this case, Cu appears to be a mixture of several lognormal populations along with a series of detection limit spikes on the low end and a rare set of assays (a count of 12) above a cutoff grade of 2.88 percent TCu.

TABLES 17-6 and 17-7 show the statistics in the SE area for Anaconda (labeled Metech) and Quaterra respectively.

The Anaconda data is "lognormal-like", in that it generally follows a bell shaped curve with some notable deviations. Anaconda data has a mean grade of 0.2209 These deviations from a true lognormal is better shown in FIGURE 17-4, which is a log probability plot of the same data. A log probability plot is noteworthy inasmuch as a true lognormal distribution will plot a straight line. Kinks in the Anaconda data (in blue) are suggestive of the mixing of additional populations. Quaterra data in TABLE 17-7 has a mean grade of 0.1343 percent TCu which is 60.8 percent of the Anaconda value. The Quaterra data is plotted in red in FIGURE 17-4. Concern for this difference will be addressed in the twin study in SECTION 17-6.

TABLE 17-8 shows the statistics for the NW area. Again, there is no Anaconda (labeled Metech) data outside of the SE area. For these three Tables, the section listing the cumulative statistics is not listed.

TABLE 17-4
Minzone Interval Data Count

MINZONE COUNT FOR SAMPLES

Quatera & Metech Class: 1 = Quaterra RC 2 = Quaterra Core 3 = Metech RC 4 = Metech RC-Twin
5 = QMT-Core-Twin 6 = QMT-RC-Twin
POLYGON LIMITING FILE USED: None

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
10	18082	29	384	11	224	69	122
20	6857	29	384	27	224	2	111
30	1766	29	300	27	207	28	101
9999	22	29	339	12	224	86	122
TOTAL	26727						

Quatera: 1 = Quaterra RC 2 = Quaterra Core 5 = QMT-Core-Twin 6 = QMT-RC-Twin
POLYGON LIMITING FILE USED: NW-Out Area

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
10	3414	29	370	27	224	73	122
20	5415	29	370	27	224	2	111
30	1679	29	298	27	207	28	101
9999	16	29	339	44	224	89	122
TOTAL	10524						

Metech Class: 3 = Metech RC 4 = Metech RC-Twin
POLYGON LIMITING FILE USED: SE-Historical Pit Area

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
10	10718	190	335	11	124	71	100
20	289	224	325	50	123	69	81
9999	3	208	295	26	100	89	98
TOTAL	11010						

Quatera Class: 1 = Quaterra 2 = Quaterra Core 5 = QMT-Core-Twin 6 = QMT-RC-Twin
POLYGON LIMITING FILE USED: SE-Historical Pit Area

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
10	3789	188	368	12	131	69	97
20	1034	188	368	44	131	64	91
30	87	188	300	44	85	66	85
9999	3	217	296	12	94	86	91
TOTAL	4913						

TABLE 17-5
All Cu Assay Statistics

NOTE: DH CLASS LIMITED BY
Quatera & Metech
1 = Quaterra RC
2 = Quaterra Core
3 = Metech RC
4 = Metech RC-Twin
5 = QMT-Core-Twin
6 = QMT-RC-Twin

NUMBER OF SAMPLE DRILLHOLES CURRENTLY USED : 449 | NUMBER OF COMPOSITE DRILLHOLES CURRENTLY USED : 449
NUMBER OF SAMPLE ASSAY VALUES USED : 26727 | NUMBER OF COMPOSITE ASSAY VALUES USED : 6649
DATA TYPE IS SAMPLE
CURRENT LABEL : cu

ROCK TYPE	SAMPLE COUNT MISSING	BELOW LIMITS	ABOVE LIMITS	INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	147	0	0	17935	0.00500	3.8400	0.17631	0.03245	0.18014	1.0217	-2.1480	0.9615	0.9805	0.1888	1.2710
20	45	1	0	6811	0.00500	8.8500	0.12505	0.05754	0.23988	1.9182	-2.8556	1.5948	1.2629	0.1277	1.9817
30	17	0	0	1749	0.00500	5.2900	0.09868	0.07704	0.27756	2.8128	-3.1649	1.3794	1.1745	0.0841	1.7241
9999	21	0	0	1	0.01000	0.01000	0.01000	0.	0.	0.0000	-4.6052	0.0000	0.0009	0.0100	0.0009
ALL	230	1	0	26496	0.00500	8.8500	0.15800	0.04258	0.20634	1.3059	-2.3971	1.2870	1.1345	0.1732	1.6193

LOWER BOUND >=	UPPER BOUND <	FREQ	PERCENT	MEAN	CUM FREQ (ALL VALUES < UPPER BOUND)	PERCENT	CUM MEAN	CUM FREQ (ALL VALUES >= LOWER BOUND)	PERCENT	CUM MEAN
0.0050	0.0073	725	2.74	0.0050	725	2.74	0.0050	26496	100.00	0.1580
0.0073	0.0106	1278	4.82	0.0100	2003	7.56	0.0082	25771	97.26	0.1623
0.0106	0.0154	0	0.00	0.0000	2003	7.56	0.0082	24493	92.44	0.1703
0.0154	0.0223	1574	5.94	0.0200	3577	13.50	0.0134	24493	92.44	0.1703
0.0223	0.0324	1607	6.07	0.0300	5184	19.57	0.0185	22919	86.50	0.1806
0.0324	0.0471	1425	5.38	0.0400	6609	24.94	0.0232	21312	80.43	0.1919
0.0471	0.0685	2487	9.39	0.0552	9096	34.33	0.0319	19887	75.06	0.2028
0.0685	0.0996	2891	10.91	0.0794	11987	45.24	0.0434	17400	65.67	0.2239
0.0996	0.1447	4627	17.46	0.1185	16614	62.70	0.0643	14509	54.76	0.2527
0.1447	0.2104	3899	14.72	0.1758	20513	77.42	0.0855	9882	37.30	0.3156
0.2104	0.3058	2799	10.56	0.2559	23312	87.98	0.1060	5983	22.58	0.4066
0.3058	0.4444	1744	6.58	0.3662	25056	94.57	0.1241	3184	12.02	0.5391
0.4444	0.6459	832	3.14	0.5302	25888	97.71	0.1371	1440	5.43	0.7485
0.6459	0.9388	378	1.43	0.7672	26266	99.13	0.1462	608	2.29	1.0473
0.9388	1.3645	145	0.55	1.0954	26411	99.68	0.1514	230	0.87	1.5076
1.3645	1.9833	49	0.18	1.6525	26460	99.86	0.1542	85	0.32	2.2108
1.9833	2.8826	24	0.09	2.3788	26484	99.95	0.1562	36	0.14	2.9708
2.8826	4.1897	8	0.03	3.2575	26492	99.98	0.1571	12	0.05	4.1549
4.1897	6.0896	3	0.01	4.9833	26495	100.00	0.1577	4	0.02	5.9496
6.0896	8.8509	1	0.00	8.8500	26496	100.00	0.1580	1	0.00	8.8484

```
   LOWER BOUND   UPPER BOUND        500       1000      1500      2000      2500      3000      3500      4000      4500      5000
       >=             <     +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
      0.0050         0.0073|***************
      0.0073         0.0106|**************************
      0.0106         0.0154|
      0.0154         0.0223|*******************************
      0.0223         0.0324|********************************
      0.0324         0.0471|*****************************
      0.0471         0.0685|**************************************************
      0.0685         0.0996|**********************************************************
      0.0996         0.1447|*********************************************************************************************
      0.1447         0.2104|******************************************************************************
      0.2104         0.3058|********************************************************
      0.3058         0.4444|***********************************
      0.4444         0.6459|*****************
      0.6459         0.9388|********
      0.9388         1.3645|***
      1.3645         1.9833|*
      1.9833         2.8826|
      2.8826         4.1897|
      4.1897         6.0896|
      6.0896         8.8509|
                            +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                            0        500       1000      1500      2000      2500      3000      3500      4000      4500      5000
```

TABLE 17-6
SE-Pit Area Cu Assay Statistics for Anaconda (Metech) Drillholes

```
Statistics are limited to samples falling within the following polygon file limit:
     SE-Historical Pit Area
 NOTE: DH CLASS LIMITED BY
        Metech (Anaconda)
  3 = Metech RC
  4 = Metech RC-Twin
 NUMBER OF SAMPLE DRILLHOLES CURRENTLY USED       :       279         NUMBER OF COMPOSITE DRILLHOLES CURRENTLY USED    :       279
 NUMBER OF SAMPLE ASSAY VALUES USED              :     11010         NUMBER OF COMPOSITE ASSAY VALUES USED            :      2894
     DATA TYPE IS SAMPLE
     CURRENT LABEL : cu
```

ROCK TYPE	SAMPLE COUNT MISSING	SAMPLE COUNT BELOW LIMITS	SAMPLE COUNT ABOVE LIMITS	SAMPLE COUNT INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	70	0	0	10648	0.01000	3.8400	0.22234	0.03429	0.18519	0.8329	-1.7403	0.4650	0.6819	0.2214	0.7695
20	0	0	0	289	0.03000	0.73000	0.16990	0.01068	0.10332	0.6081	-1.9251	0.2999	0.5476	0.1695	0.5914
30	0	0	0	0	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.	0.0000
9999	3	0	0	0	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.	0.0000
ALL	73	0	0	10937	0.01000	3.8400	0.22095	0.03374	0.18368	0.8313	-1.7452	0.4615	0.6794	0.2199	0.7658

```
    LOWER BOUND   UPPER BOUND         400       800      1200      1600      2000      2400      2800      3200      3600      4000
         >=            <      +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
         0.0100         0.0135|*
         0.0135         0.0181|
         0.0181         0.0244|*
         0.0244         0.0329|*
         0.0329         0.0443|***
         0.0443         0.0596|***
         0.0596         0.0803|*****************************
         0.0803         0.1081|*************************
         0.1081         0.1455|***********************************************
         0.1455         0.1960|****************************************************
         0.1960         0.2639|*******************************************
         0.2639         0.3553|*****************************
         0.3553         0.4785|********************
         0.4785         0.6443|***********
         0.6443         0.8675|*****
         0.8675         1.1682|**
         1.1682         1.5730|*
         1.5730         2.1181|
         2.1181         2.8520|
         2.8520         3.8404|
                              +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                              0        400       800      1200      1600      2000      2400      2800      3200      3600      4000
```

TABLE 17-7
SE-Pit Area Cu Assay Statistics for Quaterra Drillholes

```
Statistics are limited to samples falling within the following polygon file limit:
     SE-Historical Pit Area
 NOTE: DH CLASS LIMITED BY
        Quaterra
  1 = Quaterra RC
  2 = Quaterra Core
  5 = QMT-Core-Twin
  6 = QMT-RC-Twin
 NUMBER OF SAMPLE DRILLHOLES CURRENTLY USED       :       170         NUMBER OF COMPOSITE DRILLHOLES CURRENTLY USED     :       170
 NUMBER OF SAMPLE ASSAY VALUES USED               :     15717         NUMBER OF COMPOSITE ASSAY VALUES USED             :      3755
     DATA TYPE IS SAMPLE
     CURRENT LABEL : cu
```

ROCK TYPE	SAMPLE COUNT MISSING	SAMPLE COUNT BELOW LIMITS	SAMPLE COUNT ABOVE LIMITS	SAMPLE COUNT INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	44	0	0	3745	0.00500	2.6500	0.13930	0.02976	0.17252	1.2385	-2.4597	1.0658	1.0324	0.1456	1.3795
20	5	0	0	1029	0.00500	1.5600	0.12456	0.02245	0.14982	1.2028	-2.7275	1.5017	1.2255	0.1385	1.8680
30	0	0	0	87	0.00500	0.28000	0.03672	0.00214	0.04624	1.2590	-3.7427	0.7752	0.8805	0.0349	1.0822
9999	2	0	0	1	0.01000	0.01000	0.01000	0.	0.	0.0000	-4.6052	0.0000	0.0009	0.0100	0.0009
ALL	51	0	0	4862	0.00500	2.6500	0.13432	0.02792	0.16710	1.2441	-2.5398	1.1918	1.0917	0.1431	1.5142

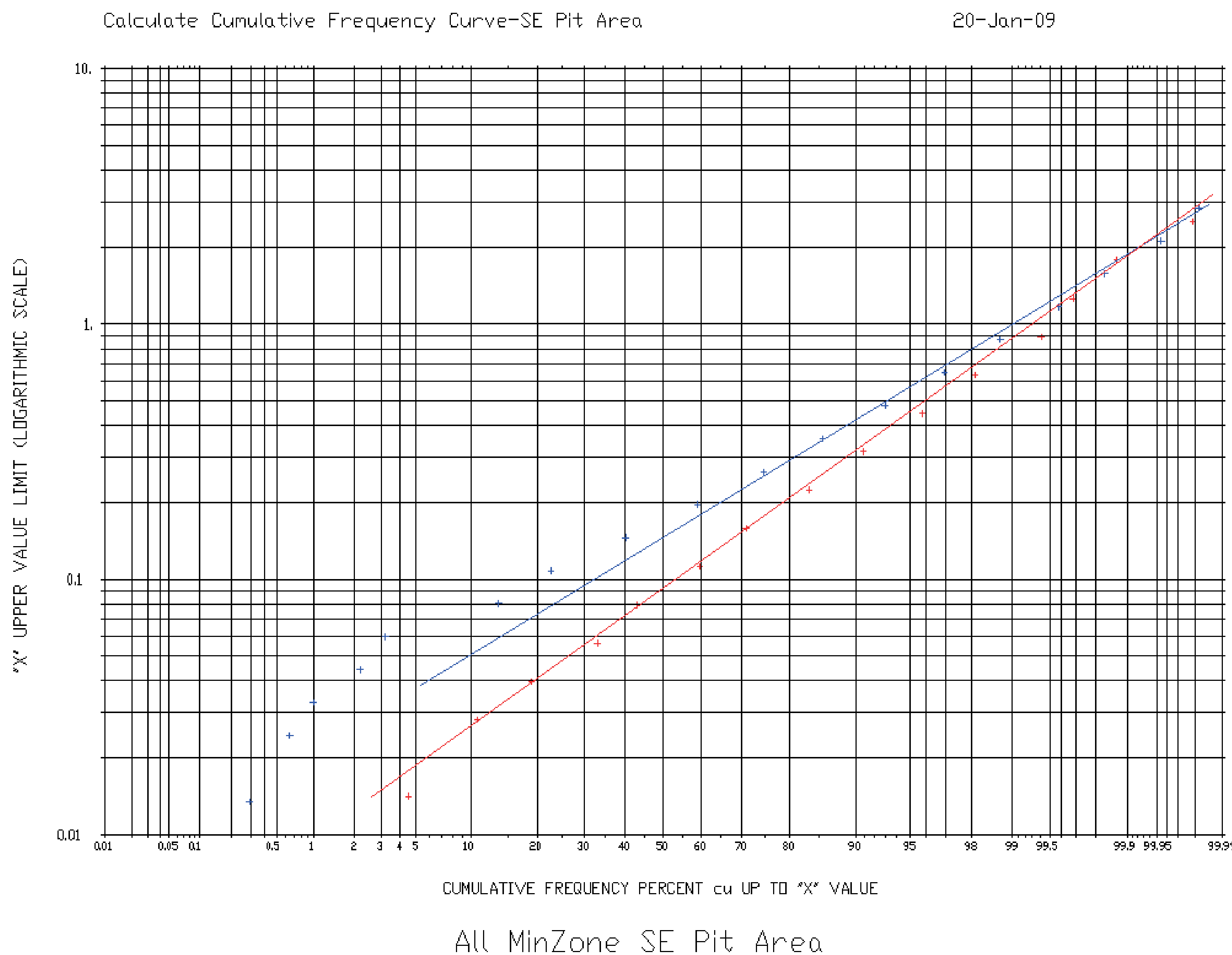
```
    LOWER BOUND   UPPER BOUND          60        120        180        240        300        360        420        480        540        600
         >=            <       +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
         0.0050        0.0068|************************
         0.0068        0.0094|
         0.0094        0.0128|**********************************
         0.0128        0.0175|
         0.0175        0.0240|************************************************
         0.0240        0.0328|***************************************************************
         0.0328        0.0449|***********************************************************
         0.0449        0.0615|****************************************************************************************
         0.0615        0.0841|************************************************************************
         0.0841        0.1151|*******************************************************************************************
         0.1151        0.1575|**************************************************************************************
         0.1575        0.2156|**************************************************************************************
         0.2156        0.2950|********************************************************
         0.2950        0.4036|**************************************
         0.4036        0.5523|**********************
         0.5523        0.7558|************
         0.7558        1.0343|****
         1.0343        1.4153|**
         1.4153        1.9367|*
         1.9367        2.6503|*
                               +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                               0         60        120        180        240        300        360        420        480        540        600
```

TABLE 17-8
NW Area Cu Assay Statistics for Quaterra Drillholes

```
Statistics are limited to samples falling within the following polygon file limit:
     NW-Out Area
 NOTE: DH CLASS LIMITED BY
        Quaterra
  1 = Quaterra RC
  2 = Quaterra Core
  5 = QMT-Core-Twin
  6 = QMT-RC-Twin
 NUMBER OF SAMPLE DRILLHOLES CURRENTLY USED       :       170         NUMBER OF COMPOSITE DRILLHOLES CURRENTLY USED    :       170
 NUMBER OF SAMPLE ASSAY VALUES USED               :     15717         NUMBER OF COMPOSITE ASSAY VALUES USED            :      3755
     DATA TYPE IS SAMPLE
     CURRENT LABEL : cu
```

ROCK TYPE	SAMPLE COUNT MISSING	BELOW LIMITS	ABOVE LIMITS	INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	33	0	0	3381	0.00500	2.9000	0.07843	0.01168	0.10809	1.3782	-2.9944	0.8710	0.9333	0.0774	1.1787
20	40	1	0	5374	0.00500	8.8500	0.12482	0.06772	0.26024	2.0850	-2.9038	1.6090	1.2685	0.1225	1.9994
30	17	0	0	1662	0.00500	5.2900	0.10192	0.08075	0.28417	2.7882	-3.1346	1.3926	1.1801	0.0873	1.7393
9999	16	0	0	0	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.	0.0000
ALL	106	1	0	10417	0.00500	8.8500	0.10611	0.05204	0.22811	2.1498	-2.9700	1.3418	1.1583	0.1003	1.6810

```
    LOWER BOUND   UPPER BOUND          200       400       600       800      1000      1200      1400      1600      1800      2000
         >=            <       +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
        0.0050        0.0073|**************************
        0.0073        0.0106|***********************************************
        0.0106        0.0154|
        0.0154        0.0223|************************************************************
        0.0223        0.0324|**********************************************************
        0.0324        0.0471|**********************************************
        0.0471        0.0685|************************************************************************
        0.0685        0.0996|****************************************************************
        0.0996        0.1447|*********************************************************
        0.1447        0.2104|*************************************
        0.2104        0.3058|**********************
        0.3058        0.4444|**************
        0.4444        0.6459|*********
        0.6459        0.9388|****
        0.9388        1.3645|***
        1.3645        1.9833|*
        1.9833        2.8826|*
        2.8826        4.1897|
        4.1897        6.0896|
        6.0896        8.8509|
                           +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                           0        200       400       600       800      1000      1200      1400      1600      1800      2000
```



Issued by: TETRA TECH, 350 Indiana Street, Suite 500, Golden, Colorado 80401, (303) 217-5700 (303) 217-5705 fax	Prepared for: **QUATERRA ALASKA, INC.**	File Name: Fig17-4.cdr	**Figure 17-4**
	Project: MacArthur Copper Project	Project Number: 114-310920	**Probability Plots**
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2008	**Comparing Metech and Quaterra Cu Data**

17.5 Composite Data

The assay data was composited to a 20-foot bench so that the planning data better reflect future mining scenarios. The composites were assigned MinZones using the interpreted wireframes discussed. The process first used GEMS™ to assign a MinZone to each block within the model specified in TABLE 17-1. When a majority of a block fell within the interpreted MinZone wireframe it was assigned the code. These coded blocks were then imported into MicroModel® and used to tag and re-code each composite using a simple majority rule. TABLE 17-9 gives the count of MinZone for composites. This table for composites compares to TABLE 17-4 for assays. The total of 6,649 for all 20-foot composites is as expected, nearly one-fourth of the 26,727 count for 5-foot assays. Note that the plotted histograms shown in TABLES 17-10 through 17-12 are more lognormal-like then the original assay data showed. Also note that the average values of the composites are quite similar to the averages shown for assays, and the coefficient of variation (CV) have been reduced.

17.6 Twinned Hole Study

Reviewing the statistics of Anaconda and Quaterra data for either assay or composite creates a concern that Anaconda data may be biased higher than Quaterra. If that were the case then combining the data would be inappropriate. This simple picture of a bias-high is complicated by the fact that some of the Anaconda data occurs in mined-out areas; and is potentially of higher grade. To test this, all data above the current topography was removed and statistics were re-run. There was no real change in the resultant statistics.

Another possible issue is that Anaconda data was generated by analytical techniques different from Quaterra. Calibration of the two data sets by regression appears impossible since there are no longer any Ananconda rejects to analyze. TABLE 17-13 lists side-by-side prospective holes that can be considered as “twinned”. For example, Anaconda’s RC hole M120-C50-1 is twinned by core hole QMT-4. Anaconda’s M45-C1-1 is twinned by QMT-1 and again twinned two Quaterra RC holes QMT-1aR and QMT-1bR. The quality of the twinning varies as the separation distances between holes tend to increase with depth. The separation distance of the composited data was calculated and used to filter pairs of data considered to be too far apart. FIGURE 17-5 shows the statistical comparison between Anaconda indicated with an “a” in TABLE 17-13 and Quaterra’s core indicated with a “b” at distances less than 11 feet apart.

