



# BISON ENGINEERING, INC.

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February 26, 2013

Mr. Hoby Rash  
Air, Energy & Pollution Prevention Bureau  
Montana Dept. of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620

Dear Mr. Rash:

Enclosed is a copy of the Tintina Resources Inc. (Tintina) quarterly meteorological data report for the fourth quarter of 2012. Tintina installed a 10 meter meteorological tower at their Black Butte Copper Project site, north of White Sulphur Springs, Montana. The tower started operations on April 30, 2012. This report contains the data from October 1 through December 30, 2012.

Please contact me with any comments or questions you may have on this report. I would be happy to discuss these with you.

Sincerely,  
BISON ENGINEERING, INC.

Chris Hiltunen, P.E.  
Project Engineer

cc: Bob Jacko – Tintina  
Vince Scartozzi- Tintina  
Alan Kirk – Geomin Resources

Enclosure

**TINTINA RESOURCES, INC.  
BLACK BUTTE COPPER PROJECT  
AMBIENT AIR  
MONITORING PROGRAM  
Quarterly Data Report  
Fourth Quarter 2012**

*Prepared for:*

**Tintina Resources, Inc.**  
17 East Main St  
White Sulphur Springs, MT 59645

*Prepared by:*

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February 26, 2013

## CERTIFICATION OF DATA INTEGRITY

Bison Engineering, Inc., certifies the data in this report is an accurate summary of the air quality conditions measured at the Black Butte Copper Project air monitoring site. Every effort was made to obtain accurate and representative data and to comply with the procedures set forth in the *Quality Assurance Project Plan*, the *State of Montana Ambient Air Monitoring Program Quality Assurance Project Plan*, the Environmental Protection Agency's *Quality Assurance Handbook for Air Pollution Measurement Systems: Volume II, Ambient Air Specific Methods (April 1994)*, and EPA's *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, Part 1, Ambient Air Quality Monitoring Program Quality System Development (March 1998)*.

Preparer: Jeffrey S. Bell

Signature: 

Title: Senior Field Technician

Date: 1/27/13

Reviewer: Rebecca L. Picchioni, P.E.

Signature: 

Title: Project Engineer

Date: 2/15/13

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Appendix A: Meteorological Data