TABLE 17-9
Minzone Composite Count

ROCK COUNT FOR COMPOSITE

Quatera & Metech Class: 1 = Quaterra RC 2 = Quaterra Core 3 = Metech RC 4 = Metech RC-Twin
5 = QMT-Core-Twin 6 = QMT-RC-Twin

POLYGON LIMITING FILE USED: None

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
0	398	55	370	12	224	85	119
10	4094	29	370	11	224	70	121
20	1246	29	316	27	207	66	111
30	578	29	315	27	207	1	101
90	256	221	370	17	224	2	87
9999	77	29	384	44	122	66	122
TOTAL	6649						

Quatera Class: 1 = Quaterra RC 2 = Quaterra Core RC-Twin 5 = QMT-Core-Twin 6 = QMT-RC-Twin
POLYGON LIMITING FILE USED: NW-Out Area

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
0	19	55	370	27	224	85	119
10	760	29	370	27	224	73	121
20	992	29	298	27	207	66	111
30	521	29	298	27	207	1	101
90	177	263	370	139	224	2	87
9999	77	29	29	44	44	122	122
TOTAL	2546						

Metech Class: 3 = Metech RC 4 = Metech RC-Twin
POLYGON LIMITING FILE USED: SE-Historical Pit Area

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
0	360	194	316	12	120	86	100
10	2434	190	335	11	124	72	100
20	81	205	316	50	123	70	87
30	6	224	289	63	111	69	72
90	13	221	335	17	118	70	81
TOTAL	2894						

Quatera Class: 1 = Quaterra 2 = Quaterra Core 5 = QMT-Core-Twin 6 = QMT-RC-Twin
POLYGON LIMITING FILE USED: SE-Historical Pit Area

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
0	19	243	347	64	128	87	93
10	900	188	368	12	131	70	97
20	173	188	315	41	127	66	91
30	51	188	315	44	127	64	86
90	66	324	368	69	131	67	75
TOTAL	1209						

TABLE 17-10
SE Area Cu Composite Statistics for Anaconda (Metech)

```
Statistics are limited to samples falling within the following polygon file limit:
     SE-Historical Pit Area
 NOTE: DH CLASS LIMITED BY
        Metech (Anaconda)
  3 = Metech RC
  4 = Metech RC-Twin
 NUMBER OF SAMPLE DRILLHOLES CURRENTLY USED       :       279         NUMBER OF COMPOSITE DRILLHOLES CURRENTLY USED    :       279
 NUMBER OF SAMPLE ASSAY VALUES USED               :     11010         NUMBER OF COMPOSITE ASSAY VALUES USED            :      2894
     DATA TYPE IS COMPOSITE
     CURRENT LABEL : c_cu
```

ROCK TYPE	COMPOSITE COUNT MISSING	BELOW LIMITS	ABOVE LIMITS	INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	175	0	0	2259	0.01000	1.7409	0.20828	0.02116	0.14547	0.6984	-1.7551	0.3739	0.6115	0.2084	0.6733
20	10	0	0	71	0.04000	0.47226	0.16998	0.00904	0.09507	0.5593	-1.9098	0.2729	0.5224	0.1698	0.5601
30	4	0	0	2	0.11920	0.18320	0.15120	0.00205	0.04525	0.2993	-1.9121	0.0462	0.2149	0.1512	0.2174
90	3	0	0	10	0.04526	0.15037	0.10794	0.000813	0.02852	0.2642	-2.2672	0.0963	0.3102	0.1087	0.3179
ALL	192	0	0	2342	0.01000	1.7409	0.20664	0.02077	0.14413	0.6975	-1.7621	0.3712	0.6092	0.2067	0.6704

LOWER BOUND >=	UPPER BOUND <	FREQ	PERCENT	MEAN	CUM FREQ (ALL VALUES < UPPER BOUND)	PERCENT	CUM MEAN	CUM FREQ (ALL VALUES >= LOWER BOUND)	PERCENT	CUM MEAN
0.0100	0.0129	6	0.26	0.0109	6	0.26	0.0109	2342	100.00	0.2066
0.0129	0.0168	1	0.04	0.0162	7	0.30	0.0117	2336	99.74	0.2071
0.0168	0.0217	5	0.21	0.0194	12	0.51	0.0149	2335	99.70	0.2072
0.0217	0.0281	2	0.09	0.0276	14	0.60	0.0167	2330	99.49	0.2076
0.0281	0.0363	8	0.34	0.0332	22	0.94	0.0227	2328	99.40	0.2078
0.0363	0.0470	15	0.64	0.0417	37	1.58	0.0304	2320	99.06	0.2084
0.0470	0.0609	52	2.22	0.0549	89	3.80	0.0447	2305	98.42	0.2095
0.0609	0.0788	102	4.36	0.0711	191	8.16	0.0588	2253	96.20	0.2130
0.0788	0.1019	244	10.42	0.0909	435	18.57	0.0768	2151	91.84	0.2198
0.1019	0.1319	307	13.11	0.1170	742	31.68	0.0934	1907	81.43	0.2363
0.1319	0.1708	445	19.00	0.1513	1187	50.68	0.1151	1600	68.32	0.2591
0.1708	0.2210	397	16.95	0.1950	1584	67.63	0.1351	1155	49.32	0.3007
0.2210	0.2861	326	13.92	0.2509	1910	81.55	0.1549	758	32.37	0.3561
0.2861	0.3703	205	8.75	0.3250	2115	90.31	0.1714	432	18.45	0.4354
0.3703	0.4793	126	5.38	0.4192	2241	95.69	0.1853	227	9.69	0.5352
0.4793	0.6204	55	2.35	0.5383	2296	98.04	0.1938	101	4.31	0.6798
0.6204	0.8029	24	1.02	0.7111	2320	99.06	0.1991	46	1.96	0.8491
0.8029	1.0393	16	0.68	0.8825	2336	99.74	0.2038	22	0.94	0.9995
1.0393	1.3451	4	0.17	1.1165	2340	99.91	0.2054	6	0.26	1.3115
1.3451	1.7410	2	0.09	1.7016	2342	100.00	0.2066	2	0.09	1.7017

```
  LOWER BOUND   UPPER BOUND        50        100        150        200        250        300        350        400        450        500
       >=             <      +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
     0.0100        0.0129|*
     0.0129        0.0168|
     0.0168        0.0217|*
     0.0217        0.0281|
     0.0281        0.0363|**
     0.0363        0.0470|***
     0.0470        0.0609|**********
     0.0609        0.0788|********************
     0.0788        0.1019|*************************************************
     0.1019        0.1319|*************************************************************
     0.1319        0.1708|*****************************************************************************************
     0.1708        0.2210|*******************************************************************************
     0.2210        0.2861|*****************************************************************
     0.2861        0.3703|*****************************************
     0.3703        0.4793|*************************
     0.4793        0.6204|***********
     0.6204        0.8029|*****
     0.8029        1.0393|***
     1.0393        1.3451|*
     1.3451        1.7410|
                             +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                             0        50        100        150        200        250        300        350        400        450        500
```

TABLE 17-11
SE Area Cu Assay Statistics for Quaterra Composites

```
Statistics are limited to samples falling within the following polygon file limit:
     SE-Historical Pit Area
 NOTE: DH CLASS LIMITED BY
        Quaterra
  1 = Quaterra RC
  2 = Quaterra Core
  5 = QMT-Core-Twin
  6 = QMT-RC-Twin
 NUMBER OF SAMPLE DRILLHOLES CURRENTLY USED       :       173         NUMBER OF COMPOSITE DRILLHOLES CURRENTLY USED    :       173
 NUMBER OF SAMPLE ASSAY VALUES USED               :     15717         NUMBER OF COMPOSITE ASSAY VALUES USED            :      3755
     DATA TYPE IS COMPOSITE
     CURRENT LABEL : c_cu
```

ROCK TYPE	COMPOSITE COUNT MISSING	BELOW LIMITS	ABOVE LIMITS	INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	32	0	0	868	0.00500	1.3144	0.13970	0.01789	0.13376	0.9575	-2.3504	0.8753	0.9356	0.1477	1.1831
20	13	0	0	160	0.00625	0.56906	0.14893	0.01533	0.12383	0.8315	-2.2824	0.8696	0.9325	0.1576	1.1773
30	7	0	0	44	0.00500	0.44302	0.05707	0.00518	0.07200	1.2616	-3.2766	0.7472	0.8644	0.0549	1.0540
90	8	0	0	58	0.00500	0.30000	0.05447	0.00347	0.05889	1.0811	-3.4275	1.1582	1.0762	0.0579	1.4779
ALL	60	0	0	1130	0.00500	1.3144	0.13342	0.01688	0.12994	0.9739	-2.4321	0.9709	0.9854	0.1427	1.2808

LOWER BOUND >=	UPPER BOUND <	FREQ	PERCENT	MEAN	CUM FREQ	PERCENT	CUM MEAN (ALL VALUES < UPPER BOUND)	CUM FREQ	PERCENT	CUM MEAN (ALL VALUES >= LOWER BOUND)
0.0050	0.0066	22	1.95	0.0054	22	1.95	0.0054	1130	100.00	0.1334
0.0066	0.0087	4	0.35	0.0076	26	2.30	0.0058	1108	98.05	0.1360
0.0087	0.0115	20	1.77	0.0101	46	4.07	0.0077	1104	97.70	0.1364
0.0115	0.0152	15	1.33	0.0136	61	5.40	0.0091	1084	95.93	0.1388
0.0152	0.0201	22	1.95	0.0179	83	7.35	0.0115	1069	94.60	0.1405
0.0201	0.0266	35	3.10	0.0235	118	10.44	0.0150	1047	92.65	0.1431
0.0266	0.0351	74	6.55	0.0309	192	16.99	0.0212	1012	89.56	0.1472
0.0351	0.0464	91	8.05	0.0404	283	25.04	0.0274	938	83.01	0.1564
0.0464	0.0614	102	9.03	0.0539	385	34.07	0.0344	847	74.96	0.1689
0.0614	0.0811	102	9.03	0.0723	487	43.10	0.0423	745	65.93	0.1846
0.0811	0.1071	117	10.35	0.0934	604	53.45	0.0522	643	56.90	0.2024
0.1071	0.1415	142	12.57	0.1243	746	66.02	0.0660	526	46.55	0.2266
0.1415	0.1870	121	10.71	0.1624	867	76.73	0.0794	384	33.98	0.2645
0.1870	0.2471	113	10.00	0.2170	980	86.73	0.0953	263	23.27	0.3114
0.2471	0.3265	73	6.46	0.2817	1053	93.19	0.1082	150	13.27	0.3826
0.3265	0.4313	38	3.36	0.3640	1091	96.55	0.1171	77	6.81	0.4783
0.4313	0.5699	28	2.48	0.4892	1119	99.03	0.1264	39	3.45	0.5896
0.5699	0.7530	6	0.53	0.6442	1125	99.56	0.1292	11	0.97	0.8453
0.7530	0.9949	2	0.18	0.8385	1127	99.73	0.1304	5	0.44	1.0865
0.9949	1.3145	3	0.27	1.2518	1130	100.00	0.1334	3	0.27	1.2518

```
    LOWER BOUND  UPPER BOUND        20        40        60        80       100       120       140       160       180       200
         >=           <       +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
       0.0050        0.0066|***********
       0.0066        0.0087|**
       0.0087        0.0115|**********
       0.0115        0.0152|********
       0.0152        0.0201|***********
       0.0201        0.0266|******************
       0.0266        0.0351|*************************************
       0.0351        0.0464|**********************************************
       0.0464        0.0614|***************************************************
       0.0614        0.0811|***************************************************
       0.0811        0.1071|***********************************************************
       0.1071        0.1415|***********************************************************************
       0.1415        0.1870|*************************************************************
       0.1870        0.2471|*********************************************************
       0.2471        0.3265|*************************************
       0.3265        0.4313|*******************
       0.4313        0.5699|**************
       0.5699        0.7530|***
       0.7530        0.9949|*
       0.9949        1.3145|**
                              +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                              0        20        40        60        80       100       120       140       160       180       200
```

TABLE 17-12

NW Area Cu Assay Statistics for Quaterra Composites

```
Statistics are limited to samples falling within the following polygon file limit:
    NW-Out Area
NOTE: DH CLASS LIMITED BY
       Quatera & Metech
 1 = Quaterra RC
 2 = Quaterra Core
 3 = Metech RC
 4 = Metech RC-Twin
 5 = QMT-Core-Twin
 6 = QMT-RC-Twin
NUMBER OF SAMPLE DRILLHOLES CURRENTLY USED      :       452        NUMBER OF COMPOSITE DRILLHOLES CURRENTLY USED    :      452
NUMBER OF SAMPLE ASSAY VALUES USED              :     26727        NUMBER OF COMPOSITE ASSAY VALUES USED            :     6649
    DATA TYPE IS COMPOSITE
    CURRENT LABEL : c_cu
```

ROCK TYPE	COMPOSITE COUNT: MISSING	BELOW LIMITS	ABOVE LIMITS	INSIDE LIMITS	UNTRANSFORMED STATISTICS: MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS: LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED: MEAN	COEF. OF VAR.
10	26	0	0	734	0.00500	1.3808	0.07837	0.00754	0.08684	1.1081	-2.8981	0.6806	0.8250	0.0775	0.9875
20	20	0	0	972	0.00500	3.2945	0.13548	0.04101	0.20251	1.4948	-2.5438	1.0606	1.0298	0.1335	1.3740
30	58	0	0	463	0.00500	1.7977	0.08652	0.02882	0.16976	1.9622	-3.1199	1.1798	1.0862	0.0797	1.5012
90	28	0	0	149	0.00500	0.51141	0.06167	0.00730	0.08542	1.3851	-3.4154	1.1871	1.0896	0.0595	1.5092
ALL	132	0	0	2318	0.00500	3.2945	0.10287	0.02658	0.16305	1.5850	-2.8271	1.0468	1.0232	0.0999	1.3597

LOWER BOUND >=	UPPER BOUND <	FREQ	PERCENT	MEAN	CUM FREQ (ALL VALUES < UPPER BOUND)	PERCENT	CUM MEAN	CUM FREQ (ALL VALUES >= LOWER BOUND)	PERCENT	CUM MEAN
0.0050	0.0069	51	2.20	0.0055	51	2.20	0.0055	2318	100.00	0.1029
0.0069	0.0096	34	1.47	0.0081	85	3.67	0.0065	2267	97.80	0.1051
0.0096	0.0132	78	3.36	0.0113	163	7.03	0.0088	2233	96.33	0.1065
0.0132	0.0183	108	4.66	0.0159	271	11.69	0.0116	2155	92.97	0.1100
0.0183	0.0253	189	8.15	0.0217	460	19.84	0.0158	2047	88.31	0.1149
0.0253	0.0350	255	11.00	0.0303	715	30.85	0.0209	1858	80.16	0.1244
0.0350	0.0485	280	12.08	0.0421	995	42.92	0.0269	1603	69.15	0.1394
0.0485	0.0671	298	12.86	0.0570	1293	55.78	0.0338	1323	57.08	0.1600
0.0671	0.0928	282	12.17	0.0790	1575	67.95	0.0419	1025	44.22	0.1900
0.0928	0.1284	222	9.58	0.1089	1797	77.52	0.0502	743	32.05	0.2321
0.1284	0.1776	196	8.46	0.1498	1993	85.98	0.0600	521	22.48	0.2845
0.1776	0.2456	138	5.95	0.2078	2131	91.93	0.0696	325	14.02	0.3658
0.2456	0.3398	77	3.32	0.2834	2208	95.25	0.0770	187	8.07	0.4824
0.3398	0.4701	52	2.24	0.3872	2260	97.50	0.0842	110	4.75	0.6217
0.4701	0.6503	31	1.34	0.5471	2291	98.84	0.0904	58	2.50	0.8319
0.6503	0.8996	13	0.56	0.7194	2304	99.40	0.0940	27	1.16	1.1589
0.8996	1.2445	4	0.17	1.0489	2308	99.57	0.0956	14	0.60	1.5671
1.2445	1.7217	7	0.30	1.4869	2315	99.87	0.0998	10	0.43	1.7744
1.7217	2.3817	2	0.09	2.0203	2317	99.96	0.1015	3	0.13	2.4450
2.3817	3.2948	1	0.04	3.2945	2318	100.00	0.1029	1	0.04	3.2945

```
  LOWER BOUND   UPPER BOUND        40        80       120       160       200       240       280       320       360       400
      >=             <      +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
     0.0050         0.0069|*************
     0.0069         0.0096|*********
     0.0096         0.0132|********************
     0.0132         0.0183|***************************
     0.0183         0.0253|***********************************************
     0.0253         0.0350|****************************************************************
     0.0350         0.0485|**********************************************************************
     0.0485         0.0671|***************************************************************************
     0.0671         0.0928|***********************************************************************
     0.0928         0.1284|********************************************************
     0.1284         0.1776|*************************************************
     0.1776         0.2456|***********************************
     0.2456         0.3398|*******************
     0.3398         0.4701|*************
     0.4701         0.6503|********
     0.6503         0.8996|***
     0.8996         1.2445|*
     1.2445         1.7217|**
     1.7217         2.3817|*
     2.3817         3.2948|
                            +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                            0        40        80       120       160       200       240       280       320       360       400
```

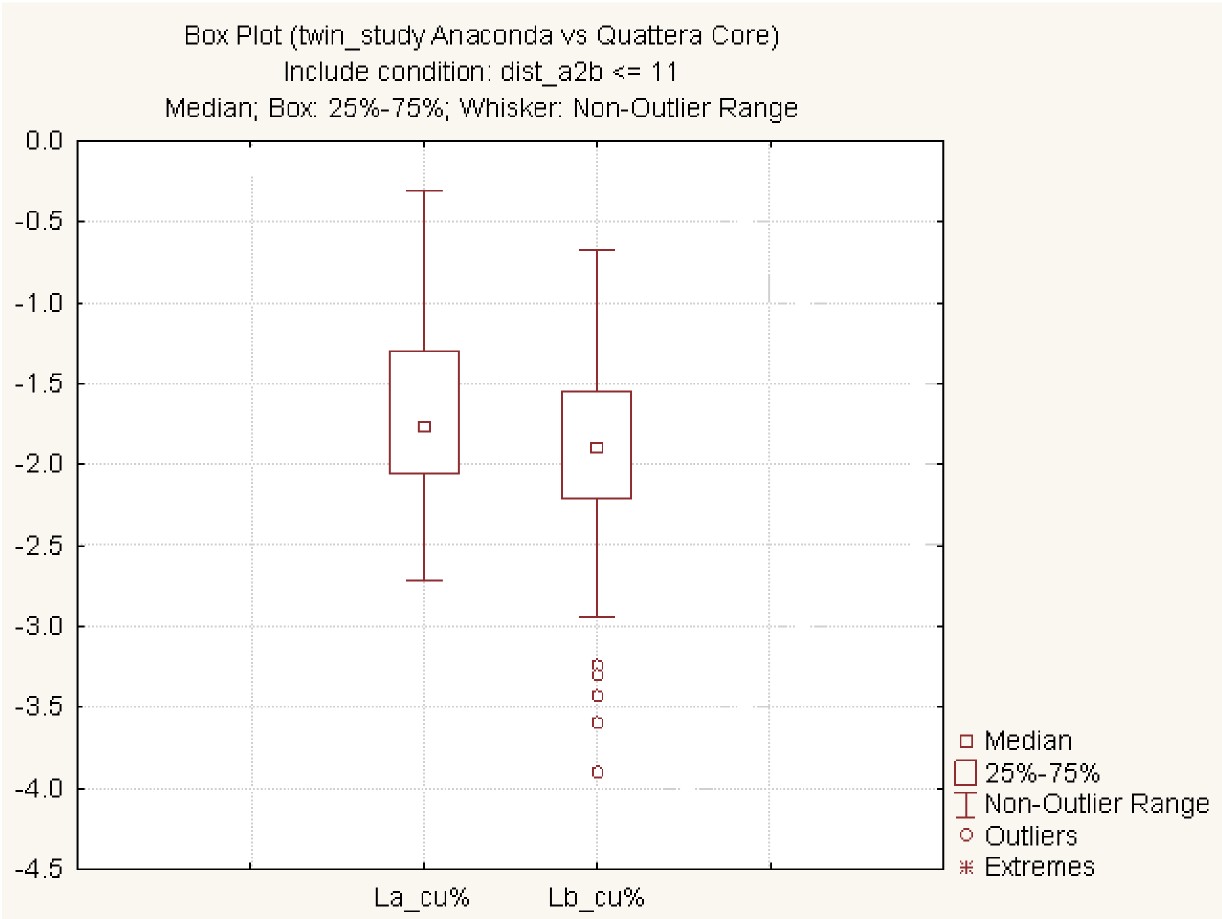
TABLE 17-13: LIST OF TWIN HOLES
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

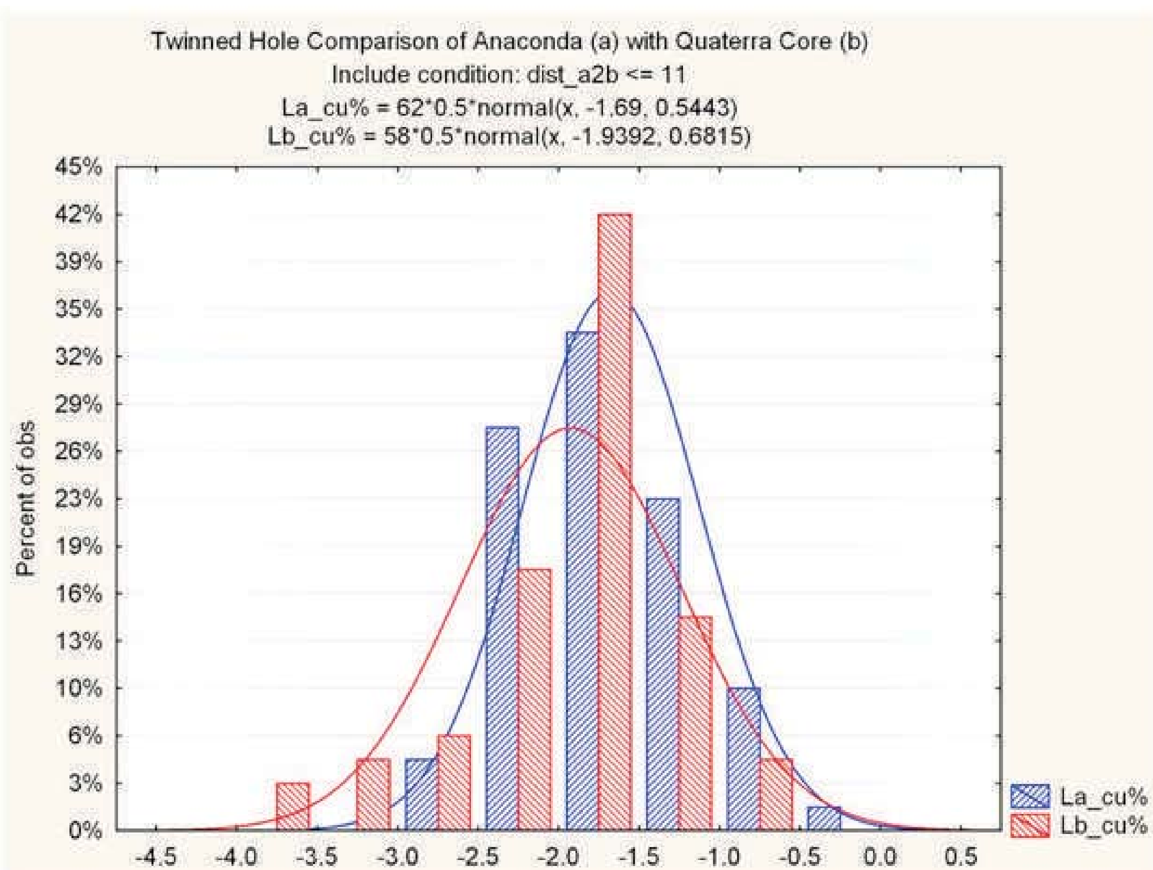
(a.) Anaconda Hole	(b.) Twin Core Hole	(c.) Twin RC Hole	(d.)Twin RC Hole
(Metech)	**Quaterra Core**	**Quaterra RC**	**Quaterra RC**
M120-C50-1	QMT-4		
M120-C50-2	QMT-5	QMT-5aR	
M165-K-1	QMT-11	QMT-11aR	
M172.5-I-1	QMT-8	QMT-8aR	
M195-M-1	QMT-13	QMT-13aR	
M195-M-2	QMT-14	QMT-14aR	QMT-14bR
M205-G-2	QMT-6		
M210-O-1	QMT-15	QMT-15aR	
M210-K-1	QMT-10	QMT-10aR	QMT-10bR
M270-Q-1	QMT-17	QMT-17aR	QMT-17bR
M270-S-1	QMT-18	QMT-18aR	QMT-18bR
M30-K-1	QMT-12	QMT-12aR	
M45-C1-1	QMT-1	QMT-1aR	QMT-1bR
M45-C1-2	QMT-2	QMT-2aR	
M75-I-1	QMT-9		
M90-O-1	QMT-16	QMT-16aR	
M90-B-1-2	QMT-3	QMT-3aR	
M-90-G-4	QMT-19		
M95-G-1	QMT-7		

FIGURE 17-5 has two sections, with the top section showing a side-by-side "box-and-whisker" plot of the log transformed composited copper values. Here the Anaconda data is listed as La_cu% for the log transformed copper grade of "a", and Lb_cu% is for the Quaterra core twin. The vertical scale is in natural log of copper grade. For example a -2 converted to a real value by exponentiating gives a grade of 0.0135 percent TCu. The large box is designed to contain the grades between the 25 and 75th percentile. The small box contains the median grade (50%). Note that the lowest data for Anaconda is approximately 0.05 percent TCu, while Quaterra's low end, shown as circles representing outliers, have values as low 0.02 percent TCu.

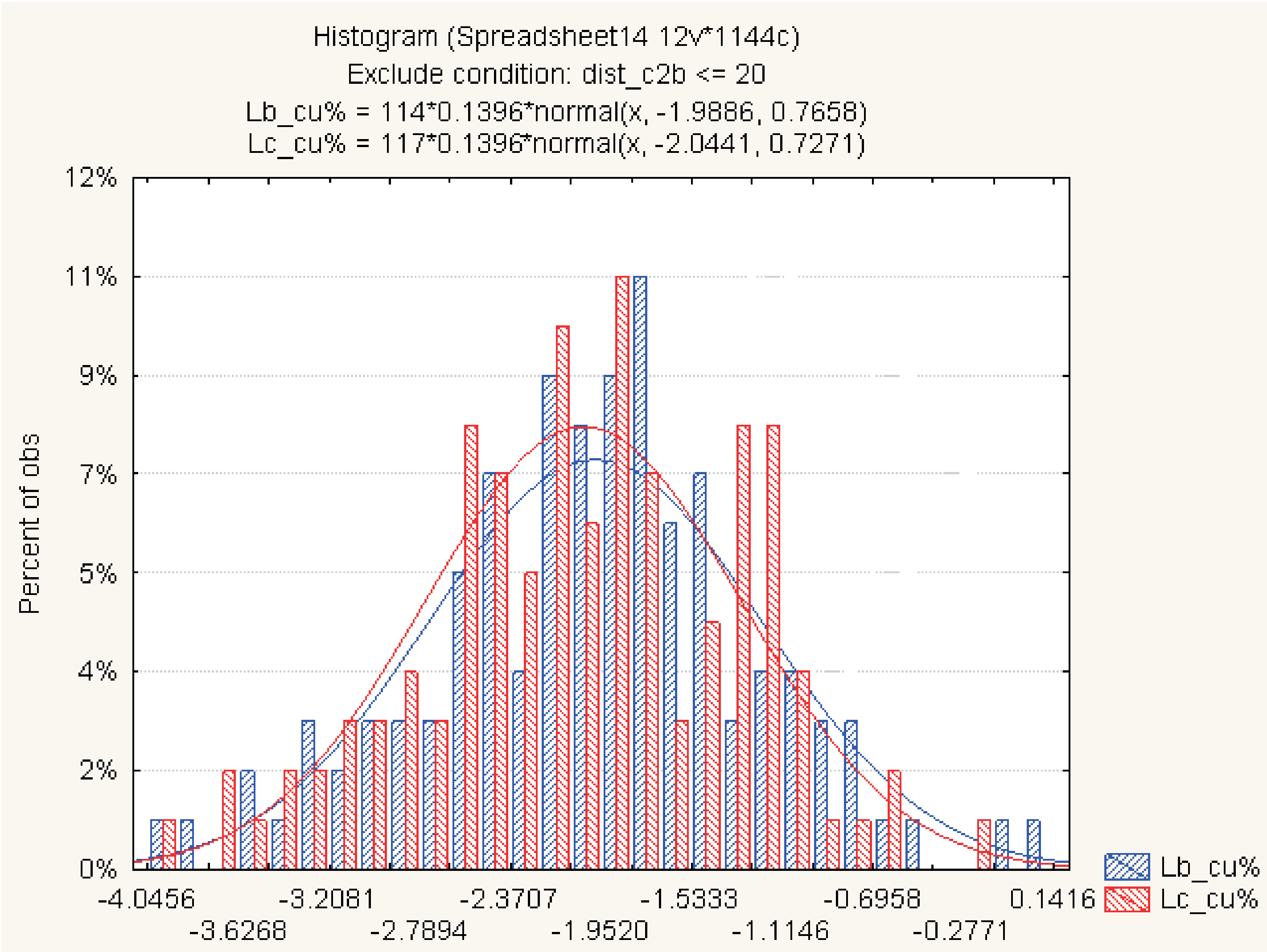
The second part of the figure shows an "inter-leaved" histogram, with the blue bars representing Anaconda data and blue line a theoretical lognormal fit and red bars representing the same for Quaterra data. A t-test of the two distributions indicated that the null hypothesis, that the two distributions come from the same population with the same mean, could not be rejected at a 95 percent confidence. This test supports the decision to combine the two datasets. Not shown here was a second variation of the above test which estimated the same blocks by separately kriging each data set. A dependent t-test of the difference in each block value was tested against the null hypothesis of a mean of zero. This second test produced the same statistical outcome.

FIGURE 17-6 repeats the above exercise showing the inter-leaved histograms for Quaterra Core (b) and Quaterra RC (c). Again a t-test comparing the two distributions failed to reject the hypothesis that they were the same at a 95 percent confidence level. This implies that core and RC data can also be pooled.





Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	***QUATERRA ALASKA, INC.***	Fig17-5.cdr	**Figure 17-5** **Comparing Twinned Composites from Metech RC Drillholes (A) with Quaterra Core holes (B)**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009	



Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	*QUATERRA ALASKA, INC.*	Fig17-6.cdr	**Figure 17-6** **Comparing Twinned Composites from Quaterra (b) RC Drillholes with Quaterra Core holes (c)**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009	

17.7 Variography

A total of twenty-two (21 directional and 1 omni-directional) variograms were calculated using MicroModel® for each MinZone within each model area (NW and SE). The program searches along each direction for data pairs within a 12.5-degree window angle and 5-foot tolerance band. All experimental variograms are inspected so that spatial continuity along a primary, secondary and tertiary direction can be modelled.

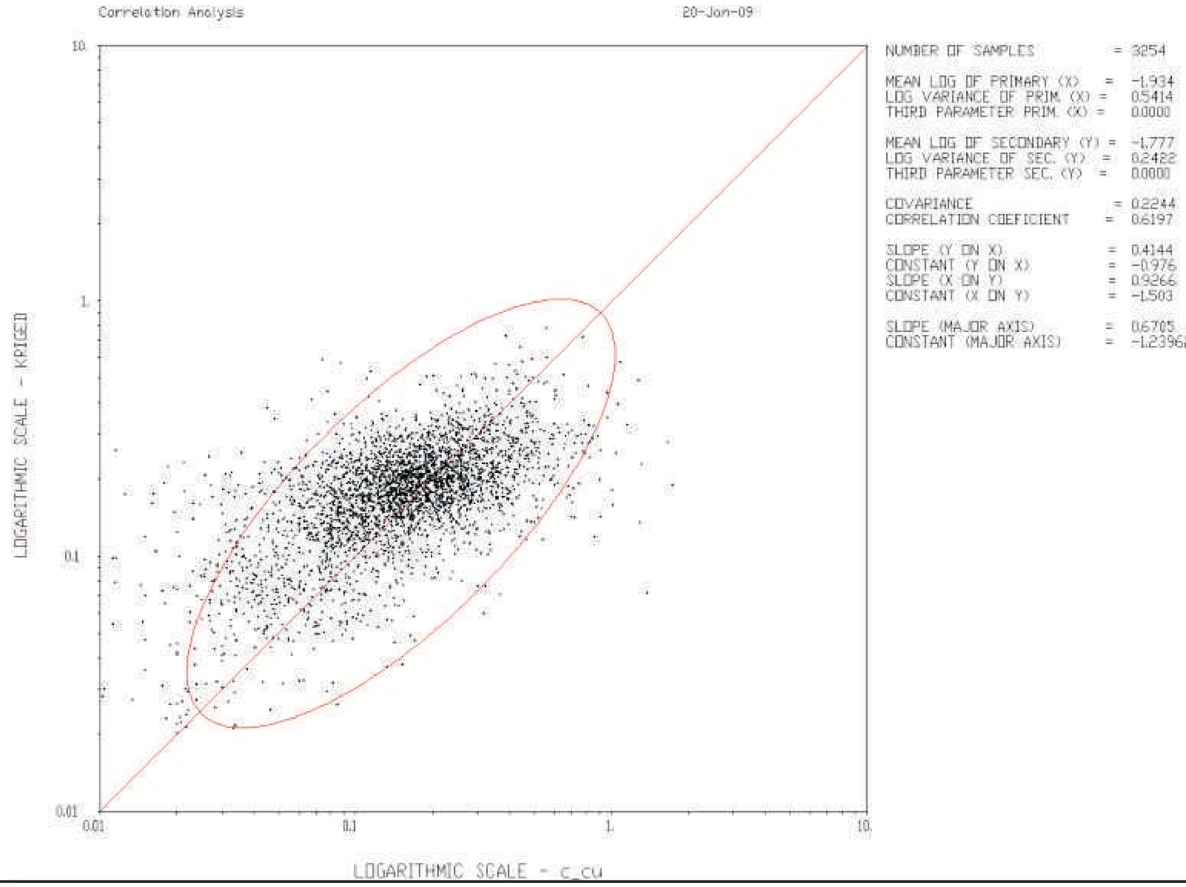
Each variogram model was then validated using the "jackknifing" method. This method sequentially removes values and then uses the remaining composites to krige the missing value using the proposed variogram. An example correlation plot of estimate and true values generated by jackknifing is shown in the top panel of FIGURE 17-7. The scatter of points represents the plot of estimated value and true value pairs. A perfect estimate would produce a scatter plot of points along a 45-degree line. This example shows a correlation of 62 percent. The ellipse contains 95 percent of the data.

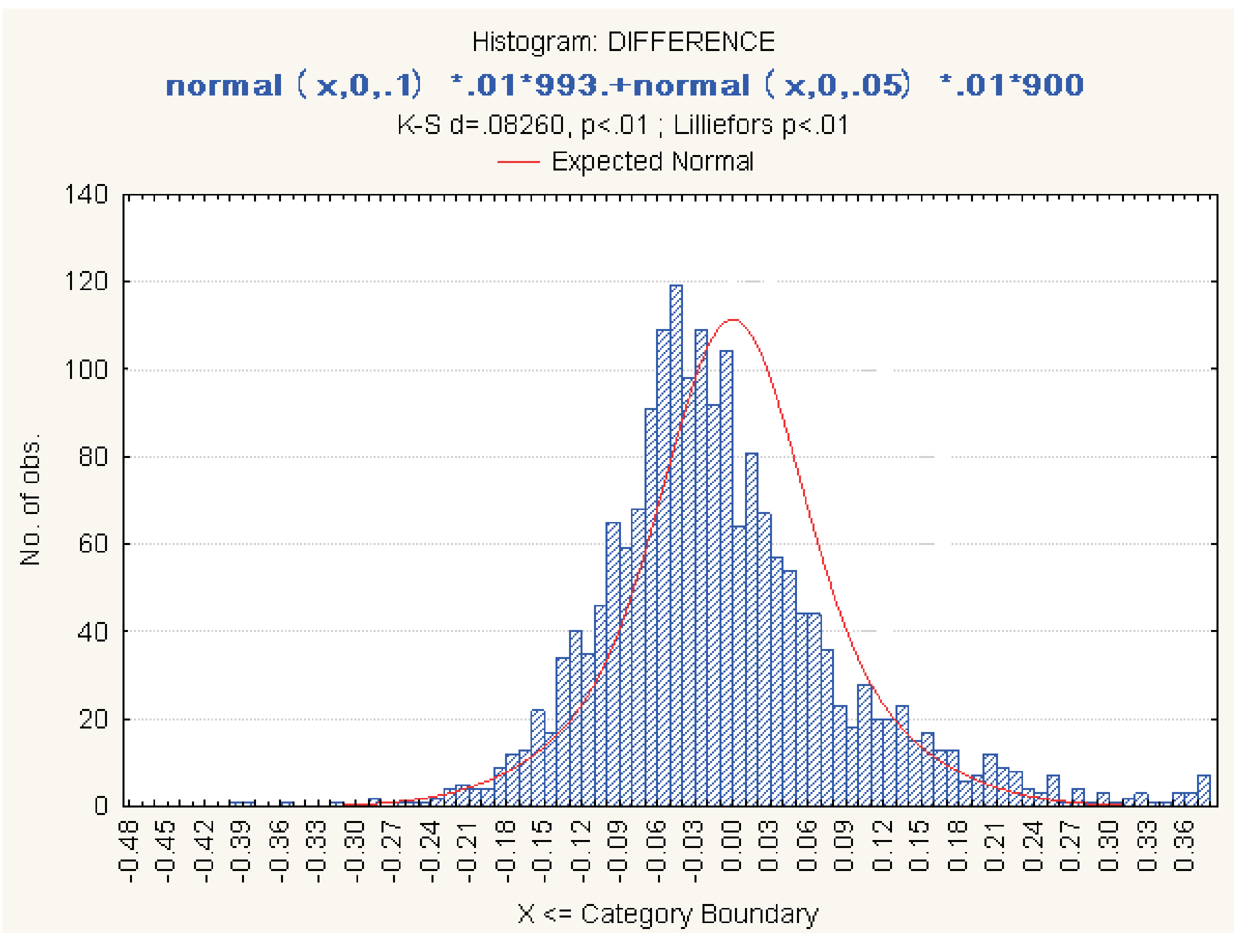
The second panel of FIGURE 17-7 shows a histogram of the difference between the estimated and true values, usually referred to as the error of estimation. This histogram shows that the error centers at zero and is slightly skewed positive. Kriging as an averaging method will always underestimate the highest grades; hence positive skew of the jackknife error is expected.

FIGURE 17-8 shows two selected plots that combine several variogram calculations. The top figure shows four directional variograms for the MinZone 10 within the SE area. The bottom figure shows two directional variograms from the NW area, MinZone 10. Each figure shows a single experimental directional variogram. The other experimental plots have been removed to limit the visual confusion. Along the experimental variogram plot, numbers are posted indicating the number of pairs used at each separation distance.

The variogram x-axis represents the separation distance of the selected pairs. The y-axis for this type of variogram represents the general relative variance between the sample pairs, but is unitized so that the final sill is 1.0 (dashed horizontal line). A series of nested spherical variogram functions has been fitted to the experimental data and are represented by the smooth curves rising from an intercept at the y-axis (the nugget) to the sill. Theoretical model variograms for the other directions have been plotted in various colors. Each curve represents variograms from other directions. The parameters for spherical models are listed in the right panel for each of the figures. An ellipse has been drawn indicating a representative anisotropy ratio and direction.

TABLE 17-14 lists the variogram parameters for each MinZone and model area.





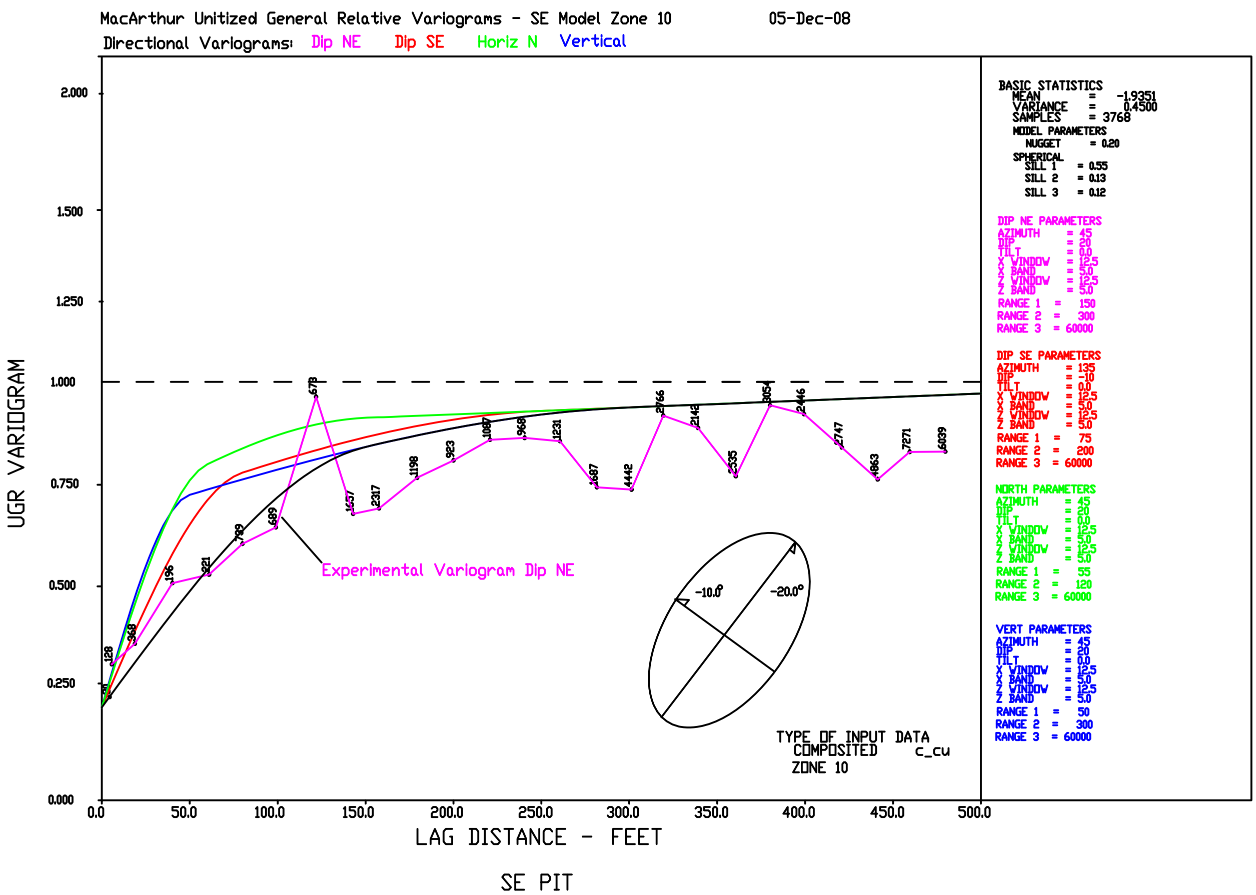
Issued by:

TETRA TECH

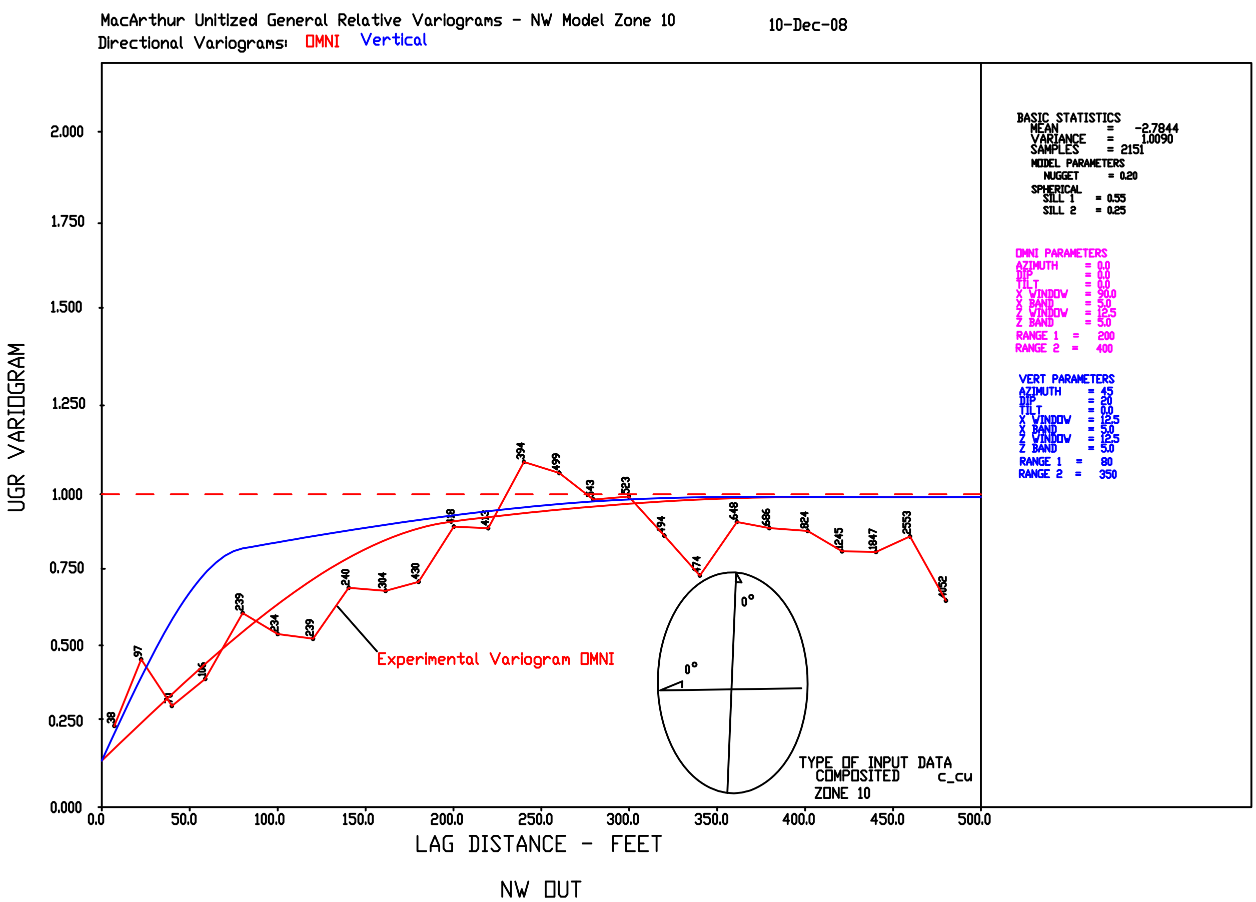
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Prepared for:	File Name:
QUATERRA ALASKA, INC.	Fig17-7.cdr
Project: MacArthur Copper Project	Project Number: 114-310920
Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009

Figure 17-7
Jackknife Validation of Kriging Model (SE Area, Minezone 10)



SE PIT



NW OUT

Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	Fig17-8.dwg	**Figure 17-8** **Selected Cu Variograms from SE and NW Areas**
	Project: MacArthur Copper Project	Project Number: 114-310829	
	Project Location: Lyon County, Nevada	Date of Issue: 02/12/2009	

TABLE 17-14: VARIOGRAM PARAMETERS
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Unitized General Relative Variogram Models by Zone	Spherical Variogram Parameters						
	Primary Range	Secondary Range	Tertiary Range	UGR Variance	Primary Axis Trend	Primary Axis Dip	Secondary Axis Rake
NW Model Zone 10							
Nugget	0	0	0	0.2	na	na	na
Structure 1	200	200	80	0.55	N 0° E	0°	0°
Structure 2	400	400	350	0.25	N 0° E	0°	0°
NW Model Zone 20							
Nugget	0	0	0	0.2	na	na	na
Structure 1	200	200	80	0.55	N 0° E	0°	0°
Structure 2	400	400	350	0.13	N 0° E	0°	0°
NW Model Zone 30							
Nugget	0	0	0	0.2	na	na	na
Structure 1	200	200	80	0.55	N 45° E	45°	0°
Structure 2	400	400	350	0.13	N 45° E	45°	0°
SE Model Zones 10							
Nugget	0	0	0	0.2	na	na	na
Structure 1	150	75	50	0.55	N 30° E	20°	-10°
Structure 2	300	200	300	0.13	N 30° E	20°	-10°
Structure 3	6000	6000	6000	0.12	N 30° E	20°	-10°
SE Model Zone 20							
Nugget	0	0	0	0.2	na	na	na
Structure 1	150	75	50	0.55	N 0° E	0°	0°
Structure 2	300	200	300	0.13	N 0° E	0°	0°
Structure 3	6000	6000	6000	0.12	N 0° E	0°	0°
SE Model Zone 30							
Nugget	0	0	0	0.2	na	na	na
Structure 1	150	75	50	0.55	N 45° E	45°	0°
Structure 2	300	200	300	0.13	N 45° E	45°	0°
Structure 3	6000	6000	6000	0.12	N 45° E	45°	0°

17.8 Kriging

Kriging requires not only a variogram model but other search parameters. FIGURE 17-9 and TABLE 17-15 shows the search parameters and variogram parameters used for block kriging of total copper. The table within the figure indicates that only MinZone 10 composites are used to estimate blocks that are classified as MinZone 10. Within the search ellipsoid, a specified number of samples are allowed to be selected. These constraints have been used to determine if a block will be estimated and to which resource class it will be assigned.