## 1.0 INTRODUCTION

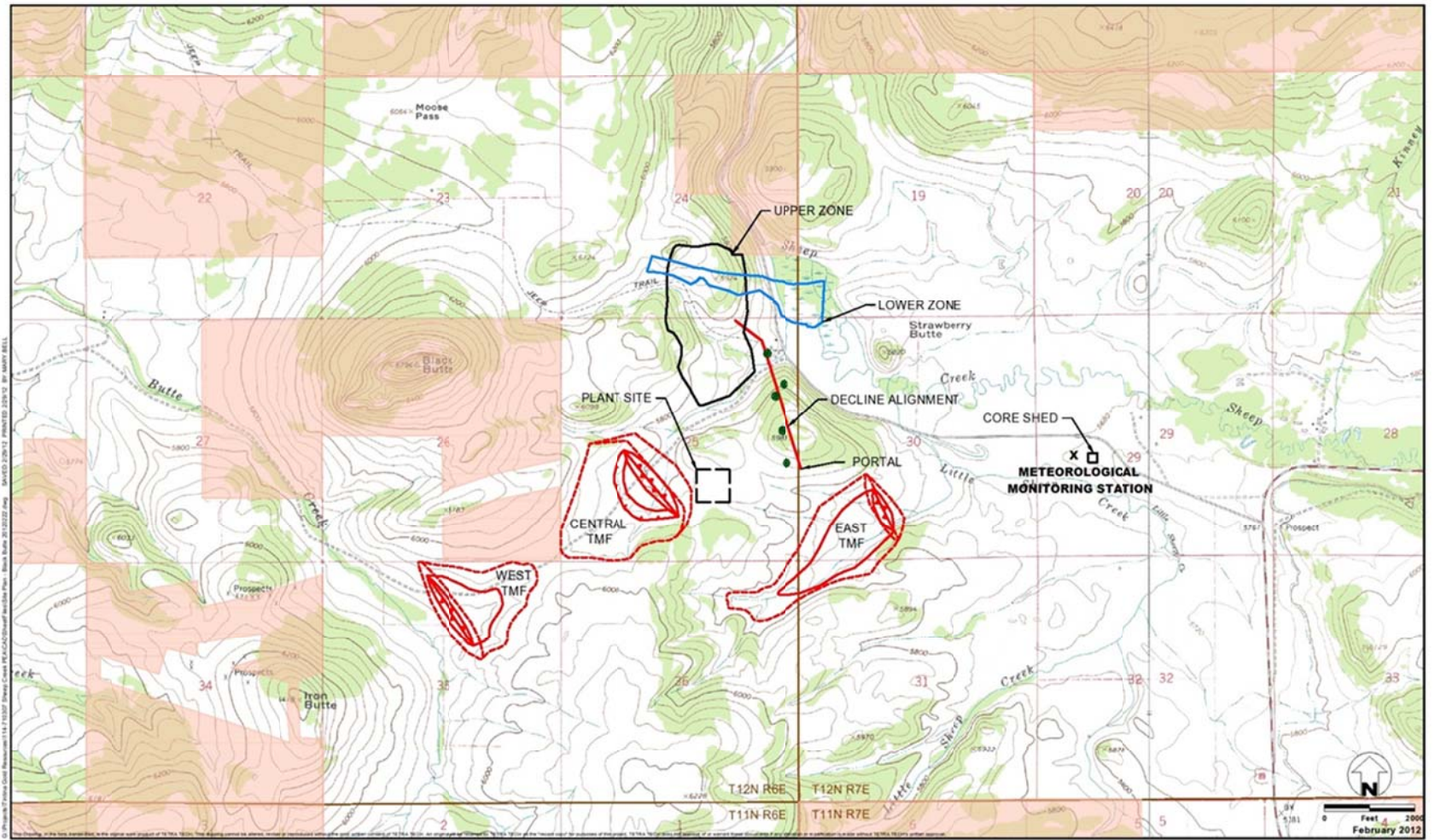
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Tintina Resources, Inc. established an ambient air monitoring site to measure wind speed, wind direction, standard deviation of wind direction, temperature at 9 meters and 2 meters, delta temperature, solar radiation, barometric pressure, and precipitation. The station was established to accurately characterize the local meteorology and collect baseline data in support of an operating permit application and various environmental studies.

The site of the meteorological monitoring system was installed in April 2012. The site is operated by Bison Engineering, Inc., of Helena and Billings. Figure 1 shows the location of the monitoring site.

This report presents the data collected during the fourth quarter (October through December) of 2012. In addition, a description of the monitoring system operations is presented, together with summaries of quality assurance activities, including calibrations and performance audits. Tabular summaries of the data completeness achieved and the periods of missing data also are presented. Appendix A presents hourly meteorological data collected.

**Figure 1. Monitoring Site Location**



- ADIT ALIGNMENT HOLES
- TAILINGS MANAGEMENT FACILITY
- USFS PROPERTY

Site Plan  
 Black Butte Copper Project  
 Meagher County, Montana  
 FIGURE 1

## **2.0 MONITORING SYSTEM OPERATIONS**

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The installation of the monitoring meteorological system equipment took place in April 2012, soon after the equipment was received from the manufacturers. The installation and calibration of the equipment required about two weeks to complete. All meteorological parameters were in full operation and producing valid data by April 30, 2012.

### **3.0 CALIBRATION DATA**

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There were no calibrations performed during the fourth quarter.

Meteorological system calibration is performed:

- No later than 180 days after the most recent calibration that indicated the meteorological system response to be acceptable;
- After an interruption of more than a few days in meteorological system operation;
- Following any repairs which might affect meteorological system calibration;
- Following a physical relocation of the meteorological system; or
- After any other indication of significant inaccuracy of the meteorological system, such as failed system.



## **4.0 PERFORMANCE AUDIT DATA**

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Chris Hiltunen of Bison Engineering, Inc. (Bison) conducted performance audits of the meteorological system at the site during the fourth quarter. All of the system audits generally produced results within the recommended tolerance limits. The Bison report of the audits is presented in Appendix B.