For example, MinZone 10 in the SE area has a search ellipse of 400x300x100 feet and is oriented so its primary (longest) axis has an azimuth of 30 degrees north, a dip of 20 degrees. The secondary axis will have a rake of -10 degrees. The following discussion of search parameters, as they relate to resource classification, is limited to a description of the minimum number of drillholes required to be used for each resource class. An additional condition involving kriging error also contributes to resource classification. Details regarding the impact of kriging error on resource classification will be discussed in SECTION 17-10.

Given the conditions in the search parameter table, a measured block requires a minimum of 22 samples, with a maximum of four samples per sector in a six sector search pattern and a maximum of three composites coming from a single drillhole. This implies that in most cases, for a block to be classified as measured there must be at least eight drillholes in four cardinal directions.

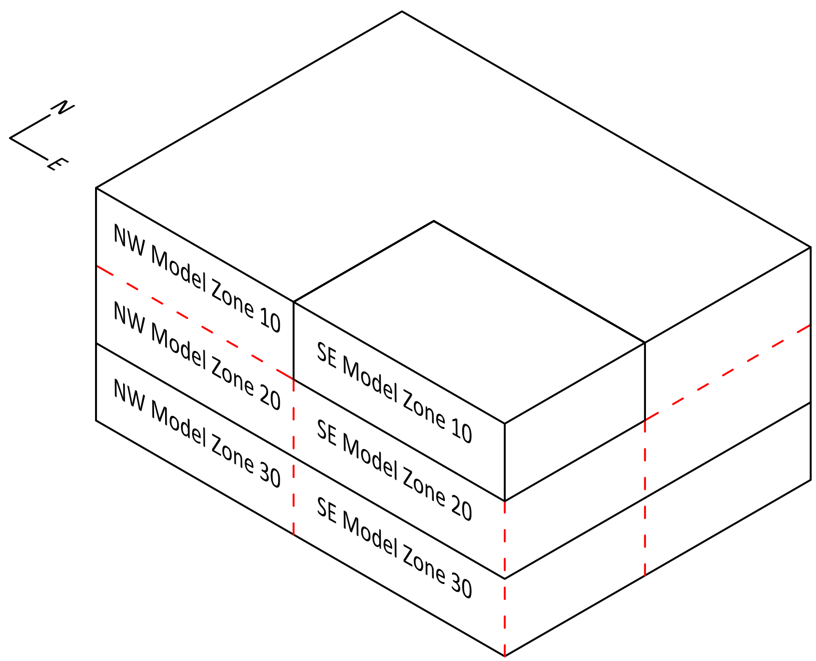
The constraints for an indicated block are not as stringent as for a measured block. An indicated block requires a minimum of 12 samples, with a maximum of three samples per sector in a sector search pattern and a maximum number of four composites coming from a single drillhole. This implies that for most cases an indicated block must have at least three drillholes in three of the four cardinal directions.

Relaxing the constraints even more, an inferred block requires a minimum of one sample, with a maximum of three samples per sector in a sector search pattern and a maximum number of four composites from a single drillhole. This implies that for most cases an inferred block must have at least one hole with 20 feet of mineralized material within the appropriate MinZone.

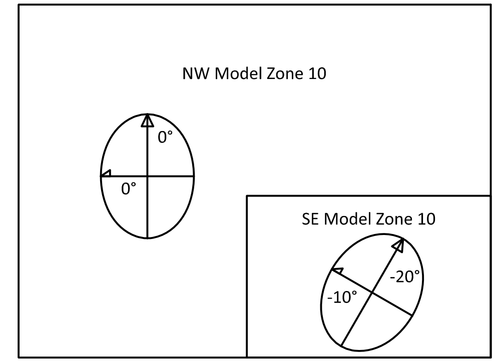
TABLE 17-16 gives the count of the potentially estimated blocks for each of the MinZones in the SE and NW areas. It should be noted that not all of these blocks will be estimated. TABLES 17-17 and 17-18 give the statistics for the kriged blocks within the SE and NW Areas respectively.

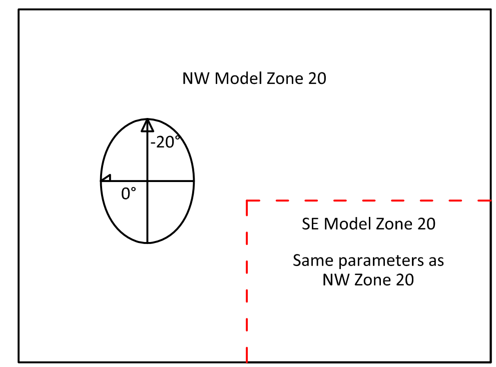
17.9 Kriging Error

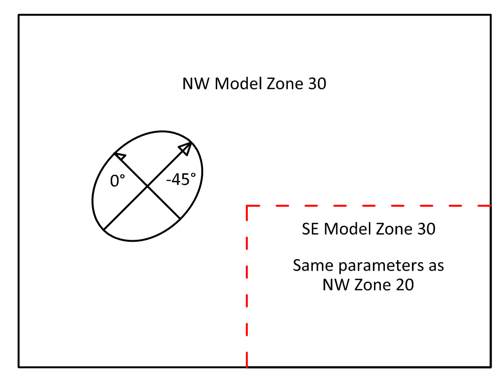
In addition to the kriging search parameters, kriging error comes into play in determining if a block falls into a particular class. FIGURE 17-10 shows the probability plot of the kriging error. Note the two straight lines that cross at a 0.6 kriging error. This is a natural break in the distribution and signifies that the error is too great to allow a block to be classified as measured or indicated. Any block with kriging error above 0.6 will be classified as inferred. TABLE 17-19 shows the statistics for kriging error. Review of the cumulative distribution table indicates that potentially 30 percent of the estimated blocks will be affected. If a block is already classified as inferred, then kriging error will not change its resource class.



Note: Dashed lines indicate boundaries between Zones that share the same kriging parameters. Contacts between Zones are determined by drilholes and geologic interpretations in the actual block model. The Zones represented here are simplified for visual purposes only.







Issued by:	Prepared for:	File Name:
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	***QUATERRA ALASKA, INC.***	Fig17-9.dwg
	Project: MacArthur Copper Project	Project Number: 114-310920
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009

Figure 17-9

Block Model Search Ellipse Parameters

TABLE 17-15: KRIGING SEARCH PARAMETERS BY MODEL ZONE
QUATERRA ALASKA, INC. -- MACARTHUR PROJECT
Janurary 2009

Model Kriging Zone	Search Distance Lengths (ft)			Search Ellipse Orientation			Estimation Parameters					
	Primary	Secondary	Tertiary	Primary Axis Trend	Primary Axis Dip	Secondary Axis Rake	Composite MinZone Code	Composite MinZone Code	Max Points / Sector	Max Points / DH	Min Points/ Block	Krig. Error
NW Model Zone 10												
Measured	400	300	100	N 0° E	0°	0°	10	10	4	3	22	< .6
Indicated	400	300	100	N 0° E	0°	0°	10	10	4	4	12	< .6
Inferred	400	300	100	N 0° E	0°	0°	10	10	4	4	4	>.6
NW Model Zone 20												
Measured	400	300	100	N 0° E	0°	0°	20	20	4	3	22	< .6
Indicated	400	300	100	N 0° E	0°	0°	20	20	4	4	12	< .6
Inferred	400	300	100	N 0° E	0°	0°	20	20	4	4	4	>.6
NW Model Zone 30												
Measured	400	300	100	N 45° E	45°	0°	30	30	4	3	22	< .6
Indicated	400	300	100	N 45° E	45°	0°	30	30	4	4	12	< .6
Inferred	400	300	100	N 45° E	45°	0°	30	30	4	4	4	>.6
SE Model Zone 10												
Measured	400	300	100	N 30° E	20°	10°	10	10	4	3	22	< .6
Indicated	400	300	100	N 30° E	20°	10°	10	10	4	4	12	< .6
Inferred	400	300	100	N 30° E	20°	10°	10	10	4	4	4	>.6
SE Model Zone 20												
Measured	400	300	100	N 0° E	0°	0°	20	20	4	3	22	< .6
Indicated	400	300	100	N 0° E	0°	0°	20	20	4	4	12	< .6
Inferred	400	300	100	N 0° E	0°	0°	20	20	4	4	1	>.6
SE Model Zone 30												
Measured	400	300	100	N 45° E	45°	0°	30	30	4	3	22	< .6
Indicated	400	300	100	N 45° E	45°	0°	30	30	4	4	12	< .6
Inferred	400	300	100	N 45° E	45°	0°	30	30	4	4	4	>.6

TABLE 17-16
Minzone Block Count

MINZONE ROCK COUNT FOR COMPOSITES

LEVEL DIMENSION : 20.00 FEET

POLYGON LIMITING FILE USED: SE-Historical Pit Area

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
0	1091180	186	384	1	132	84	132
10	362593	186	384	1	132	70	102
20	76398	186	318	16	132	67	93
30	960851	186	318	16	132	1	86
90	976354	186	384	1	132	1	90
TOTAL	3467376						

POLYGON LIMITING FILE USED: NW-Out Area

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
0	2631199	1	384	1	288	82	132
10	614586	1	384	1	264	73	121
20	527995	7	314	1	224	70	114
30	3444036	7	314	1	224	1	107
90	3912952	1	384	1	288	1	121
TOTAL	11130768						

TABLE 17-17
Southeast Area Cu Block Statistics

Statistics are limited to samples falling within the following polygon file limit:
SE-Historical Pit Area

CURRENT LABEL : (G101) Kriged Grade k_cu

ROCK TYPE	BLOCK COUNT MISSING	BLOCK COUNT BELOW LIMITS	BLOCK COUNT ABOVE LIMITS	BLOCK COUNT INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	142806	0	0	219787	0.00500	0.94100	0.13979	0.00562	0.07500	0.5365	-2.1895	0.6545	0.8090	0.1553	0.9614
20	14570	0	0	61828	0.00500	0.50605	0.12652	0.00539	0.07341	0.5802	-2.2716	0.4996	0.7068	0.1324	0.8050
30	946559	0	0	14292	0.00500	0.33000	0.04819	0.00130	0.03600	0.7470	-3.2941	0.5488	0.7408	0.0488	0.8551
90	976354	0	0	0	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.	0.0000
ALL	2080289	0	0	295907	0.00500	0.94100	0.13260	0.00576	0.07587	0.5722	-2.2601	0.6725	0.8201	0.1460	0.9794

LOWER BOUND >=	UPPER BOUND <	FREQ	PERCENT	MEAN	CUM FREQ (ALL VALUES < UPPER BOUND)	PERCENT	CUM MEAN	CUM FREQ (ALL VALUES >= LOWER BOUND)	PERCENT	CUM MEAN
0.0050	0.0065	2769	0.94	0.0052	2769	0.94	0.0052	295907	100.00	0.1326
0.0065	0.0084	2476	0.84	0.0073	5245	1.77	0.0062	293138	99.06	0.1338
0.0084	0.0110	2234	0.75	0.0096	7479	2.53	0.0072	290662	98.23	0.1349
0.0110	0.0143	4624	1.56	0.0121	12103	4.09	0.0091	288428	97.47	0.1358
0.0143	0.0185	5147	1.74	0.0169	17250	5.83	0.0114	283804	95.91	0.1379
0.0185	0.0241	3355	1.13	0.0219	20605	6.96	0.0131	278657	94.17	0.1401
0.0241	0.0313	6765	2.29	0.0273	27370	9.25	0.0166	275302	93.04	0.1415
0.0313	0.0406	8171	2.76	0.0367	35541	12.01	0.0212	268537	90.75	0.1444
0.0406	0.0528	14743	4.98	0.0460	50284	16.99	0.0285	260366	87.99	0.1478
0.0528	0.0686	14938	5.05	0.0604	65222	22.04	0.0358	245623	83.01	0.1539
0.0686	0.0891	22356	7.56	0.0788	87578	29.60	0.0468	230685	77.96	0.1600
0.0891	0.1158	34352	11.61	0.1032	121930	41.21	0.0627	208329	70.40	0.1687
0.1158	0.1505	58174	19.66	0.1333	180104	60.87	0.0855	173977	58.79	0.1816
0.1505	0.1955	62051	20.97	0.1715	242155	81.83	0.1075	115803	39.13	0.2059
0.1955	0.2541	37575	12.70	0.2187	279730	94.53	0.1225	53752	18.17	0.2455
0.2541	0.3301	12441	4.20	0.2779	292171	98.74	0.1291	16177	5.47	0.3079
0.3301	0.4290	2680	0.91	0.3669	294851	99.64	0.1312	3736	1.26	0.4076
0.4290	0.5574	852	0.29	0.4817	295703	99.93	0.1323	1056	0.36	0.5110
0.5574	0.7243	185	0.06	0.6176	295888	99.99	0.1326	204	0.07	0.6335
0.7243	0.9411	19	0.01	0.7886	295907	100.00	0.1326	19	0.01	0.7888

```
LOWER BOUND   UPPER BOUND        8000      16000      24000      32000      40000      48000      56000      64000      72000      80000
    >=             <      +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
  0.0050         0.0065|***
  0.0065         0.0084|***
  0.0084         0.0110|***
  0.0110         0.0143|******
  0.0143         0.0185|******
  0.0185         0.0241|****
  0.0241         0.0313|********
  0.0313         0.0406|**********
  0.0406         0.0528|******************
  0.0528         0.0686|*******************
  0.0686         0.0891|****************************
  0.0891         0.1158|*******************************************
  0.1158         0.1505|*************************************************************************
  0.1505         0.1955|******************************************************************************
  0.1955         0.2541|***********************************************
  0.2541         0.3301|****************
  0.3301         0.4290|***
  0.4290         0.5574|*
  0.5574         0.7243|
  0.7243         0.9411|
                          +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                          0        8000      16000      24000      32000      40000      48000      56000      64000      72000      80000
```

TABLE 17-18
Northwest Area Cu Block Statistics

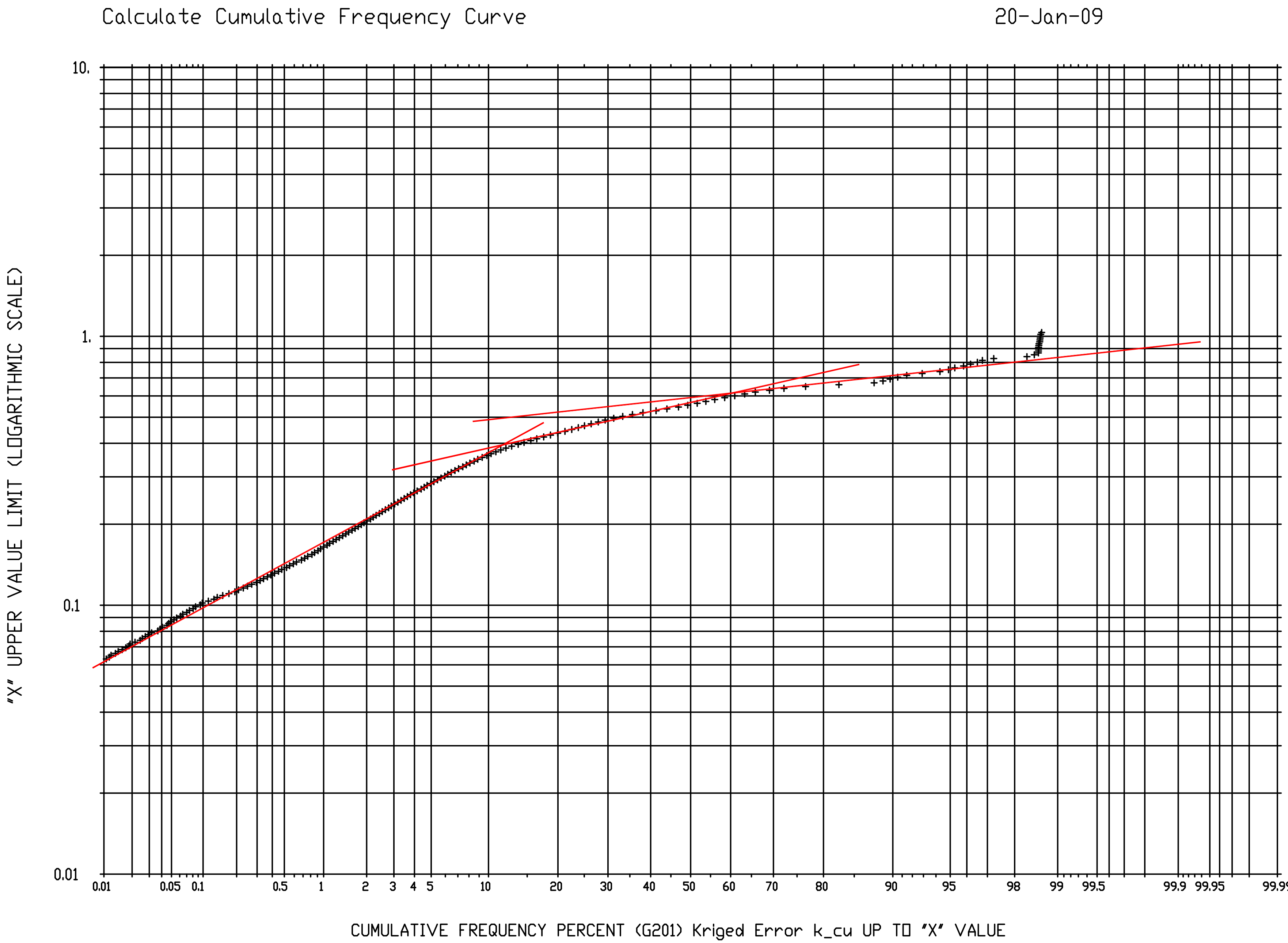
Statistics are limited to samples falling within the following polygon file limit:
NW-Out Area

ROCK TYPE	BLOCK COUNT MISSING	BELOW LIMITS	ABOVE LIMITS	INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	414463	0	0	200123	0.00700	0.89500	0.07119	0.00218	0.04664	0.6551	-2.8340	0.3954	0.6288	0.0716	0.6965
20	222764	0	0	305231	0.00500	2.2429	0.12023	0.01869	0.13670	1.1370	-2.4530	0.6183	0.7863	0.1172	0.9251
30	3283566	0	0	160470	0.00500	1.2980	0.08420	0.01198	0.10944	1.2997	-2.9621	0.9119	0.9549	0.0816	1.2202
90	3910443	0	0	0	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.	0.0000
ALL	7831236	0	0	665824	0.00500	2.2429	0.09681	0.01259	0.11222	1.1592	-2.6911	0.6669	0.8166	0.0946	0.9738

CURRENT LABEL : (G101) Kriged Grade k_cu

LOWER BOUND >=	UPPER BOUND <	FREQ	PERCENT	MEAN	CUM FREQ (ALL VALUES < UPPER BOUND)	PERCENT	CUM MEAN	CUM FREQ (ALL VALUES >= LOWER BOUND)	PERCENT	CUM MEAN
0.0050	0.0068	3172	0.48	0.0053	3172	0.48	0.0053	665824	100.00	0.0968
0.0068	0.0092	4732	0.71	0.0085	7904	1.19	0.0072	662652	99.52	0.0972
0.0092	0.0125	8274	1.24	0.0112	16178	2.43	0.0092	657920	98.81	0.0979
0.0125	0.0170	11271	1.69	0.0148	27449	4.12	0.0115	649646	97.57	0.0990
0.0170	0.0230	28627	4.30	0.0201	56076	8.42	0.0159	638375	95.88	0.1005
0.0230	0.0312	51124	7.68	0.0276	107200	16.10	0.0215	609748	91.58	0.1042
0.0312	0.0424	75594	11.35	0.0370	182794	27.45	0.0279	558624	83.90	0.1113
0.0424	0.0575	92564	13.90	0.0502	275358	41.36	0.0354	483030	72.55	0.1229
0.0575	0.0780	116763	17.54	0.0672	392121	58.89	0.0449	390466	58.64	0.1401
0.0780	0.1059	91424	13.73	0.0902	483545	72.62	0.0534	273703	41.11	0.1712
0.1059	0.1437	66252	9.95	0.1228	549797	82.57	0.0618	182279	27.38	0.2119
0.1437	0.1950	51144	7.68	0.1667	600941	90.26	0.0707	116027	17.43	0.2628
0.1950	0.2647	33965	5.10	0.2249	634906	95.36	0.0790	64883	9.74	0.3384
0.2647	0.3592	14890	2.24	0.3023	649796	97.59	0.0841	30918	4.64	0.4632
0.3592	0.4874	6691	1.00	0.4161	656487	98.60	0.0875	16028	2.41	0.6127
0.4874	0.6614	6223	0.93	0.5778	662710	99.53	0.0921	9337	1.40	0.7536
0.6614	0.8976	1231	0.18	0.7616	663941	99.72	0.0933	3114	0.47	1.1049
0.8976	1.2181	563	0.08	1.0296	664504	99.80	0.0941	1883	0.28	1.3293
1.2181	1.6530	1272	0.19	1.4411	665776	99.99	0.0967	1320	0.20	1.4571
1.6530	2.2432	48	0.01	1.8818	665824	100.00	0.0968	48	0.01	1.8818

```
LOWER BOUND   UPPER BOUND       20000     40000     60000     80000    100000    120000    140000    160000    180000    200000
    >=             <       +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
  0.0050        0.0068|**
  0.0068        0.0092|**
  0.0092        0.0125|****
  0.0125        0.0170|******
  0.0170        0.0230|**************
  0.0230        0.0312|**************************
  0.0312        0.0424|**************************************
  0.0424        0.0575|**********************************************
  0.0575        0.0780|**********************************************************
  0.0780        0.1059|**********************************************
  0.1059        0.1437|*********************************
  0.1437        0.1950|**************************
  0.1950        0.2647|*****************
  0.2647        0.3592|*******
  0.3592        0.4874|***
  0.4874        0.6614|***
  0.6614        0.8976|*
  0.8976        1.2181|
  1.2181        1.6530|*
  1.6530        2.2432|
                           +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                           0       20000     40000     60000     80000    100000    120000    140000    160000    180000    200000
```



Issued by:
TETRA TECH
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Prepared for: QUATERRA ALASKA, INC.

Project: MacArthur Copper Project

Project Location: Lyon County, Nevada

File Name: Fig17-10.dwg

Project Number: 114-310920

Date of Issue: 01/26/2009

Figure 17-10
Probability plot of Kriging Error

TABLE 17-19
Block Kriging Error Statistics

CURRENT LABEL : (G201) Kriged Error k_cu

ROCK TYPE	BLOCK COUNT MISSING	BLOCK COUNT BELOW LIMITS	BLOCK COUNT ABOVE LIMITS	BLOCK COUNT INSIDE LIMITS	UNTRANSFORMED STATISTICS MINIMUM	MAXIMUM	MEAN	VARIANCE	STD. DEV.	COEF. OF VAR	LOG-TRANSFORMED STATS LOG MEAN	LOG VAR.	LOG STD.DEV	LOG-DERIVED MEAN	COEF. OF VAR.
10	557269	0	0	419910	0.04300	0.86900	0.49797	0.01954	0.13980	0.2807	-0.7490	0.1231	0.3509	0.50289	0.3620
20	237334	0	0	367059	0.06120	1.0501	0.57608	0.02303	0.15177	0.2635	-0.5879	0.0779	0.2792	0.57758	0.2847
30	4230125	0	0	174762	0.07900	0.86600	0.61494	0.01133	0.10644	0.1731	-0.5045	0.0417	0.2042	0.61653	0.2064
90	4886797	0	0	0	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.	0.0000
ALL	9911525	0	0	961731	0.04300	1.0501	0.54904	0.02159	0.14693	0.2676	-0.6432	0.1003	0.3167	0.55261	0.3248

LOWER BOUND >=	UPPER BOUND <	FREQ	PERCENT	MEAN	CUM FREQ (ALL VALUES < UPPER BOUND)	PERCENT	CUM MEAN	CUM FREQ (ALL VALUES >= LOWER BOUND)	PERCENT	CUM MEAN
0.0430	0.0504	10	0.00	0.0473	10	0.00	0.0473	961731	100.00	0.5490
0.0504	0.0592	57	0.01	0.0559	67	0.01	0.0546	961721	100.00	0.5490
0.0592	0.0694	98	0.01	0.0649	165	0.02	0.0607	961664	99.99	0.5491
0.0694	0.0815	206	0.02	0.0762	371	0.04	0.0693	961566	99.98	0.5491
0.0815	0.0956	344	0.04	0.0893	715	0.07	0.0789	961360	99.96	0.5492
0.0956	0.1122	1144	0.12	0.1058	1859	0.19	0.0955	961016	99.93	0.5494
0.1122	0.1316	2151	0.22	0.1223	4010	0.42	0.1099	959872	99.81	0.5499
0.1316	0.1544	3856	0.40	0.1437	7866	0.82	0.1264	957721	99.58	0.5509
0.1544	0.1811	5316	0.55	0.1687	13182	1.37	0.1435	953865	99.18	0.5525
0.1811	0.2125	8057	0.84	0.1975	21239	2.21	0.1640	948549	98.63	0.5547
0.2125	0.2493	12152	1.26	0.2317	33391	3.47	0.1886	940492	97.79	0.5577
0.2493	0.2925	18844	1.96	0.2719	52235	5.43	0.2187	928340	96.53	0.5620
0.2925	0.3432	29424	3.06	0.3193	81659	8.49	0.2550	909496	94.57	0.5680
0.3432	0.4027	58150	6.05	0.3765	139809	14.54	0.3055	880072	91.51	0.5763
0.4027	0.4724	114246	11.88	0.4386	254055	26.42	0.3654	821922	85.46	0.5905
0.4724	0.5543	219733	22.85	0.5168	473788	49.26	0.4356	707676	73.58	0.6150
0.5543	0.6503	263669	27.42	0.6064	737457	76.68	0.4967	487943	50.74	0.6592
0.6503	0.7630	179041	18.62	0.6816	916498	95.30	0.5328	224274	23.32	0.7213
0.7630	0.8951	32020	3.33	0.8108	948518	98.63	0.5422	45233	4.70	0.8785
0.8951	1.0502	13213	1.37	1.0426	961731	100.00	0.5490	13213	1.37	1.0426

```
LOWER BOUND   UPPER BOUND     40000     80000    120000    160000    200000    240000    280000    320000    360000    400000
     >=            <     +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
   0.0430        0.0504|
   0.0504        0.0592|
   0.0592        0.0694|
   0.0694        0.0815|
   0.0815        0.0956|
   0.0956        0.1122|
   0.1122        0.1316|*
   0.1316        0.1544|*
   0.1544        0.1811|*
   0.1811        0.2125|**
   0.2125        0.2493|***
   0.2493        0.2925|*****
   0.2925        0.3432|*******
   0.3432        0.4027|***************
   0.4027        0.4724|*****************************
   0.4724        0.5543|*******************************************************
   0.5543        0.6503|******************************************************************
   0.6503        0.7630|*********************************************
   0.7630        0.8951|********
   0.8951        1.0502|***
                       +---------+---------+---------+---------+---------+---------+---------+---------+---------+---------+
                       0       40000     80000    120000    160000    200000    240000    280000    320000    360000    400000
```

17.10 Recoding of Blocks for Resource Reporting

To simplify the tabulation of the blocks into resource classification by MinZone, the blocks were recorded according to TABLE 17-20. For example, a block with a MinZone code of 10, that is classified as measured will be assigned a code of 11. For an inferred block with a MinZOne code of 30, the code will be 33. TABLE 17-20 gives a count of the recorded blocks.

17.11 Model Validation using three new holes

FIGURE 17-11 shows the results from three drillholes in the SE area of the model, QM-083, QM-084 and QM-085. These holes were not available for use in the grade model. FIGURE 17-11 shows a visual comparison of kriged percent TCu block grades and drillhole sample percent TCu grades. All sections shown are centered on the drillhole and are north-south sections, looking westward.

The similarity of increased mineralization intervals in the drillholes, especially QM-083 and QM-084 and to a lesser degree in QM-085 is felt to reflect those predicted in the model. This lends confidence to the orientation and interpolation parameters used.

17.12 Selected Cross Sections

FIGURES 17-12 and 17-13 show the NE cross section 7 looking NW for copper grades and resource class respectively.

FIGURES 17-14 and 17-15 show the Long Section 1 looking north for copper grades and resource class respectively.

The locations of these sections are shown on Figure 17-1.

17.13 Mineral Resource Estimate

A summary of Measured and Indicated Mineral Resources are shown in TABLE 17-21. A summary of the Inferred Mineral Resources are shown in TABLE 17-22. The base case cutoff grade for the leachable resources is 0.18 percent TCu. The base case cutoff grade for the primary sulfide resources is 0.30 percent TCu. Both values are representative of actual cutoff grades currently applied at other operating properties as of the date of this report.

17.14 Mineral Reserve Estimate

As of the date of this report, the MacArthur Copper Property does not have any CIM definable mineral reserves.

TABLE 17-20
MinZone Block Count With and Without Resource Classification

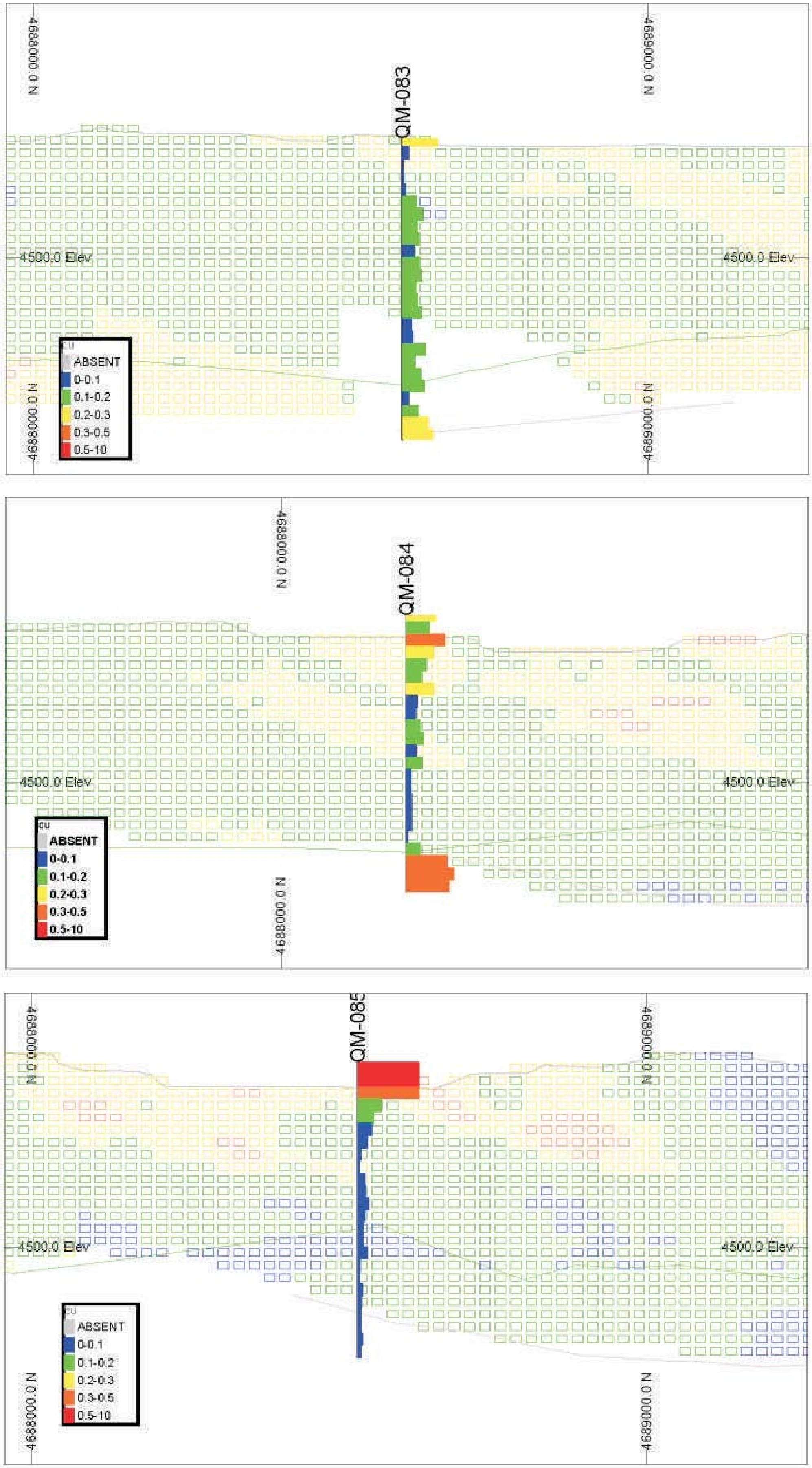
MINZONE ROCK COUNT FOR BLOCK MODEL (R200)

NUMBER OF ROWS	: 288	ROW DIMENSION	:	25.00	FEET
NUMBER OF COLUMNS	: 384	COLUMN DIMENSION	:	25.00	FEET
NUMBER OF LEVELS	: 132	LEVEL DIMENSION	:	20.00	FEET

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
0	3722379	1	384	1	288	82	132
10	977179	1	384	1	264	70	121
20	604393	7	318	1	224	67	114
30	4404887	7	318	1	224	1	107
90	4886797	1	384	1	288	1	121
9999	2509	1	41	1	288	122	126
TOTAL	14598144						

MINZONE WITH RESOURCE CLASS ADDED TO CODE (MEASURED=1, INDICATED=2 AND INFERRED=3)

CODE	COUNT	MINCOL	MAXCOL	MINROW	MAXROW	MINLEV	MAXLEV
0	3722379	1	384	1	288	82	132
11	19908	199	333	12	122	75	96
12	107281	49	348	1	196	72	119
13	849990	1	384	1	264	70	121
21	5	275	276	158	161	84	86
22	31917	48	315	25	198	70	111
23	572471	7	318	1	224	67	114
33	50594	23	304	2	213	15	105
34	4354293	7	318	1	224	1	107
90	4886797	1	384	1	288	1	121
9999	2509	1	41	1	288	122	126
TOTAL	14598144						

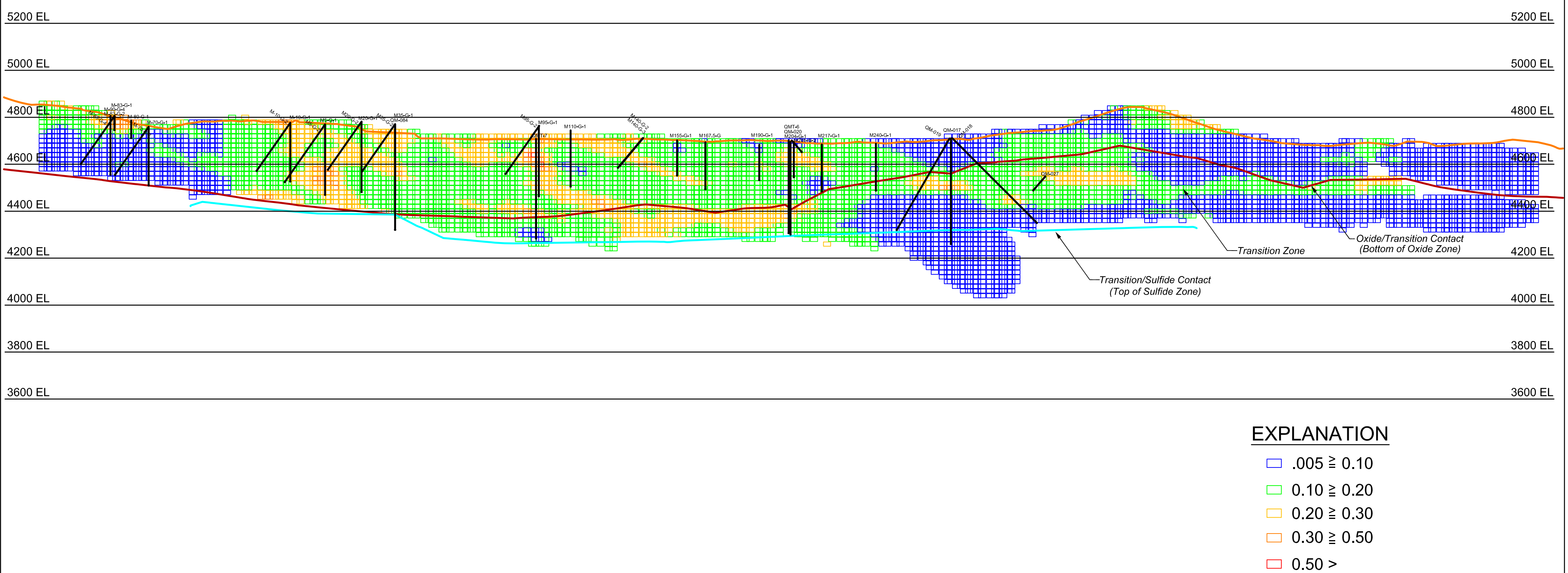


Issued by:

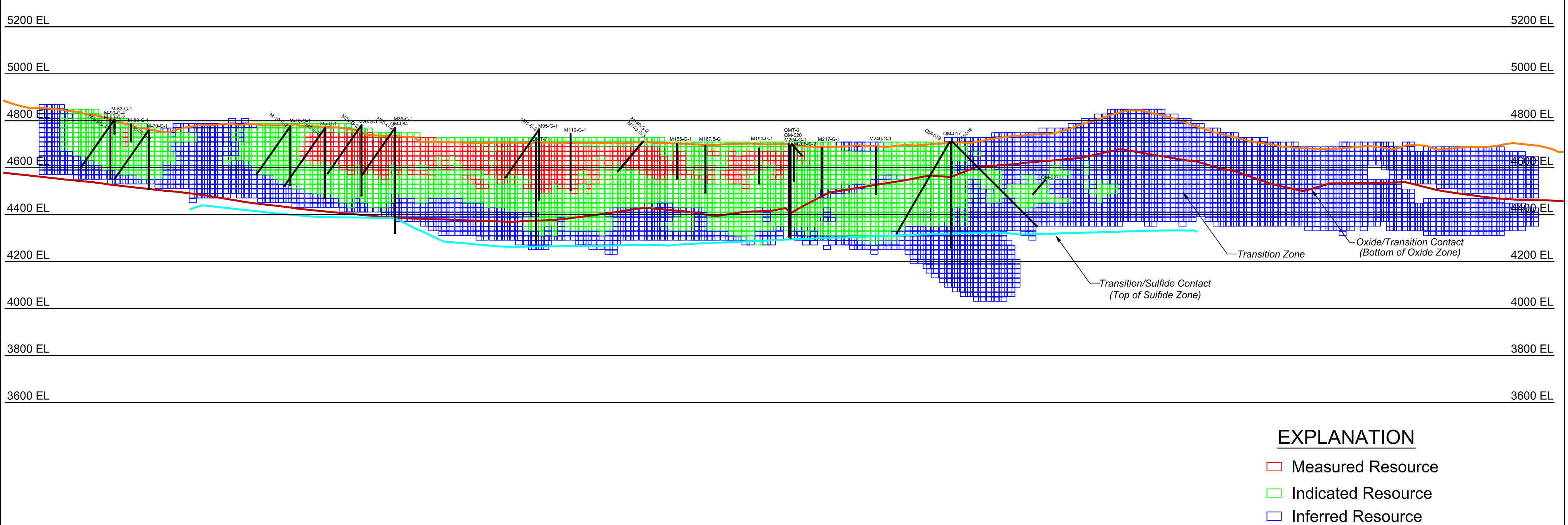
TETRA TECH
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Drawing Provided by/Prepared for:	File Name:	
QUATERRA ALASKA, INC.	Fig17-11.cdr	
Project: MacArthur Copper Project	Project Number: 114-310920	
Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009	

Figure 17-11
Comparison of three new holes with Block Model (TCu)



Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	Section-7.dwg	**Figure 17-12** **Kriged Cu Blocks** **Northeast Section 7 (looking Northwest)**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon, County, Nevada	Date of Issue: 01/26/2009	



Issued by: TETRA TECH
350 Indiana Street, Suite 500
Golden, Colorado 80401
(303) 217-5700 (303) 217-5705 fax

Prepared for: **QUATERRA ALASKA, INC.**

Project: MacArthur Copper Project

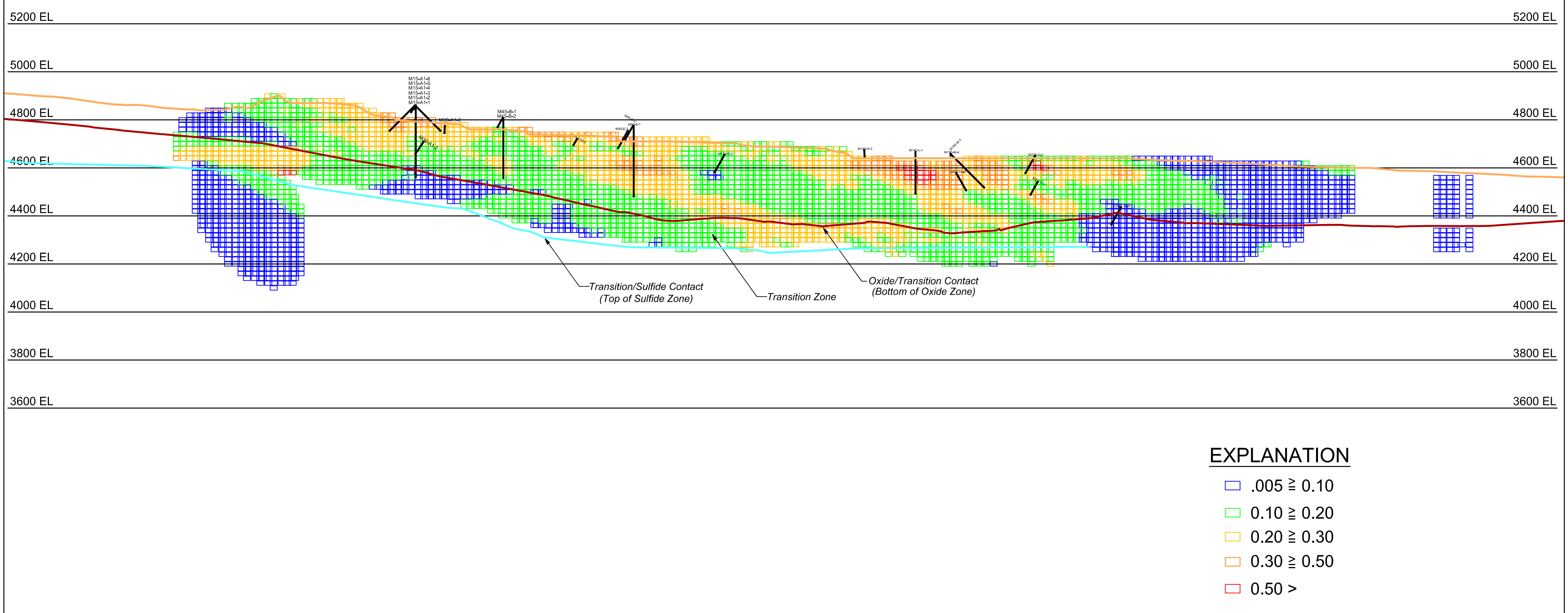
Project Location: Lyon, County, Nevada

File Name: Section-7.dwg

Project Number: 114-310920

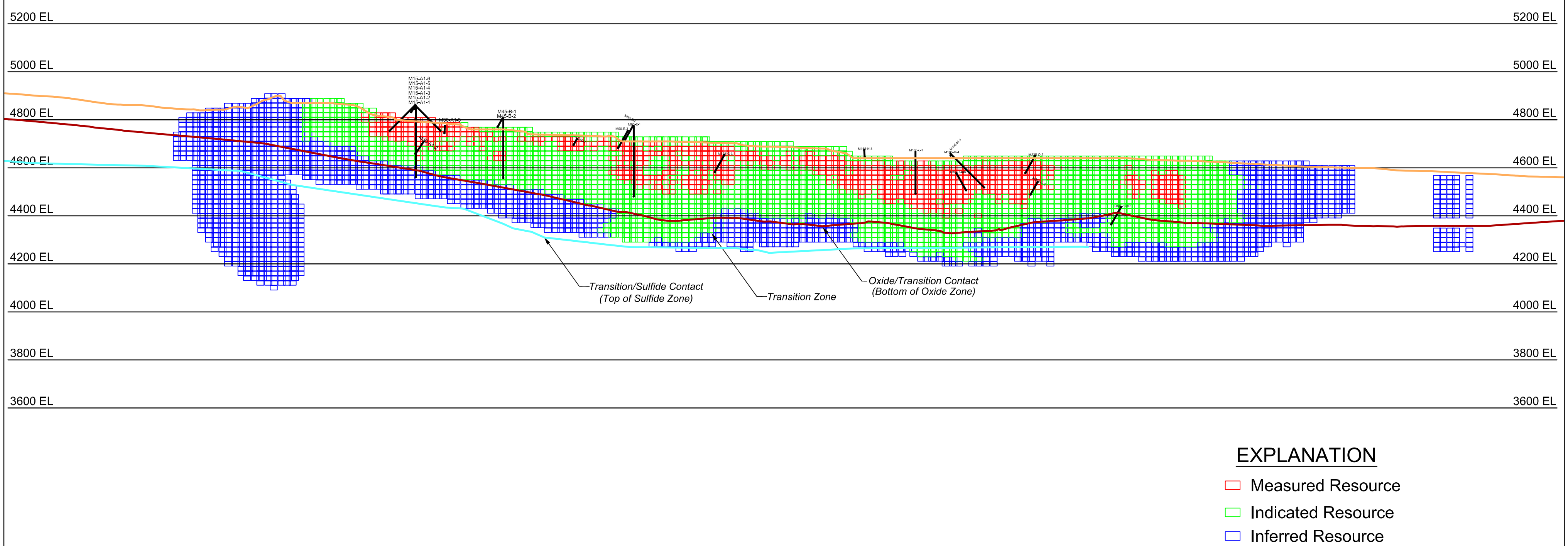
Date of Issue: 01/26/2009

Figure 17-13
Measured, Indicated & Inferred Blocks Northeast Section 7 (looking Northwest)



Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	QUATERRA ALASKA, INC.	LongSection1.dwg	
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon, County, Nevada	Date of Issue: 01/26/2009	

Figure 17-14
Kriged Cu Blocks
Long Section 1 (looking North)



Issued by:	Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	***QUATERRA ALASKA, INC.*** Project: MacArthur Copper Project Project Location: Lyon, County, Nevada	LongSection1.dwg Project Number: 114-310920 Date of Issue: 01/26/2009	**Figure 17-15** **Measured, Indicated & Inferred Blocks** **Long Section 1 (looking North)**

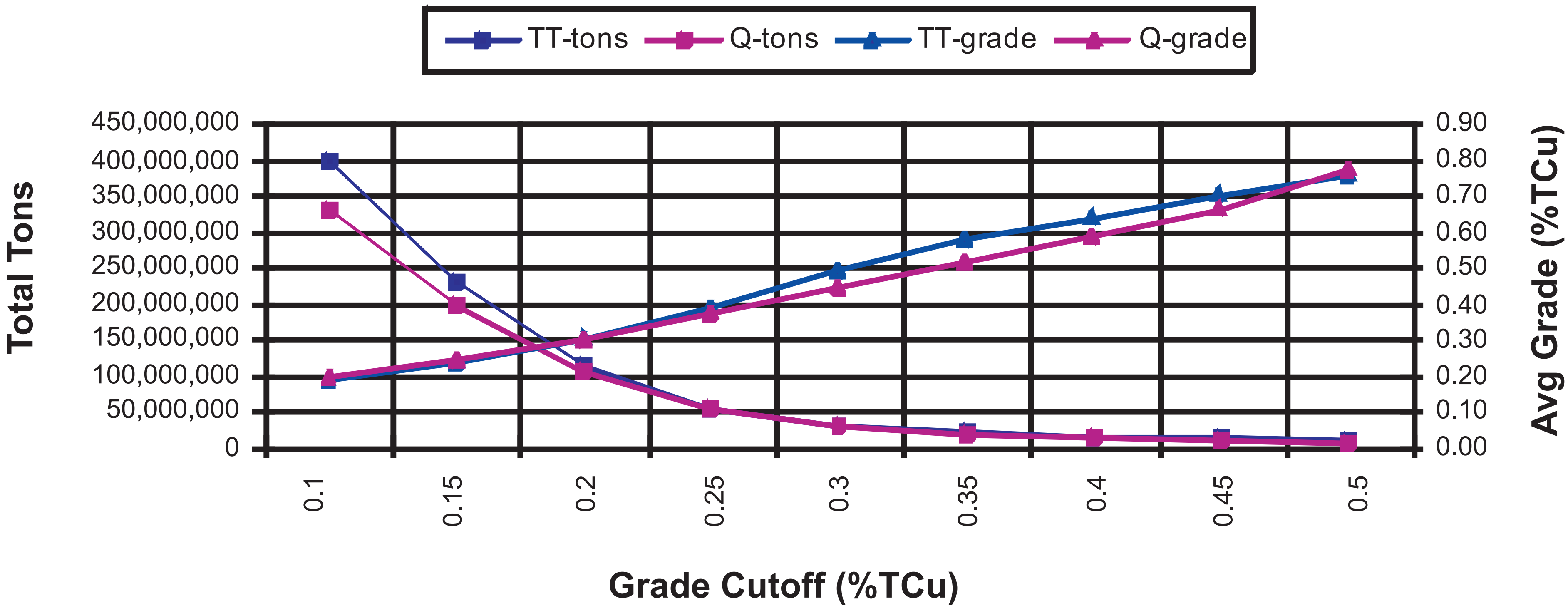
TABLE 17-21: MEASURED AND INDICATED TOTAL COPPER RESOURCES QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009				
Measured Resources	**Cutoff Grade %TCu**	**Tons (x1000)**	**Average Grade %TCu**	**Contained Copper (lbs x 1000)**
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	307	0.585	3,594.28
	0.40	957	0.486	9,309.09
	0.35	1,695	0.437	14,812.69
	0.30	3,044	0.386	23,486.70
	0.25	5,889	0.331	38,942.61
	0.20	11,470	0.278	63,708.34
	0.18	**14,170**	**0.261**	**73,969.30**
	0.15	17,186	0.244	83,970.00
Primary Sulfide Material (MinZone 30)	0.50	N/A	N/A	N/A
	0.40			
	0.35			
	0.30			
	0.25			
	0.20			
	0.18			
	0.15			
Indicated Resources	**Cutoff Grade %TCu**	**Tons (x1000)**	**Average Grade %TCu**	**Contained Copper (lbs x 1000)**
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	598	0.628	7,505.20
	0.40	1,518	0.516	15,661.55
	0.35	2,390	0.463	22,139.62
	0.30	4,022	0.406	32,638.77
	0.25	8,728	0.332	58,021.47
	0.20	27,608	0.255	140,754.35
	0.18	**43,195**	**0.231**	**199,683.85**
	0.15	72,111	0.204	294,730.71
Primary Sulfide Material (MinZone 30)	0.50	2	0.562	22.48
	0.40	7	0.473	66.26
	0.35	27	0.392	211.73
	0.30	**84**	**0.342**	**574.22**
	0.25	204	0.300	1,224.82
	0.20	481	0.254	2,441.56
	0.18	565	0.245	2,762.85
	0.15	730	0.226	3,305.44

TABLE 17-21 CONTINUED: MEASURED + INDICATED COPPER RESOURCES QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009				
Measured + Indicated Resources	**Cutoff Grade %TCu**	**Tons (x1000)**	**Average Grade %TCu**	**Contained Copper (lbs x 1000)**
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	905	0.613	11,099.48
	0.40	2,475	0.504	24,970.64
	0.35	4,085	0.452	36,952.31
	0.30	7,066	0.397	56,125.46
	0.25	14,617	0.332	96,964.08
	0.20	39,078	0.262	204,462.69
	0.18	**57,365**	**0.239**	**273,653.15**
	0.15	89,297	0.212	378,700.71
Primary Sulfide Material (MinZone 30)	0.50	2	0.562	22.48
	0.40	7	0.473	66.26
	0.35	27	0.392	211.73
	0.30	**84**	**0.342**	**574.22**
	0.25	204	0.300	1,224.82
	0.20	481	0.254	2,441.56
	0.18	565	0.245	2,762.85
	0.15	730	0.226	3,305.44

TABLE 17-22: INFERRED COPPER RESOURCES QUATERRA ALASKA, INC. – MACARTHUR PROJECT February 2009				
	Cutoff Grade %TCu	**Tons (x1000)**	**Average Grade %TCu**	**Contained Copper (lbs x 1000)**
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	3,988	0.971	77,468.26
	0.40	6,932	0.744	103,111.97
	0.35	9,416	0.646	121,668.91
	0.30	15,772	0.515	162,380.18
	0.25	29,287	0.401	234,916.85
	0.20	57,484	0.313	359,765.78
	0.18	**75,832**	**0.283**	**429,335.65**
	0.15	114,426	0.243	555,424.47
Primary Sulfide Material (MinZone 30)	0.50	4,538	0.593	53,802.53
	0.40	5,633	0.567	63,844.42
	0.35	5,842	0.560	65,395.35
	0.30	**6,398**	**0.539**	**68,932.05**
	0.25	9,101	0.459	83,601.79
	0.20	12,418	0.398	98,747.94
	0.18	14,367	0.370	106,172.13
	0.15	18,116	0.327	118,587.34

17.15 External Independent Model Validation

FIGURE 17-16 is presented as an additional indication of the robustness of the Tt resource estimate. Ms. Judy Pratt of Quaterra independently calculated the total copper resources at the MacArthur project. As seen in the figure, both the contained tons and grades above any given total copper grade are nearly identical. In fact, the two estimates are within approximately three percent based on contained pounds of copper.



Issued by:	Drawing Provided by/Prepared for:	File Name:	
TETRA TECH 350 Indiana Street, Suite 500 Golden, Colorado 80401 (303) 217-5700 (303) 217-5705 fax	**QUATERRA ALASKA, INC.**	Fig17-16.cdr	**Figure 17-16** **Tetra Tech Kriged Model vs Quaterra IDP Model**
	Project: MacArthur Copper Project	Project Number: 114-310920	
	Project Location: Lyon County, Nevada	Date of Issue: 01/26/2009	

18.0 OTHER RELEVANT DATA AND INFORMATION

Tt is unaware of any other data and/or information that would be relevant to this report that is not contained in one of the existing sections of this report.

19.0 INTERPRETATION AND CONCLUSIONS

At the present time, the MacArthur Copper Project is considered to be a mid-stage exploration project. The exploration results presented in this report have demonstrated the presence of a large area of copper mineralization that has only been partially delineated. Portions of the property are well-drilled from a resource determination perspective, while other areas still require additional infill drilling in order to develop quantifiable resources. The tenor of the mineralization encountered to date is supportive of continued exploration and development expenditures. Additional exploration is planned and outlined in SECTION 20.0 of this report.

20.0 RECOMMENDATIONS AND WORK PLAN

20.1 Recommendations

Tt makes the following recommendations regarding this brief review of historical and current data available for the MacArthur project.

- For all total copper assays from the oxide and the chalcocite zones that contain greater than 0.1 percent TCu, Quaterra will use an assay system that includes TCu assay, warm H_2SO_4 assay, and QLT or standard sequential leach assaying methodology. Tt should mention that Quaterra has already begun this process for the drilling completed in 2008 and Quaterra has agreed to add this to their standard practices for all future drilling and assaying.
- Begin a duplicate sample procedure for current and all future analytical work. This will require re-assaying of some of the 2008 drilling samples. This has already been started.
- Perform statistical analyses on standards from every sample lot (this may require Quaterra to begin to submit samples in lots of 40 to 50 samples) and use it to determine whether the assaying is meeting the analytical accuracy required by current assaying guidelines. This procedure is discussed in depth in SECTION 13.
- Place the purchased blanks and standards in a locked environment to control access to these important components of the QA/QC program. This change has already been completed.
- Add another standard that contains both copper and gold. Currently, two standards are used, one containing copper only, the other containing gold only.
- Complete infill drilling to an approximate average drillhole spacing of 250 feet. This will allow re-classification of inferred category resources into measured and indicated categories in areas that are currently under-drilled

20.2 Work Plan

Quaterra's future plans include reducing drillhole spacing, preliminary metallurgical testwork, initiating mine planning and baseline environmental studies, continued surface geologic mapping, and securing adequate supplies of water and power. These items are required for the project to proceed toward feasibility.

Near term plans are dependent on approval of the Plan of Operation / Environmental Assessment (expected Spring 2009) by the Bureau of Land Management. Plan approval will allow Quaterra to initiate a comprehensive reverse circulation and core drilling program designed to expand oxide and chalcocite mineralization and continue to test for underlying sulfide chalcopyrite mineralization. Priority drilling will seek to expand higher-grade sulfide copper intersected along the northernmost drill fence, some 5,000 feet north of the MacArthur pit. Drilling will infill the current 500 foot hole spacing and is planned in the area west of the pit where drill density coverage is poor to absent over an approximate 2,000 foot by 2,000 foot area.

Attention will also be directed to metallurgical leach column tests with oxide-bearing host rock readily sourced from the MacArthur Pit. Large diameter drilling will be necessary to obtain adequate sample material from the non-outcropping chalcocite and chalcopyrite mineralization.

Refined QA/QC protocols will include insertion of a gold-copper standard and a second gold standard on all future sample shipments. To assure that there is no contamination during sample preparation at the laboratory, duplicate assays will be run on coarse rejects from the next drill sample below a higher grade assay. Statistical analyses, duplicating a population of oxide, chalcocite, and chalcopyrite-bearing samples, will continue.

TABLE 20-1: PROPOSED BUDGET FOR PLAN OF WORK
QUATERRA ALASKA, INC. – MACARTHUR PROJECT
February 2009

Task	Estimated Completion Date*	Estimated Cost to Complete*	Notes
Preliminary metallurgical sampling and shipping	Q3-09	$20,000	Oxide mineralization from MacArthur pit
Prelim column tests	Q3-09	$60,000	90 day testing time
Surface Geological Mapping	Q3-09	$60,000	May be ongoing
Plan of Op. & EA approval	Q3-09	$75,000	Includes prelim bonding
North porphyry drilling	Q4-10	$190,000	1-2000' core holes
Step-out & Infill RC Drilling	Q4-10	$300,000	20-500' holes
Drilling & QAQC assays	Q4-10	$120,000	3,000 x $40/sample
Mine planning and baseline environmental studies	Q4-10	$150,000	
Personnel & Infrastructure	Q4-10	$540,000	18 months
Total – Overall Budget		**$1,515,000**	

* Completion dates and expenditures represent minimum programs based on depressed economic and market conditions and are subject to the availability of funding.

21.0 REFERENCES CITED

Adams, D., 1987, MacArthur Au-Evaluation: Summary Report: unpublished report for Pangea Explorations, Inc.: 6p.

Anaconda Collection-American Heritage Center, University of Wyoming, Laramie, Wyoming.

Heatwole, D. A., 1972, Progress Report, Yerington Oxide Project – MacArthur Area, Lyon County, Nevada: unpublished private report for The Anaconda Company, 28p.

Heatwole, D. A., 1978, Controls of Copper Oxide Mineralization, MacArthur Property, Lyon County, Nevada: Arizona Geological Society Digest, Volume XI, p 59-66.

Martin, D., 1989, MacArthur Metallurgical Review, Memo addressed to Mr. Bruce Riederer, Bateman Engineering

Matson, E.J., 1952, Mac Arthur Copper Deposit, Lyon County, Nev., US Bureau of Mines Report of Investigation 4906, 47p.

Moore, J. G., 1969, Geology and Mineral Deposits of Lyon, Douglas, and Ormsby Counties, Nevada: Nevada Bureau of Mines and Geology Bulletin 75, 45p.

Nelson, P.H. and Van Voorhis, G.D., 1983, Estimation of sulfide content from induced polarization data, GEOPHYSICS, V.48, No. 1, pp. 62-75.

Proffett, Jr., J. M., and Dilles, J. H., 1984, Geologic Map of the Yerington District, Nevada: Nevada Bureau of Mines and Geology, Map 77.

Proffett, J.M. and Proffett, B.H., 1976, Stratigraphy of the Tertiary Ash-Flow Tuffs in the Yerington District, Nevada: Nevada Bureau of Mines and Geology, Report 27.

Schmidt, R., 1996, Copper Mineralogy of Four Samples: Hazen Research, Inc.: unpublished private report for Arimetco, Inc., 10p.

Tingley, J.V., Horton, R.C., and Lincoln, F.C., 1993, Outline of Nevada Mining History: Nevada Bureau of Mines and Geology, Special Publication 15, 48p.

22.0 DATE AND SIGNATURE PAGE

John W. Rozelle, P.G.
Principal Geologist

TETRA TECH MM, INC.

350 Indiana Street, Suite 500
Golden, Colorado 80401
Telephone: 303-217-5700
Facsimile: 303-217-5705
Email: john.rozelle@tetratech.com

CERTIFICATE of AUTHOR

I, John W. Rozelle, P.G., do hereby certify that:

1. I am currently employed by Tetra Tech MM, Inc. at:

    350 Indiana Street
    Suite 500
    Golden, Colorado 80401

2. I graduated with a degree in Geology (BA.) from the State University of New York at Plattsburg, New York in 1976. In addition, I graduated from the Colorado School of Mines, Golden, Colorado with a graduate degree in Geochemistry (M.Sc.) in 1978.

3. I am a Member of the American Institute of Professional Geologists (CPG-07216), a register Geologist in the State of Wyoming (PG-337), a member of Society for Mining, Metallurgy, and Exploration, Inc. (SME) and the Society of Economic Geologists.

4. I have worked as a geologist for a total of thirty years since my graduation from university; as a graduate student, as an employee of a major mining company, and as a consultant for more than 27 years.

5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.

6. I am responsible for the preparation of the technical report titled “***MacArthur Copper Project, NI 43-101 Technical Report, Lyon County, Nevada, U.S.A***.” and dated 17 February 2009 (the “Technical Report”). I have visited the subject properties between September 29, 2008 and October 1, 2008.

7. I have either supervised the data collection, preparation, and analysis and/or personally completed an independent review and analysis of the data and written information contained in this Technical Report.

8. I have not had prior involvement with Quaterra Alaska, Inc. on the property that is the subject of this Technical Report.

9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

10. I do not hold, nor do I expect to receive, any securities or any other interest in any corporate entity, private or public, with interests in the properties that are the subject of this report or in the properties themselves, nor do I have any business relationship with any such entity apart from a professional consulting relationship with the issuer, nor to the best of my knowledge do I have any interest in any securities of any corporate entity with property within a two (2) kilometer distance of any of the subject properties.

11. I have read National Instrument 43-101 and Form 43-101, and the Technical Report has been prepared in compliance with that instrument and form.

12. I consent to the filing of the Technical Report with any stock exchanges or other regulatory authority and any publication by them, including electronic publication in the public company files on the websites accessible by the public, of the Technical Report.

Dated this 17th Day of February 2009.

Signature of Qualified Person

"John W. Rozelle"
Print name of Qualified Person

23.0 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

As the MacArthur is a mid-stage exploration project, there are no applicable data for this section at this time.

24.0 ILLUSTRATIONS

All of the illustrations used in the preparation of this report appear in each of their respective sections.

APPENDIX A
LIST OF UNPATENTED MINING CLAIMS

List of Patented Mining Claims

BLM Serial Number	Claim	Lyon Co. Reference	Township	Range	Section(s)	Location Date
NMC 963173	MP 1	412825	14N	24E	26	8/9/2007
NMC 963174	MP 2	412826	14N	24E	26,35	8/9/2007
NMC 963175	MP 3	412827	14N	24E	26	8/9/2007
NMC 963176	MP 4	412828	14N	24E	26,35	8/9/2007
NMC 963177	MP 5	412829	14N	24E	26	8/9/2007
NMC 963178	MP 6	412830	14N	24E	26,35	8/9/2007
NMC 963179	MP 7	412831	14N	24E	26	8/9/2007
NMC 963180	MP 8	412832	14N	24E	26,35	8/9/2007
NMC 963181	MP 9	412833	14N	24E	26	8/9/2007
NMC 963182	MP 10	412834	14N	24E	26,35	8/9/2007
NMC 963183	MP 11	412835	14N	24E	26	8/9/2007
NMC 963184	MP 12	412836	14N	24E	26,35	8/9/2007
NMC 963185	MP 13	412837	14N	24E	25,26	8/9/2007
NMC 963186	MP 14	412838	14N	24E	25, 26, 35, 36	8/9/2007
NMC 963187	MP 15	412839	14N	24E	25	8/9/2007
NMC 963188	MP 16	412840	14N	24E	25,36	8/9/2007
NMC 963189	MP 17	412841	14N	24E	25	8/9/2007
NMC 963190	MP 18	412842	14N	24E	25,36	8/9/2007
NMC 963191	MP 19	412843	14N	24E	25	8/9/2007
NMC 963192	MP 20	412844	14N	24E	25,36	8/9/2007
NMC 963193	MP 21	412845	14N	24E	25	8/9/2007
NMC 963194	MP 22	412846	14N	24E	25,36	8/9/2007
NMC 963195	MP 23	412847	14N	24E	25	8/9/2007
NMC 963196	MP 24	412848	14N	24E	25	8/9/2007
NMC 963197	MP 25	412849	14N	24E	25	8/9/2007
NMC 963198	MP 26	412850	14N	24E	25	8/9/2007
NMC 963199	MP 27	412851	14N	24E	25	8/9/2007
			14N	25E	30	
NMC 963200	MP 28	412852	14N	25E	30	8/9/2007
NMC 963201	MP 29	412853	14N	25E	30	8/9/2007
NMC 963202	MP 30	412854	14N	24E	26	8/9/2007
NMC 963203	MP 31	412855	14N	24E	26	8/9/2007
NMC 963204	MP 32	412856	14N	24E	26	8/9/2007
NMC 963205	MP 33	412857	14N	24E	26	8/9/2007
NMC 963206	MP 34	412858	14N	24E	26	8/9/2007
NMC 963207	MP 35	412859	14N	24E	26	8/9/2007
NMC 963208	MP 36	412860	14N	24E	26	8/9/2007
NMC 963209	MP 37	412861	14N	24E	26	8/9/2007

NMC 963210	MP 38	412862	14N	24E	26	8/9/2007
NMC 963211	MP 39	412863	14N	24E	26	8/9/2007
NMC 963212	MP 40	412864	14N	24E	26	8/9/2007
NMC 963213	MP 41	412865	14N	24E	25, 26	8/9/2007
NMC 963214	MP 42	412866	14N	24E	25, 26	8/9/2007
NMC 963215	MP 43	412867	14N	24E	25	8/9/2007
NMC 963216	MP 44	412868	14N	24E	25	8/9/2007
NMC 963217	MP 45	412869	14N	24E	25	8/9/2007
NMC 963218	MP 46	412870	14N	24E	25	8/9/2007
NMC 963219	MP 47	412871	14N	24E	25	8/9/2007
NMC 963220	MP 48	412872	14N	24E	25	8/9/2007
NMC 963221	MP 49	412873	14N	24E	25	8/9/2007
NMC 963222	MP 50	412874	14N	24E	25	8/9/2007
NMC 963223	MP 51	412875	14N	24E	25	8/9/2007
NMC 963224	MP 52	412876	14N	24E	25	8/9/2007
NMC 963225	MP 53	412877	14N	24E	25	8/9/2007
NMC 963226	MP 54	412878	14N	24E	25	8/9/2007
NMC 963227	MP 55	412879	14N	24E	25	8/9/2007
NMC 963228	MP 56	412880	14N	24E	25	8/9/2007
NMC 963229	MP 57	412881	14N	24E	25	8/9/2007
NMC 963230	MP 58	412882	14N	24E	25	8/9/2007
NMC 963231	MP 59	412883	14N	24E	25	8/9/2007
			14N	25E	30	
NMC 963232	MP 60	412884	14N	24E	25	8/9/2007
			14N	25E	30	
NMC 963233	MP 61	412885	14N	25E	30	8/9/2007
NMC 963234	MP 62	412886	14N	25E	30	8/9/2007
NMC 963235	MP 63	412887	14N	25E	30	8/9/2007
NMC 963236	MP 64	412888	14N	25E	30	8/9/2007
NMC 963237	MP 65	412889	14N	25E	30	8/9/2007
NMC 963238	MP 66	412890	14N	25E	30	8/9/2007
NMC 963239	MP 67	412891	14N	25E	30	8/9/2007
NMC 963240	MP 68	412892	14N	25E	30	8/9/2007
NMC 963241	MP 69	412893	14N	25E	30	8/9/2007
NMC 963242	MP 70	412894	14N	25E	30	8/9/2007
NMC 963243	MP 71	412895	14N	25E	30	8/9/2007
NMC 963244	MP 72	412896	14N	25E	30	8/9/2007
NMC 963245	MP 73	412897	14N	24E	24, 25	8/9/2007
NMC 963246	MP 74	412898	14N	24E	24, 25	8/9/2007
NMC 963247	MP 75	412899	14N	24E	24, 25	8/9/2007
NMC 963248	MP 76	412900	14N	24E	24, 25	8/9/2007
NMC 963249	MP 77	412901	14N	24E	24, 25	8/9/2007
NMC 963250	MP 78	412902	14N	24E	24, 25	8/9/2007