## 5.0 DATA COMPLETENESS

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The meteorological percentages of data recovery achieved during the fourth quarter of 2012 are given in Tables 1 and 2. In these tables, the number of possible data values during each month of the quarter is given, together with the number of valid readings and the number of hours spent on quality assurance activities (such as calibrations, performance audits, and maintenance on the sensors). The quality assurance hours are added to the number of hours of valid data to compute the net percentage data recovery.

During the fourth quarter, the net percentage data recovery was 100.0 percent for all meteorological parameters at Black Butte.

**Table 1. Monthly Data Completeness**

<b>October 2012</b>					
Parameter	Readings Possible	Valid Readings	Percentage Recovery	Quality Assurance Hours	Net Percentage Recovery
<b>Black Butte Copper Project Met Tower</b>					
Wind Speed	744	744	100.0	0	100.0
Wind Direction	744	744	100.0	0	100.0
Standard Deviation	744	744	100.0	0	100.0
Temperature 9 Meters	744	744	100.0	0	100.0
Temperature 2 Meters	744	744	100.0	0	100.0
Temperature Delta T	744	744	100.0	0	100.0
Solar Radiation	744	744	100.0	0	100.0
Barometric Pressure	744	744	100.0	0	100.0
Relative Humidity	744	744	100.0	0	100.0
Precipitation	744	744	100.0	0	100.0
Total	7,440	7,440	100.0	0	100.0

**Table 1. Monthly Data Completeness (Continued)**

<b>November 2012</b>					
Parameter	Readings Possible	Valid Readings	Percentage Recovery	Quality Assurance Hours	Net Percentage Recovery
<b>Black Butte Copper Project Met Tower</b>					
Wind Speed	720	720	100.0	0	100.0
Wind Direction	720	720	100.0	0	100.0
Standard Deviation	720	720	100.0	0	100.0
Temperature 9 Meters	720	720	100.0	0	100.0
Temperature 2 Meters	720	720	100.0	0	100.0
Temperature Delta T	720	720	100.0	0	100.0
Solar Radiation	720	720	100.0	0	100.0
Barometric Pressure	720	720	100.0	0	100.0
Relative Humidity	720	720	100.0	0	100.0
Precipitation	720	720	100.0	0	100.0
Total	7,200	7,200	100.0	0	100.0

**Table 1. Monthly Data Completeness (Continued)**

<b>December 2012</b>					
Parameter	Readings Possible	Valid Readings	Percentage Recovery	Quality Assurance Hours	Net Percentage Recovery
<b>Black Butte Copper Project Met Tower</b>					
Wind Speed	744	741	99.6	3	100.0
Wind Direction	744	740	99.5	3	99.9
Standard Deviation	744	740	99.5	3	99.9
Temperature 9 Meters	744	741	99.6	3	100.0
Temperature 2 Meters	744	741	99.6	3	100.0
Temperature Delta T	744	741	99.6	3	100.0
Solar Radiation	744	741	99.6	3	100.0
Barometric Pressure	744	741	99.6	3	100.0
Relative Humidity	744	741	99.6	3	100.0
Precipitation	744	741	99.6	3	100.0
<b>Total</b>	<b>7,440</b>	<b>7,408</b>	<b>99.6</b>	<b>30</b>	<b>100.0</b>

**Table 2. Quarterly Data Completeness**

<b>Fourth Quarter 2012</b>					
Parameter	Readings Possible	Valid Readings	Percentage Recovery	Quality Assurance Hours	Net Percentage Recovery
<b>Black Butte Copper Project Met Tower</b>					
Wind Speed	2,208	2,205	99.9	3	100.0
Wind Direction	2,208	2,204	99.8	3	100.0
Standard Deviation	2,208	2,204	99.8	3	100.0
Temperature 9 Meters	2,208	2,205	99.9	3	100.0
Temperature 2 Meters	2,208	2,205	99.9	3	100.0
Temperature Delta T	2,208	2,205	99.9	3	100.0
Solar Radiation	2,208	2,205	99.9	3	100.0
Barometric Pressure	2,208	2,205	99.9	3	100.0
Relative Humidity	2,208	2,205	99.9	3	100.0
Precipitation	2,208	2,205	99.9	3	100.0
<b>Total</b>	<b>22,080</b>	<b>22,048</b>	<b>99.9</b>	<b>30</b>	<b>100.0</b>

## 6.0 MONITORING DATA

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The hourly data values collected at the monitoring sites are given in the data tables in Appendix A. Each of these tables presents one month's data for all parameters in the monitoring system. In addition, the average, maximum, and minimum values for each parameter for each day are listed (for wind direction, the prevailing wind direction for the day is given). For those hours with missing data, a code is given that explains the reason the data were missing. These codes are given in Table 3.

Monthly and quarterly wind rose distributions from the monitoring site are presented in Tables 4 through 7. These tables give the percentage frequency of occurrence of winds from 16 cardinal directions and from 22 wind speed ranges. These same data are presented graphically in Figures 2 through 5. In the wind rose figures, the length of each "petal" of the rose is proportional to the percentage of time the wind blew from that direction. On the bottom of each figure is a histogram showing the average wind speed from each of the cardinal wind directions.

**Table 3. Missing Data Codes**

<b>Mnemonic Code</b>	<b>Description</b>	<b>Equivalent EPA Null Value Reason Code</b>
Sc	Scheduled but not collected	9972
Ti	Sample time out of limits	9973
Fi	Filter damage	9976
Op	Voided by operator	9978
ND	Machine malfunction	9980
Wx	Bad weather	9981
Co	Collection error	9983
Lb	Lab error	9984
QA	Poor quality assurance results	9985
Pwr	Power failure	9988
Wi	Wildlife damage	9989
AZ	Automatic zero/span check	9991
ZS	Manual zero/span check	9986
Au	Performance audit	9992
Ma	Routine maintenance/repairs	9993
Ca	Multipoint calibration	9995
PZ	Precision/zero/span	9998



**Table 4. Monthly Wind Rose Summary, Black Butte Copper Project Met Tower**

October 2012																		
Direction>>>	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total	
Wind Speed (meters per second)	0.1 - 1.0	1.2	0.9	1.1	2.4	2.0	2.4	2.7	1.9	1.6	0.8	0.7	0.0	0.8	0.4	1.2	1.2	21.4
	1.1 - 2.0	0.8	0.1	0.9	1.3	3.9	3.8	3.8	2.3	1.1	0.4	0.5	0.9	1.3	1.1	0.5	0.4	23.3
	2.1 - 3.0	0.3	0.1	0.7	0.9	3.4	1.3	1.5	0.8	0.4	0.9	0.3	1.5	2.3	1.5	1.5	0.5	17.9
	3.1 - 4.0	0.4	0.3	0.1	0.4	1.5	0.0	0.0	0.7	0.0	0.1	0.7	1.1	2.3	1.2	1.5	0.7	10.9
	4.1 - 5.0	0.1	0.1	0.0	0.0	0.3	0.1	0.1	0.9	0.4	0.3	0.1	1.1	2.2	0.8	0.8	0.5	7.9
	5.1 - 6.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	0.0	0.7	2.4	0.5	0.4	0.7	6.0
	6.1 - 7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.5	0.8	2.4	1.1	0.5	0.1	5.8
	7.1 - 8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	0.4	0.1	0.0	2.0
	8.1 - 9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	0.3	0.1	0.0	1.7
	9.1 - 10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.3	0.0	0.0	1.2
	10.1 - 11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.3	0.0	0.0	1.2
	11.1 - 12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	12.1 - 13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
	13.1 - 14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
	14.1 - 15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	15.1 - 16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	16.1 - 17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	17.1 - 18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18.1 - 19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	19.1 - 20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
> 20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Calm																		0.0
Total	3.1	1.6	2.8	5.1	11.0	7.7	8.1	7.7	3.5	2.8	2.8	6.7	18.4	7.8	6.7	4.2	100.0	
Average Speed	2.2	1.7	1.5	1.5	2.1	1.5	1.4	2.6	1.6	2.4	3.0	4.2	5.4	4.4	3.3	2.9	3.1	