NMC 963251	MP 79	412903	14N	24E	24, 25	8/9/2007
NMC 963252	MP 80	412904	14N	24E	24, 25	8/9/2007
			14N	25E	19, 30	
NMC 963253	MP 81	412905	14N	25E	19, 30	8/9/2007
NMC 963254	MP 82	412906	14N	25E	19, 30	8/9/2007
NMC 963255	MP 83	412907	14N	25E	19, 30	8/9/2007
NMC 963256	MP 84	412908	14N	25E	19, 30	8/9/2007
NMC 963257	MP 85	412909	14N	25E	19, 30	8/9/2007
NMC 932507	QT 1	388083	14N	24E	14, 15, 22, 23	5/24/2006
NMC 932508	QT 2	388084	14N	24E	22, 23	5/24/2006
NMC 932509	QT 3	388085	14N	24E	14, 23	5/24/2006
NMC 932510	QT 4	388086	14N	24E	23	5/24/2006
NMC 932511	QT 5	388087	14N	24E	14, 23	5/24/2006
NMC 932512	QT 6	388088	14N	24E	23	5/24/2006
NMC 932513	QT 7	388089	14N	24E	14, 23	5/24/2006
NMC 932514	QT 8	388090	14N	24E	23	5/24/2006
NMC 932515	QT 9	388091	14N	24E	14, 23	5/24/2006
NMC 932516	QT 10	388092	14N	24E	23	5/24/2006
NMC 932517	QT 11	388093	14N	24E	14, 23	5/24/2006
NMC 932518	QT 12	388094	14N	24E	24	5/24/2006
NMC 932519	QT 13	388095	14N	24E	14, 23	5/24/2006
NMC 932520	QT 14	388096	14N	24E	23	5/24/2006
NMC 932521	QT 15	388097	14N	24E	14, 23	5/24/2006
NMC 932522	QT 16	388098	14N	24E	23	5/24/2006
NMC 932523	QT 17	388099	14N	24E	14, 23	5/24/2006
NMC 932524	QT 18	388100	14N	24E	23	5/24/2006
NMC 932525	QT 19	388101	14N	24E	13, 14, 23, 24	5/24/2006
NMC 932526	QT 20	388102	14N	24E	23, 24	5/24/2006
NMC 932527	QT 21	388103	14N	24E	13, 24	5/23/2006
NMC 932528	QT 22	388104	14N	24E	24	5/23/2006
NMC 932529	QT 23	388105	14N	24E	13, 24	5/23/2006
NMC 932530	QT 24	388106	14N	24E	24	5/23/2006
NMC 932531	QT 25	388107	14N	24E	13, 24	5/23/2006
NMC 932532	QT 26	388108	14N	24E	24	5/23/2006
NMC 932533	QT 27	388109	14N	24E	13, 24	5/23/2006
NMC 932534	QT 28	388110	14N	24E	24	5/23/2006
NMC 932535	QT 29	388111	14N	24E	13, 24	5/23/2006
NMC 932536	QT 30	388112	14N	24E	24	5/23/2006
NMC 932537	QT 31	388113	14N	24E	13, 24	5/23/2006
NMC 932538	QT 32	388114	14N	24E	24	5/23/2006
NMC 932539	QT 33	388115	14N	24E	13, 24	5/23/2006
NMC 932540	QT 34	388116	14N	24E	24	5/23/2006
NMC 932541	QT 35	388117	14N	24E	13, 24	5/23/2006

NMC 932542	QT 36	388118	14N	24E	24	5/23/2006
NMC 932543	QT 37	388119	14N	24E	13, 24	5/23/2006
			14N	25E	18, 19	
NMC 932544	QT 38	388120	14N	24E	24	5/23/2006
			14N	25E	19	
NMC 932545	QT 39	388121	14N	25E	18, 19	5/23/2006
NMC 932546	QT 40	388122	14N	25E	19	5/23/2006
NMC 932547	QT 41	388123	14N	25E	18, 19	5/23/2006
NMC 932548	QT 42	388124	14N	25E	19	5/23/2006
NMC 932549	QT 43	388125	14N	25E	18, 19	5/23/2006
NMC 932550	QT 44	388126	14N	25E	19	5/23/2006
NMC 932551	QT 45	388127	14N	25E	18, 19	5/23/2006
NMC 932552	QT 46	388128	14N	25E	19	5/23/2006
NMC 932553	QT 47	388129	14N	25E	18, 19	5/23/2006
NMC 932554	QT 48	388130	14N	25E	19	5/23/2006
NMC 932555	QT 49	388131	14N	25E	18, 19	5/23/2006
NMC 932556	QT 50	388132	14N	25E	19	5/24/2006
NMC 932557	QT 51	388133	14N	25E	18, 19	5/23/2006
NMC 932558	QT 52	388134	14N	25E	19	5/25/2006
NMC 932559	QT 53	388135	14N	25E	17, 18, 19, 20	5/25/2006
NMC 932560	QT 54	388136	14N	25E	19, 20	5/25/2006
NMC 932561	QT 55	388137	14N	24E	22, 23	5/24/2006
NMC 932562	QT 56	388138	14N	24E	22, 23, 26, 27	5/24/2006
NMC 932563	QT 57	388139	14N	24E	23	5/24/2006
NMC 932564	QT 58	388140	14N	24E	23, 26	5/24/2006
NMC 932565	QT 59	388141	14N	24E	23	5/24/2006
NMC 932566	QT 60	388142	14N	24E	23, 26	5/24/2006
NMC 932567	QT 61	388143	14N	24E	23	5/24/2006
NMC 932568	QT 62	388144	14N	24E	23, 26	5/24/2006
NMC 932569	QT 63	388145	14N	24E	23	5/24/2006
NMC 932570	QT 64	388146	14N	24E	23, 26	5/24/2006
NMC 932571	QT 65	388147	14N	24E	23	5/24/2006
NMC 932572	QT 66	388148	14N	24E	23, 26	5/24/2006
NMC 932573	QT 67	388149	14N	24E	23	5/24/2006
NMC 932574	QT 68	388150	14N	24E	23, 26	5/24/2006
NMC 932575	QT 69	388151	14N	24E	23	5/26/2006
NMC 932576	QT 70	388152	14N	24E	23, 26	7/27/2006
NMC 932577	QT 71	388153	14N	24E	23	5/26/2006
NMC 932578	QT 72	388154	14N	24E	23, 26	7/27/2006
NMC 932579	QT 73	388155	14N	24E	23, 24	5/26/2006
NMC 932580	QT 74	388156	14N	24E	23, 24, 25, 26	7/27/2006
NMC 932581	QT 75	388157	14N	24E	24	5/26/2006
NMC 932582	QT 76	388158	14N	24E	24, 25	7/27/2006

NMC 932583	QT 77	388159	14N	24E	24	5/26/2006
NMC 932585	QT 79	388161	14N	24E	24	5/23/2006
NMC 932587	QT 81	388163	14N	24E	24	5/23/2006
NMC 932589	QT 83	388165	14N	24E	24	5/23/2006
NMC 932591	QT 85	388167	14N	24E	24	5/23/2006
NMC 932593	QT 87	388169	14N	24E	24	5/23/2006
NMC 932595	QT 89	388171	14N	24E	24	5/23/2006
NMC 932597	QT 91	388173	14N	24E	24	5/23/2006
			14N	25E	19	
NMC 932599	QT 93	388175	14N	25E	19	5/23/2006
NMC 932601	QT 95	388177	14N	25E	19	5/23/2006
NMC 932603	QT 97	388179	14N	25E	19	5/23/2006
NMC 932605	QT 99	388181	14N	25E	19	5/23/2006
NMC 932607	QT 101	388183	14N	25E	19	5/23/2006
NMC 932609	QT 103	388185	14N	25E	19	5/25/2006
NMC 932610	QT 104	388186	14N	25E	19, 30	5/25/2006
NMC 932611	QT 105	388187	14N	25E	19	5/25/2006
NMC 932612	QT 106	388188	14N	25E	19, 30	5/25/2006
NMC 932613	QT 107	388189	14N	25E	19, 20	5/25/2006
NMC 932614	QT 108	388190	14N	25E	19, 20, 29, 30	5/25/2006
NMC 932615	QT 109	388191	14N	25E	20, 29	5/25/2006
NMC 932616	QT 110	388192	14N	25E	20, 29	5/25/2006
NMC 932617	QT 111	388193	14N	24E	26, 27	5/26/2006
NMC 932618	QT 112	388194	14N	24E	26, 27	5/26/2006
NMC 932619	QT 113	388195	14N	24E	26	5/26/2006
NMC 932620	QT 114	388196	14N	24E	26	5/26/2006
NMC 932621	QT 115	388197	14N	24E	26	5/26/2006
NMC 932622	QT 116	388198	14N	24E	26	5/26/2006
NMC 932623	QT 117	388199	14N	24E	26	5/26/2006
NMC 932639	QT 133	388215	14N	25E	30	5/25/2006
NMC 932641	QT 135	388217	14N	25E	29, 30	5/25/2006
NMC 932642	QT 136	388218	14N	25E	29, 30	5/25/2006
NMC 932643	QT 137	388219	14N	25E	29	5/25/2006
NMC 932644	QT 138	388220	14N	25E	29	5/25/2006
NMC 932645	QT 139	388221	14N	25E	29	5/25/2006
NMC 932646	QT 140	388222	14N	25E	29	5/25/2006
NMC 932647	QT 141	388223	14N	24E	26, 27	5/26/2006
NMC 932648	QT 142	388224	14N	24E	26, 27	5/26/2006
NMC 932649	QT 143	388225	14N	24E	26	5/26/2006
NMC 932650	QT 144	388226	14N	24E	26, 35	5/26/2006
NMC 932651	QT 145	388227	14N	24E	26	5/26/2006
NMC 932652	QT 146	388228	14N	24E	26, 35	5/26/2006
NMC 932658	QT 152	388234	14N	24E	25, 36	5/25/2006

NMC 932660	QT 154	388236	14N	24E	25, 36	5/25/2006
NMC 932662	QT 156	388238	14N	24E	25, 36	5/25/2006
NMC 932664	QT 158	388240	14N	24E	25, 36	5/25/2006
NMC 932666	QT 160	388242	14N	24E	25, 36	5/25/2006
			14N	25E	30, 31	
NMC 932667	QT 161	388243	14N	25E	30	5/25/2006
NMC 932668	QT 162	388244	14N	25E	30, 31	5/25/2006
NMC 932669	QT 163	388245	14N	25E	30	5/25/2006
NMC 932670	QT 164	388246	14N	25E	30, 31	5/25/2006
NMC 932671	QT 165	388247	14N	25E	30	5/25/2006
NMC 932672	QT 166	388248	14N	25E	30, 31	5/25/2006
NMC 932673	QT 167	388249	14N	25E	30	5/25/2006
NMC 932674	QT 168	388250	14N	25E	30, 31	5/25/2006
NMC 932676	QT 170	388252	14N	25E	30, 31	5/25/2006
NMC 932677	QT 171	388253	14N	25E	30	5/25/2006
NMC 932678	QT 173	388254	14N	25E	29, 30	5/25/2006
NMC 932679	QT 174	388255	14N	25E	29, 30	5/25/2006
NMC 932680	QT 175	388256	14N	25E	29	5/25/2006
NMC 932681	QT 176	388257	14N	25E	29	5/25/2006
NMC 932682	QT 177	388258	14N	24E	34, 35	5/25/2006
NMC 932683	QT 178	388259	14N	24E	35	5/25/2006
NMC 932684	QT 179	388260	14N	24E	35	5/25/2006
NMC 932685	QT 180	388261	14N	24E	35	5/25/2006
NMC 932686	QT 181	388262	14N	24E	35	5/25/2006
NMC 932687	QT 182	388263	14N	24E	35	5/25/2006
NMC 932688	QT 183	388264	14N	24E	35	5/25/2006
NMC 932689	QT 184	388265	14N	24E	35	5/25/2006
NMC 932690	QT 185	388266	14N	24E	35	5/25/2006
NMC 932691	QT 186	388267	14N	24E	35	5/25/2006
NMC 932692	QT 187	388268	14N	24E	35	5/25/2006
NMC 932693	QT 188	388269	14N	24E	35	5/25/2006
NMC 932694	QT 189	388270	14N	24E	35	5/25/2006
NMC 932695	QT 190	388271	14N	24E	35	5/25/2006
NMC 932696	QT 191	388272	14N	24E	35	5/25/2006
NMC 932697	QT 192	388273	14N	24E	35	5/25/2006
NMC 932698	QT 193	388274	14N	24E	35	5/25/2006
NMC 932699	QT 194	388275	14N	24E	35	5/25/2006
NMC 932700	QT 195	388276	14N	24E	35	5/25/2006
NMC 932701	QT 196	388277	14N	24E	35, 36	5/25/2006
NMC 932702	QT 197	388278	14N	24E	36	5/25/2006
NMC 932703	QT 198	388279	14N	24E	36	5/25/2006
NMC 932704	QT 199	388280	14N	24E	36	5/25/2006
NMC 932705	QT 200	388281	14N	24E	36	5/25/2006

NMC 932706	QT 201	388282	14N	24E	36	5/25/2006
NMC 932707	QT 202	388283	14N	24E	36	5/25/2006
NMC 932708	QT 203	388284	14N	24E	36	5/25/2006
NMC 932709	QT 204	388285	14N	24E	36	5/25/2006
NMC 932710	QT 205	388286	14N	24E	36	5/25/2006
NMC 932711	QT 206	388287	14N	24E	36	5/25/2006
NMC 932712	QT 207	388288	14N	24E	36	5/25/2006
NMC 932713	QT 208	388289	14N	24E	36	5/25/2006
NMC 932714	QT 209	388290	14N	24E	36	5/25/2006
NMC 932715	QT 210	388291	14N	24E	36	5/25/2006
NMC 932716	QT 211	388292	14N	24E	36	5/25/2006
			14N	25E	31	
NMC 932717	QT 212	388293	14N	24E	36	5/25/2006
			14N	25E	31	
NMC 932718	QT 213	388294	14N	25E	31	5/25/2006
NMC 932719	QT 214	388295	14N	25E	31	5/25/2006
NMC 932720	QT 215	388296	14N	25E	31	5/25/2006
NMC 932721	QT 216	388297	14N	25E	31	5/25/2006
NMC 932722	QT 217	388298	14N	25E	31	5/25/2006
NMC 932723	QT 218	388299	14N	25E	31	5/25/2006
NMC 932724	QT 219	388300	14N	25E	31	5/25/2006
NMC 932725	QT 220	388301	14N	25E	31	5/25/2006
NMC 932726	QT 221	388302	14N	25E	31	5/25/2006
NMC 932727	QT 222	388303	14N	25E	31	5/25/2006
NMC 932728	QT 223	388304	14N	25E	31	5/25/2006
NMC 932729	QT 224	388305	14N	25E	31	5/25/2006
NMC 983708	QT 251	423181	14N	24E	27	1/30/2008
			14N	24E	34	
NMC 983709	QT 252	423182	14N	24E	27	1/30/2008
			14N	24E	34	
NMC 983710	QT 253	423183	14N	24E	34	1/30/2008
NMC 983711	QT 254	423184	14N	24E	34	1/30/2008
NMC 983712	QT 255	423185	14N	24E	34	1/30/2008
NMC 983713	QT 256	423186	14N	24E	34	1/30/2008
NMC 983714	QT 257	423187	13N	24E	3	1/30/2008
			14N	24E	34	
NMC 983715	QT 258	423188	13N	24E	3	1/30/2008
NMC 983716	QT 259	423189	13N	24E	3	1/30/2008
			14N	24E	34	
NMC 983717	QT 260	423190	13N	24E	3	1/30/2008
NMC 983718	QT 261	423191	13N	24E	2, 3	1/30/2008
			14N	24E	34, 35	
NMC 983719	QT 262	423192	13N	24E	2, 3	1/30/2008

NMC 983720	QT 263	423193	13N	24E	2	1/30/2008
			14N	24E	35	
NMC 983721	QT 264	423194	13N	24E	2	1/30/2008
NMC 983722	QT 265	423195	13N	24E	2	1/30/2008
			14N	24E	35	
NMC 983723	QT 266	423196	13N	24E	2	1/30/2008
NMC 983724	QT 267	423197	13N	24E	2	1/30/2008
			14N	24E	35	
NMC 983725	QT 268	423198	13N	24E	2	1/30/2008
NMC 983726	QT 269	423199	13N	24E	2	1/30/2008
			14N	24E	35	
NMC 983727	QT 270	423200	13N	24E	2	1/30/2008
NMC 983728	QT 271	423201	13N	24E	2	1/30/2008
			14N	24E	35	
NMC 983729	QT 272	423202	13N	24E	2	1/30/2008
NMC 983730	QT 273	423203	13N	24E	2	1/30/2008
			14N	24E	35	
NMC 983731	QT 274	423204	13N	24E	2	1/30/2008
NMC 983732	QT 275	423205	13N	24E	2	1/30/2008
			14N	24E	35	
NMC 983733	QT 276	423206	13N	24E	2	1/30/2008

APPENDIX B
EXPLORATION HISTORY OF THE MACARTHUR OXIDE COPPER PROPERTY BY THE ANACONDA COMPANY, 1972

Exploration History of the MacArthur Oxide Copper Property by The Anaconda Company, 1972

My name is David Heatwole; from 1971 to 1974 I was a Project Geologist for The Anaconda Company (Anaconda), stationed in Weed Heights, Nevada. My primary responsibility during this time period was the exploration of the MacArthur Oxide copper property. I personally:

1. did the original geologic mapping of the property
2. designed and supervised the execution of the trenching program
3. mapped the trenches and supervised the sampling
4. designed drill programs and supervised site locations
5. supervised the drill program and logged cuttings
6. posted geologic and assay data to maps and sections
7. calculated first reserve estimates
8. collected samples for metallurgical testing

The following report documents my recollections of the implementation of exploration work done by Anaconda on the MacArthur property. I have supplemented my memory by the written reports referenced on the last page.

SURVEYING

Initial geologic work was done on enlarged USGS 15 minute topographic maps. To lay out the trenching program surveyors from the Yerington Mine established primary triangulation stations on the project. The stations were placed by triangulation with a transit from established USGS survey points and previous stations located by the mine. The triangulation stations allowed work at MacArthur to use the Yerington Mine Grid, a rectangular coordinate system based at the Yerington pit.

Yerington Mine surveyors established elevation control on the property by transit using vertical angles from known elevation points.

The MacArthur trenches were laid out on a N30E direction perpendicular to the geologic grain established in early mapping. The end lines of the trenches were located by transit and stadia rod. To guide the bulldozer, stakes were placed along surface trace of the trenches using tape and compass.

Before the drilling began, the mine surveyors triangulated additional control points on the property. Drill sites were located by transit/stadia, and compass and tape from the triangulation stations.

In 2007, I was able to locate a number of Anaconda drillholes in areas that had not been disturbed by Arimetco's mining operations.

TRENCHING

A trenching program designed to systematically assay outcropping copper oxide mineralization was accomplished in the later half of 1971. The trenches were laid out on 200 foot intervals using the survey methods outlined above. 10,500 feet of trenches were dug to a depth averaging 5 feet. About 850 of these trenches were deepened to a depth of 15' to demonstrate the affect of surface "super-leach" on oxide copper grades.

The trenches were mapped geologically at scales of 1”= 20;1’ = 50 and 1’=100 ; the scale depending upon geologic complexity. Survey control for the geologic mapping was tape and compass tied to triangulation and stadia points.

After geologic mapping, trenches were sampled on 10 intervals. Survey control for the sampling was the same as those previously established by the geologic mapping. Sample locations were recorded in numbered sample tag books giving each sample a unique sample number.

The samples collected are best described as “irregular rock chip”. Anaconda field personnel using geology picks, supplemented by single jack and moil, chipped horizontal samples at chest height. Considerable care was taken to assure that all fine material was collected in the samples. A brief description of sample procedure:

1. the sample face was cleaned using a dry brush
2. a canvas tarp was placed at the foot of the trench wall
3. the sample was cut taking care that all material fell on the tarp
4. the sample was transferred from the tarp to a new canvas sample bag
5. the unique sample tag was placed in bag and the bag was sealed using attached cloth ties
6. the samples were delivered at the end of each day to the Yerington Mine assay lab.

Assay results were usually available within 24 hours. Assay results were averaged by myself and posted by hand to a 1”= 100 plan map. At a later date the trench assays were digitized and became part of what is now known as the Metech MacArthur database.

DRILLING

In 1972 over 225 holes (33,000 feet vertical and 13,000 feet angle) were drilled on the prospect using open hole percussion and rotary methods. 82 percent of the drilling was done using a modified Gardner-Denver PR123J “Air-trac” percussion rig. Additional drilling was done in 1973.

The Air-trac rig was fitted with a sampling system designed by Anaconda’s Mining Research department for drilling friable ore minerals. The sampling system consisted of modified drill collar that allowed fine material to be routed to an industrial dust collector. Although the Air-trac drilling was done dry, nothing was discharged to the atmosphere; 100 percent of the material exiting the hole was collected.

Samples were normally collected at 5 foot intervals. The coarse and fine fractions were combined on site and split using a Jones splitter. Samples were bagged and tagged on site by the drill crew. An Anaconda field person picked up the samples daily and transferred them to the Yerington Mine assay lab. A mining engineer from Anaconda’s Mining Research department was on site to supervise the Air-trac drilling for most of the program. Sample recovery was estimated by weighing samples on site and comparing the sample weight to a calculated theoretical weight based on the volume drilled.

Boyles Brothers Drilling company completed the remainder of the drilling (18 percent) using a standard dry rotary drill rig. Boyles also designed a special sample collector to capture fine discharge from the hole. The Boyles system was not as efficient as Anaconda’s, but was successful in collecting much of the fine material. Boyles’s samples were split, tagged and bagged on site and picked up daily by Anaconda personnel.

A small number of samples from this drilling were sent to Chemical and Mineralogical services (CMS) in Salt Lake City.

ASSAYING

The majority of samples from the MacArthur project were assayed in the Yerington Mine assay lab. The Yerington Mine lab specialized in copper assays providing assay services to the mine and mill. The Yerington Mine used the "short iodide method" for copper assays. Anaconda's geology department routinely checked the Yerington Mine's assays by submitting duplicate samples to CMS.

Anaconda's geological research laboratory in Tucson, Arizona did check assays using atomic absorption spectrophotometry on both the Yerington Mine and CMS. (See attached report by Vincent, 1972)

Respectfully submitted,

David Heatwole

Yerington District Exploration Manager

Quaterra Alaska Inc

October 2008

REFERENCES

Heatwole, David, 1972. Progress Report and Drilling Proposal MacArthur Claims, Lyon County Nevada, January 1972, Anaconda Company unpublished report.

Heatwole, David, 1972, Progress Report Yerington Oxide Project-MacArthur Area, Lyon County Nevada: December 1972, Anaconda Company unpublished report.