**Table 5. Monthly Wind Rose Summary, Black Butte Copper Project Met Tower**

November 2012																		
Direction>>>	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total	
Wind Speed (meters per second)	0.1 - 1.0	1.1	0.8	0.8	0.7	1.8	0.7	1.8	3.2	0.8	0.4	0.0	0.1	0.3	0.3	0.8	1.1	14.9
	1.1 - 2.0	0.8	0.1	1.5	1.3	3.8	4.9	7.2	2.8	1.9	0.7	0.7	0.7	0.8	0.6	1.1	0.6	29.4
	2.1 - 3.0	0.0	0.0	0.3	1.1	3.8	3.1	1.4	0.8	0.6	0.6	0.0	0.7	1.8	1.1	0.8	0.1	16.1
	3.1 - 4.0	0.0	0.0	0.0	0.3	1.3	0.6	0.6	1.3	0.7	0.4	0.4	0.8	1.8	1.5	0.4	0.4	10.4
	4.1 - 5.0	0.0	0.0	0.0	0.3	0.0	0.3	0.4	1.3	0.6	1.0	0.3	0.4	1.9	1.0	0.7	0.0	8.1
	5.1 - 6.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	1.4	0.7	0.1	0.6	0.8	3.9	1.8	0.7	0.1	10.6
	6.1 - 7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.7	0.0	0.4	1.5	1.1	1.0	0.0	6.0
	7.1 - 8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1	0.1	0.1	0.7	0.0	0.1	0.0	1.8
	8.1 - 9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.6	0.1	0.8	0.0	0.0	2.1
	9.1 - 10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4
	10.1 - 11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3
	11.1 - 12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	12.1 - 13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	13.1 - 14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	14.1 - 15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	15.1 - 16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	16.1 - 17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	17.1 - 18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18.1 - 19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	19.1 - 20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
> 20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Calm																		0.0
Total	1.9	1.0	2.6	3.8	10.6	9.6	11.5	11.8	6.4	4.2	2.5	4.9	12.9	8.3	5.7	2.4	100.0	
Average Speed	0.9	0.9	1.3	2.2	2.0	2.1	1.7	2.9	3.5	3.9	4.5	4.6	4.6	4.7	3.6	1.9	3.1	

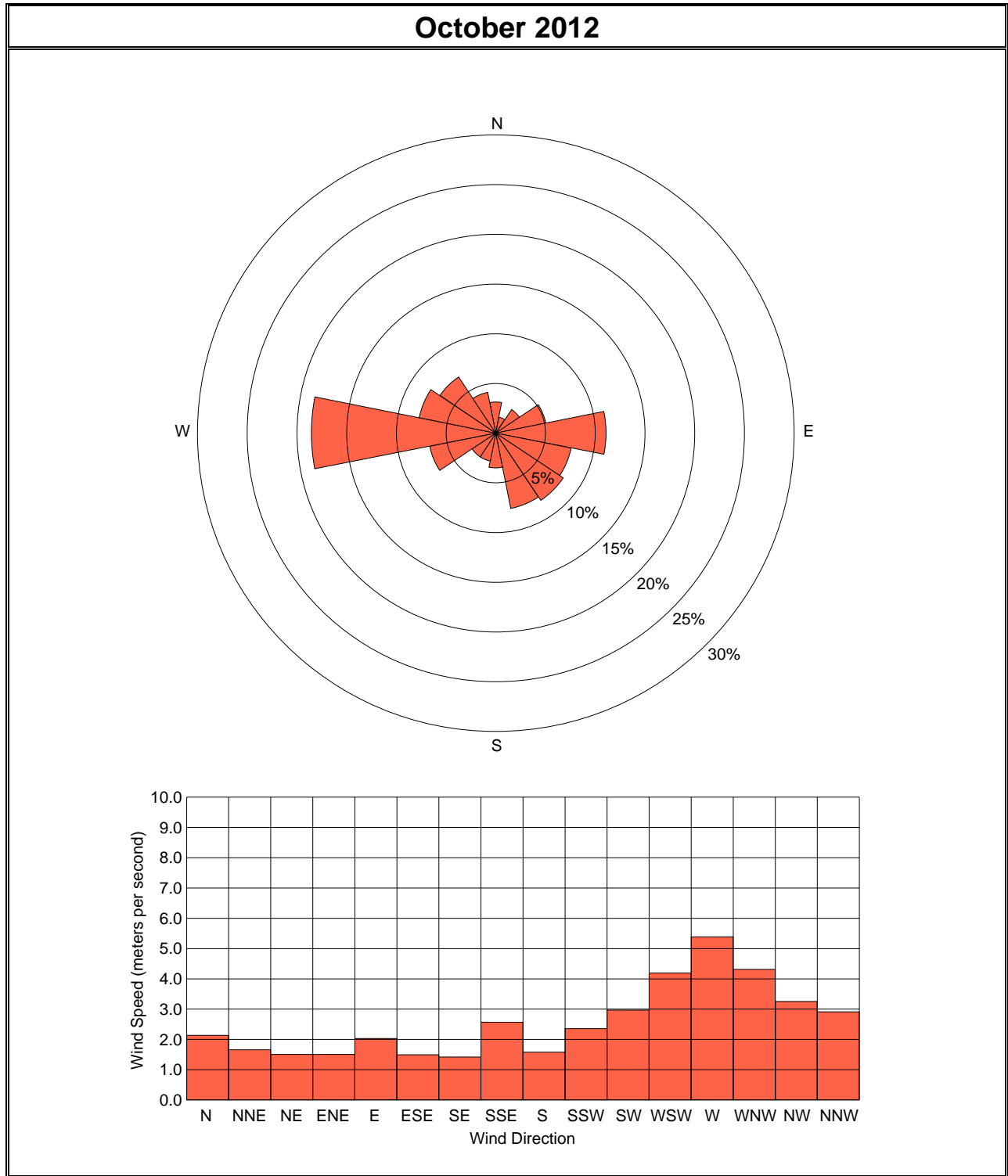
**Table 6. Monthly Wind Rose Summary, Black Butte Copper Project Met Tower**