Vincent, Harold, 1972, Assay Checks for Drill Hole Samples from MacArthur Prospect, October, 1972, unpublished Anaconda inter-office memo.

APPENDIX C
DRILLHOLE LISTING
MACARTHUR COPPER PROJECT
BY QUATERRA ALASKA INC., 2007-2008

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
QMT-1	0º/-90º	300	0	145	145	0.22
including			50	120	70	0.31
			170	210	40	0.15
QMT-1aR	0º/-90º	300	0	165	165	0.26
including			40	85	45	0.53
			180	200	20	0.19
QMT-1bR	0º/-90º	300	0	135	135	0.33
including			20	125	105	0.38
			185	210	25	0.19
			300	350	50	0.47
including			300	335	35	0.55
QMT-2	210º/-55º	300	0	245	245	0.29
including			40	170	130	0.38
QMT-2aR	210º/-55º	170	0	55	55	0.2
			75	165	90	0.26
including			95	165	70	0.29
QMT-3	0º/-90º	352.5	0	120	120	0.24
			220	275	55	0.19
QMT-3aR	0º/-90º	400	0	120	120	0.17
			140	150	10	0.13
QMT-4	0º/-90º	422.3	37.7	84	46.3	0.5
			110.5	174	63.5	0.17
			186.7	228.7	42	0.22
			274	304.3	30.3	0.31
QMT-5	195º/-57º	352	36.8	112	75.2	0.15
			182	206	24	0.21
			245	275	30	0.15

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
QMT-5aR	210º/-55º	400	0	135	135	0.2
			230	255	25	0.1
			285	320	35	0.11
			370	400	30	0.21
QMT-6	0º/-90º	394.7	33	128	95	0.25
			173	188	15	0.18
			257	322	65	0.28
including			268	322	54	0.31
QMT-7	0º/-90º	424	0	24	24	0.28
			48.4	70.3	21.9	0.29
			74.2	116	41.8	0.92
including			77.3	93.2	15.9	1.77
			129.6	154	24.4	0.18
			184	224	40	0.14
			254	284	30	0.2
			334	356.5	22.5	0.3
QMT-8	0º/-90º	353	10	29	19	0.19
			49	84	35	0.19
			142.2	229	86.8	0.2
			258.3	316	57.7	0.15
QMT-8aR	0º/-90º	400	0	20	20	0.51
			40	85	45	0.22
			150	170	20	0.52
			185	360	175	0.24
including			305	355	50	0.43
QMT-9	0º/-90º	244	9	81	72	0.34
			116.3	173	56.7	0.16
			193	244	51	0.14
QMT-10	0º/-90º	480	84	109	25	0.22

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			129	334	205	0.42
including			136	214	78	0.78
including			274	330.2	56.2	0.27
			349	372	23	0.3
			389	399	10	0.27
QMT-10aR	30º/-55º	350	80	180	100	0.27
including			140	165	25	0.44
			300	350	50	0.13
QMT-10bR	0º/-90º	350	80	145	65	0.78
including			85	135	50	0.91
			185	350	165	0.38
including			190	230	40	0.63
including			295	335	40	0.55
QMT-11	0º/-90º	284	0	120	120	0.18
			147	180	33	0.14
			214	284	70	0.24
including			229	284	55	0.27
QMT-11aR	0º/-90º	300	15	135	120	0.19
including			65	105	40	0.25
			160	220	60	0.16
			240	300	60	0.21
QMT-12	0º/-90º	326	0	10	10	0.16
			55	189	134	0.21
			229	317	88	0.2
QMT-12aR	0º/-90º	110	25	40	15	0.12
			60	110	50	0.18
QMT-13	0º/-90º	309.2	0	164	164	0.21
			180	216	36	0.25
			228.4	241.3	12.9	0.26

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			277.4	290.5	13.1	0.24
QMT-13aR	0º/-90º	300	0	240	240	0.27
including			30	185	155	0.3
			270	300	30	0.2
QMT-14	210º/-55º	360	5	123	118	0.31
including			36.2	80.5	44.3	0.55
			203	263	60	0.26
including			218	258	40	0.29
			303	338	35	0.29
QMT-14aR	0º/-90º	350	0	190	190	0.26
including			0	120	120	0.33
			215	235	20	0.13
			250	325	75	0.23
including			250	290	40	0.33
			340	350	10	0.54
QMT-14bR	210º/-55º	350	0	115	115	0.4
including			30	115	85	0.48
			155	175	20	0.19
			200	260	60	0.16
			290	350	60	0.17
QMT-15	0º/-90º	350	12.5	118	105.5	0.36
including			72	108	36	0.4
			183.3	288	104.7	0.19
QMT-15aR	0º/-90º	350	15	115	100	0.21
			230	350	120	0.19
including			280	310	30	0.31
QMT-16	0º/-90º	455	36.5	199	162.5	0.18
			214	254	40	0.18
			277.9	339	61.1	0.14

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			359	455	96	0.24
including			372.6	394	21.4	0.46
QMT-16aR	0º/-90º	450	55	190	135	0.16
			230	265	35	0.16
			285	305	20	0.14
			355	450	95	0.23
including			370	405	35	0.35
QMT-17	0º/-90º	350	54	67.3	13.3	0.13
			87.3	208.9	121.6	0.16
			236	246	10	0.14
QMT-17aR	0º/-90º	350	50	140	90	0.24
including			85	120	35	0.32
			170	180	10	0.12
QMT-17bR	0º/-90º	350	60	80	20	0.19
			115	180	65	0.2
			240	250	10	0.13
			390	400	10	0.13
QMT-18	0º/-90º	400	64	84	20	0.25
			112	189	77	0.2
QMT-18aR	0º/-90º	350	80	90	10	0.16
			105	160	55	0.15
			190	200	10	0.15
			215	240	25	0.13
			310	325	15	0.13
QMT-18bR	0º/-90º	350	115	175	60	0.18
QMT-19	0º/-90º	200	0	44	44	0.51
including			16	44	28	0.73

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
QME-1	0º/-90º	324	174	250	76	0.37
including			184	234	50	0.48
QME-2	0º/-90º	300.5	159	179	20	0.29
			258	300.5	42.5	0.27
including			263	288	25	0.4
QME-3	0º/-90º	303	63	166.5	103.5	0.16
including			72.5	93	20.5	0.28
			181.2	303	121.8	0.13
QME-4	0º/-90º	115	0	22.4	22.4	0.13
QME-4aR	0º/-90º	230	0	20	20	0.13
			35	45	10	0.17
			70	115	45	0.14
			215	230	15	0.15
QME-5	210º/-50º	72.5	0	40	40	0.18
QME-5aR	210º/-50º	80	0	80	80	0.23
QME-6R	0º/-90º	200	40	50	10	0.11
QME-8R	0º/-90º	340	0	10	10	0.13
			25	35	10	0.13
			70	100	30	0.18
			120	140	20	0.2
			195	265	70	0.17
QME-9R	0º/-90º	200	80	105	25	0.22
			130	140	10	0.13
QME-10R	0º/-90º	400	0	20	20	0.44
			105	120	15	0.34

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
QME-75R	0º/-90º	350	195	235	40	0.09
QME-76R	0º/-90º	350	300	310	10	0.17
QME-77R	0º/-90º	350	No assays above cut-off			
QME-78R	0º/-90º	350	275	285	10	0.15
			315	330	15	0.14
QME-79R	0º/-90º	350	210	250	40	0.31
			285	350	65	0.23
QME-80R	0º/-90º	350	85	100	15	0.57
			185	245	60	0.34
including			190	205	15	0.79
QME-81R	0º/-90º	350		No assays above cut-off		
QMC-1aR	0º/-90º	340	85	190	105	0.16
including			160	190	30	0.27
			245	300	55	0.49
QMC-1bR	270º/-45º	450	90	110	20	0.12
			185	255	70	0.13
			270	450	180	0.91
including			300	395	95	1.56
QMC-4aR	0º/-90º	300	40	60	20	0.3
QMC-4bR	270º/-45º	400	40	125	85	0.28
			160	275	115	0.24
including			180	195	15	0.72
			305	400	95	0.57
including			315	375	60	0.71
QMC-21R	0º/-90º	400	165	205	40	0.26

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			340	355	15	0.2
			390	400	10	0.13
QMC-22R	0º/-90º	400	0	40	40	0.44
			100	110	10	0.23
			345	355	10	0.35
QMC-23R	0º/-90º	400	280	290	10	0.2
			340	365	25	1.25
including			340	355	15	1.97
QMC-24R	0º/-90º	400	0	15	15	0.12
			40	105	65	0.17
			120	220	100	0.22
QMC-25R	0º/-90º	350	70	80	10	0.1
			100	155	55	0.29
including			135	155	20	0.51
			305	330	25	0.12
QMC-26R	0º/-90º	390	10	40	30	0.2
			65	95	30	0.29
			115	160	45	0.34
including			140	160	20	0.63
			200	220	20	0.14
			240	265	25	0.11
QMC-26aR	180º/-45º	400	30	45	15	0.21
			75	95	20	0.24
			120	155	35	0.22
			175	205	30	0.25
including			185	195	10	0.48
QMC-27R	0º/-90º	380	30	65	35	0.18
			80	170	90	0.13
			195	310	115	0.3

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
including			205	225	20	0.71
QMCC-1	0º/-90º	404	119	149	30	0.2
			179	204	25	0.14
			224	264	40	0.54
			289	303.6	14.6	0.36
QMCC-2	0º/-90º	454	34	115.3	81.3	0.21
			127	222.7	95.7	0.24
			320	339	19	0.17
			351.2	416.8	65.6	0.18
QMCC-3	0º/-90º	400	107	334	227	0.22
including			286	334	48	0.41
			399.1	416.8	17.7	0.21
QMCC-4	0º/-90º	304	42.1	87	44.9	0.23
including			72	87	15	0.39
QMCC-5	0º/-90º	318.5	154	217.6	63.6	0.17
QMCC-6	0º/-90º	359	88.3	98.3	10	0.15
QMCC-7	0º/-90º	410	5	23	18	0.15
			89	134	45	0.19
			239	275.1	36.1	0.42
QMCC-8	0º/-90º	356	304	314	10	0.14
QMCC-9	0º/-90º	350	142.4	152.5	10.1	0.12
			254	264	10	0.14
QMCC-10	0º/-90º	325	95.5	144	48.5	0.44
including			119	144	25	0.74
			159	199	40	0.2

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
QMCC-11	0º/-90º	350	94	194	100	0.16
including			145	158.7	13.7	0.25
QMCC-12	0º/-90º	474	149	251.8	102.8	0.19
			281.7	333	51.3	0.14
			422.4	454.5	32.1	0.16
QMCC-13	0º/-90º	434	0	114	114	0.24
including			39.8	69	29.2	0.49
QMCC-14	0º/-90º	330	162.2	172.3	10.1	0.1
			241.5	251.7	10.2	0.15
QMCC-15	0º/-90º	375	182.8	286.7	103.9	0.16
QMCC-16	0º/-90º	325	5	78.2	73.2	0.14
			96.9	219.3	122.4	0.26
including			143	156.4	13.4	0.84
			295	325	30	0.13
QMCC-17	0º/-90º	327.5	77.2	103	25.8	0.19
			277	290.5	13.5	0.12
QMCC-18	0º/-90º	369.5	77	97	20	0.13
			155.2	166.8	11.6	0.23
			182	212	30	0.22
QMCC-19	0º/-90º	360.4	274	287	13	0.13
QMCC-20	0º/-90º	333	163	183	20	0.15
QM-001	0º/-90º	400	20	65	45	0.39
including			50	65	15	0.91
			150	160	10	0.16
			310	345	35	0.43

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
QM-002	0º/-90º	400	0	15	15	0.19
			80	100	20	0.38
including			80	90	10	0.5
			270	330	60	0.12
QM-003	0º/-90º	400	0	15	15	0.22
			40	175	135	0.38
including			75	140	65	0.52
			220	235	15	0.21
			260	290	30	0.24
QM-004	0º/-90º	400	135	175	40	0.12
QM-005	0º/-90º	450	210	220	10	0.11
			310	320	10	0.25
QM-006	0º/-90º	400	110	155	45	0.28
including			130	150	20	0.5
QM-007	0º/-90º	400	160	180	20	0.16
			220	280	60	0.43
including			220	250	30	0.75
QM-008	0º/-90º	400	0	30	30	0.39
including			0	20	20	0.47
			275	290	15	0.48
QM-009	0º/-90º	400	40	95	55	0.18
including			45	60	15	0.28
			190	220	30	0.16
QM-010	0º/-90º	870	25	60	35	0.17
			190	250	60	0.3
			370	385	15	0.42
			470	530	60	0.73

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
including			480	495	15	2.46
			575	625	50	0.4
including			575	595	20	0.79
QM-011	0º/-90º	355	No assays above cut-off			
QM-012	0º/-90º	400	145	155	10	0.12
			205	220	15	0.14
QM-013	0º/-90º	290	15	50	35	0.24
including			40	50	10	0.59
QM-014	0º/-90º	350	285	330	45	0.17
including			315	325	10	0.27
QM-015	0º/-90º	400	160	230	70	0.28
including			190	210	20	0.55
			255	270	15	0.12
QM-016	0º/-90º	390	65	80	15	0.17
			125	155	30	0.14
			175	230	55	0.23
QM-017	0º/-90º	450	135	160	25	0.19
			175	230	55	0.3
including			200	225	25	0.49
QM-018	30º/-45º	510	85	95	10	0.17
			140	200	60	0.15
			275	310	35	0.18
			355	420	65	0.32
QM-019	210º/-60º	450	155	270	115	0.24
including			180	260	80	0.27
QM-020	0º/-45º	530	40	180	140	0.24

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			215	340	125	0.22
including			240	300	60	0.32
			410	420	10	0.21
QM-021	180º/-60º	450	85	110	25	0.15
			125	180	55	0.29
including			150	165	15	0.54
			315	420	105	0.22
QM-022	0º/-90º	440	130	150	20	0.58
including			135	150	15	0.72
			295	305	10	0.15
QM-023	210º/-60º	400	100	160	60	0.26
including			135	155	20	0.45
			290	300	10	0.14
QM-024	210º/-70º	350	50	60	10	0.13
			115	125	10	0.13
			215	265	50	0.45
QM-025	210º/-70º	520	100	180	80	0.21
including			160	170	10	0.41
			195	265	70	0.22
including			240	260	20	0.41
QM-026	0º/-90º	2,000.00	147	158.3	11.3	0.24
			860.5	880.5	20	0.35
including			865	875.5	10.5	0.56
			1,063.40	1,111.00	47.6	0.39
QM-027	180º/-45º	540	0	30	30	0.1
			135	150	15	0.15
			210	240	30	0.36
			265	295	30	0.26
			310	335	25	0.17

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			350	415	65	0.28
			430	540	110	0.17
QM-028	0º/-60º	470	20	55	35	0.16
			165	205	40	0.13
			230	250	20	0.17
			270	365	95	0.14
			390	470	80	0.19
including			430	445	15	0.31
QM-029	180º/-45º	500	0	70	70	0.18
			230	270	40	0.24
			285	300	15	0.3
			375	465	90	0.32
QM-030	180º/-45º	500	245	345	100	0.46
			360	475	115	0.38
including			360	385	25	0.62
QM-031	0º/-60º	430	65	105	40	0.16
			225	275	50	0.2
including			240	250	10	0.42
			290	300	10	0.3
QM-032	0º/-60º	500	150	230	80	0.11
			305	320	15	0.21
			405	460	55	0.15
QM-033	270º/-45º	490	130	155	25	0.2
			175	415	240	0.33
including			280	320	40	0.51
including			405	415	10	1.53
QM-034	90º/-45º	450	240	450	210	0.51
including			305	425	120	0.71

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
QM-035	180º/-60º	800	15	90	75	0.16
			140	165	25	0.16
			270	290	20	0.25
			380	555	175	0.23
including			470	485	15	0.73
QM-036	0º/-90º	1,917.00	128	146	18	0.18
			198	255	57	0.31
			602.7	614	11.3	0.25
QM-037	270º/-60º	900	15	70	55	0.18
			175	195	20	0.29
			480	525	45	0.23
QM-038	0º/-90º	800	0	190	190	0.2
			210	255	45	0.19
			340	385	45	0.39
QM-039	180º/-45º	800	0	100	100	0.19
including			55	75	20	0.32
			265	275	10	0.54
			320	340	20	0.23
			365	395	30	0.17
QM-040	270º/-60º	415	0	140	140	0.19
including			70	100	30	0.27
			190	260	70	0.23
			315	415	100	0.18
including			345	360	15	0.38
QM-041	0º/-90º	1,894.00	153	182.2	29.2	0.31
			233.5	284.5	51	0.51
including			271	284.5	13.5	1
QM-042	0º/-45º	400	200	255	55	0.73
including			210	225	15	2.26

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			280	325	45	0.29
			340	375	35	0.19
QM-043	270º/-45º	620	250	265	15	0.16
			295	310	15	0.19
			345	390	45	0.31
including			365	375	10	0.71
			490	500	10	0.67
QM-044	0º/-60º	965	0	60	60	0.22
			155	200	45	0.88
including			160	190	30	1.2
			225	255	30	0.41
			280	320	40	0.44
			435	460	25	0.3
			595	610	15	0.55
			820	840	20	0.3
QM-045	150º/-45º	800	0	50	50	0.13
			175	250	75	0.14
			270	330	60	0.19
including			295	310	15	0.3
			360	375	15	0.24
			420	440	20	0.16
			575	600	25	0.27
including			580	590	10	0.42
			750	780	30	0.1
QM-046	15º/-50º	1,502.00	228	253	25	0.23
			375	391	16	0.3
			791	805	14	0.19
			886	898.5	12.5	0.25
			983	993	10	0.4
			1,068.00	1,088.00	20	0.23
			1,279.00	1,355.00	76	0.74
including			1,283.00	1,300.00	17	2.27

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			1,410.00	1,424.00	14	0.25
			1,468.00	1,478.00	10	0.29
QM-047	0º/-90º	1,030.00	165	220	55	0.26
			245	290	45	0.33
			325	335	10	0.33
			365	375	10	0.28
			610	620	10	0.29
			635	680	45	0.32
			720	750	30	0.11
			770	785	15	0.22
			960	990	30	0.12
QM-048	270º/-60º	1,000.00	70	90	20	0.23
			130	155	25	0.13
			170	185	15	0.17
			235	275	40	0.11
			525	540	15	0.35
			650	685	35	1.32
including			660	680	20	2.17
			720	750	30	0.3
QM-049	180º/-60º	1,478.00	264	294	30	0.61
			423.5	463	39.5	0.15
			732.2	747	14.8	0.28
			809	829	20	0.29
QM-050	180º/-60º	800	40	75	35	0.21
including			50	60	10	0.43
			115	145	30	0.27
			305	335	30	0.13
QM-051	0º/-45º	400	280	290	10	0.13
QM-052	180º/-45º	420	130	170	40	0.28
including			135	150	15	0.47

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			185	200	15	0.26
			220	280	60	0.18
including			235	255	20	0.26
QM-053	270º/-45º	490	50	60	10	0.15
			150	165	15	0.14
QM-054	270º/-45º	480	190	205	15	0.25
			250	260	10	0.29
			295	345	50	0.59
			360	375	15	0.27
QM-055	0º/-45º	500	0	115	115	0.17
including			70	85	15	0.31
			130	175	45	0.36
including			135	150	15	0.57
			195	230	35	0.2
QM-056	270º/-45º	550	40	110	70	0.34
			155	225	70	0.16
including			200	215	15	0.34
QM-057	0º/-90º	400	15	40	25	0.21
			80	175	95	0.3
			285	300	15	0.42
QM-058	180º/-45º	450	0	30	30	0.22
			95	110	15	0.2
			125	265	140	0.41
			355	415	60	0.21
QM-059	0º/-45º	450	70	80	10	0.17
			315	325	10	0.21
QM-060	270º/-45º	400	50	85	35	0.15
			140	400	260	0.38

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
including			140	190	50	0.8
including			140	160	20	1.48
QM-061	0º/-90º	550	30	80	50	0.12
			155	250	95	0.19
including			190	225	35	0.26
			410	455	45	0.17
QM-062	180º/-45º	500	0	10	10	0.19
			45	60	15	0.12
QM-063	0º/-90º	500	0	30	30	0.13
			85	105	20	0.16
			215	240	25	0.17
QM-064	0º/-45º	650	0	35	35	0.14
			340	370	30	0.22
			430	500	70	0.26
including			430	460	30	0.44
QM-065	0º/-90º	520	295	310	15	0.31
			375	400	25	0.51
			485	505	20	0.17
QM-066	0º/-90º	570	170	190	20	0.15
			395	545	150	0.26
including			440	450	10	1.2
QM-067	0º/-90º	500	0	20	20	0.12
			110	230	120	0.25
including			175	225	50	0.42
QM-068	0º/-90º	600	470	585	115	1.15
including			485	580	95	1.36
QM-069	180º/-60º	450	80	90	10	0.2

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
			130	140	10	0.22
QM-070	0º/-90º	490	315	325	10	0.22
			415	480	65	0.76
including			435	480	45	1.02
QM-071	0º/-90º	470	60	125	65	0.25
			65	95	30	0.4
QM-072	0º/-90º	860	750	785	35	0.6
including			770	785	15	1.2
QM-073	0º/-45º	520	95	110	15	0.15
			125	160	35	0.13
			270	335	65	0.17
			350	365	15	0.18
QM-074	0º/-90º	460	20	100	80	0.16
including			85	100	15	0.3
QM-075	0º/-90º	430	175	300	125	0.18
including			250	290	40	0.26
			355	395	40	0.19
QM-076	0º/-45º	490	55	70	15	0.23
			430	460	30	0.33
QM-077	0º/-90º	450	40	80	40	0.29
			145	190	45	0.25
including			150	165	15	0.43
QM-078	180º/-45º	420	90	145	55	0.17
			195	255	60	0.45
including			210	230	20	0.83
QM-079	180º/-45º	530	130	340	210	0.24

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
including			275	325	50	0.38
including			290	300	10	0.89
QM-080	180º/-45º	500	0	230	230	0.23
including			30	100	70	0.33
including			195	220	25	0.32
QM-081	180º/-45º	510	130	150	20	0.15
			440	460	20	0.26
QM-082	0º/-90º	470	85	190	105	0.18
			210	355	145	0.14
including			240	260	20	0.25
QM-083	0º/-90º	490	0	15	15	0.31
			100	170	70	0.15
			190	290	100	0.14
			330	360	30	0.16
			375	415	40	0.17
			435	490	55	0.2
QM-084	0º/-90º	450	0	85	85	0.24
			105	140	35	0.19
			180	200	20	0.19
			390	450	60	0.36
QM-085	0º/-90º	490	0	95	95	0.43
including			0	60	60	0.59

All intervals calculated using 0.1% copper cutoff

REGULATORY NOTE:

The samples from the MacArthur drilling program are prepared and assayed by ISO/IEC 17025 certified American Assay Laboratories (AAL) located in Sparks, Nevada and by Skyline Laboratories in Tucson, Arizona.

Holes			Footage		
RC	Core	Total	RC	Core	Total

Drillhole intercepts through December 31, 2008
QUATERRA ALASKA, INC. -- MACARTHUR COPPER PROJECT
Complete Intercept Table

Hole ID	Angle (Azimuth/Dip)	Total Depth (ft)	From	To	Thickness (ft)	TCu %
124	49	173		56,215.00	23,921.60	80,136.60
109	181					