December 2012																		
Direction>>>	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total	
Wind Speed (meters per second)	0.1 - 1.0	1.8	1.9	1.9	2.7	2.8	3.6	4.5	3.5	0.5	0.8	0.1	0.1	0.3	0.5	1.5	1.3	27.9
	1.1 - 2.0	0.1	0.1	1.2	2.6	2.7	4.7	3.8	1.5	0.7	0.4	0.3	0.5	1.3	0.8	1.1	0.3	22.1
	2.1 - 3.0	0.0	0.0	0.1	0.3	1.6	2.7	0.9	0.7	0.1	0.1	0.7	1.2	1.9	1.9	0.5	0.4	13.2
	3.1 - 4.0	0.0	0.0	0.0	0.0	1.1	0.5	0.4	0.7	0.3	0.9	0.0	1.1	3.0	2.0	0.3	0.0	10.3
	4.1 - 5.0	0.0	0.0	0.0	0.0	0.5	0.4	0.0	1.2	0.8	0.4	0.8	0.8	1.5	1.1	0.1	0.0	7.7
	5.1 - 6.0	0.0	0.0	0.0	0.3	0.3	0.0	0.1	0.3	0.3	0.9	0.4	0.5	1.3	1.1	0.1	0.0	5.7
	6.1 - 7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.1	0.3	3.2	0.4	0.1	0.0	5.4
	7.1 - 8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.3	0.5	3.0	0.4	0.0	0.0	5.0
	8.1 - 9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.3	0.9	0.0	0.0	0.0	1.9
	9.1 - 10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.1	0.0	0.0	0.5
	10.1 - 11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	11.1 - 12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	12.1 - 13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	13.1 - 14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	14.1 - 15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	15.1 - 16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	16.1 - 17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	17.1 - 18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18.1 - 19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	19.1 - 20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
> 20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Calm																		0.0
Total	1.9	2.0	3.2	5.8	9.0	12.0	9.7	8.4	3.6	5.0	2.7	5.4	17.0	8.4	3.8	2.0	100.0	
Average Speed	0.7	0.6	1.0	1.3	2.0	1.7	1.4	2.3	4.1	4.4	4.2	4.2	5.2	3.7	1.9	1.1	2.8	

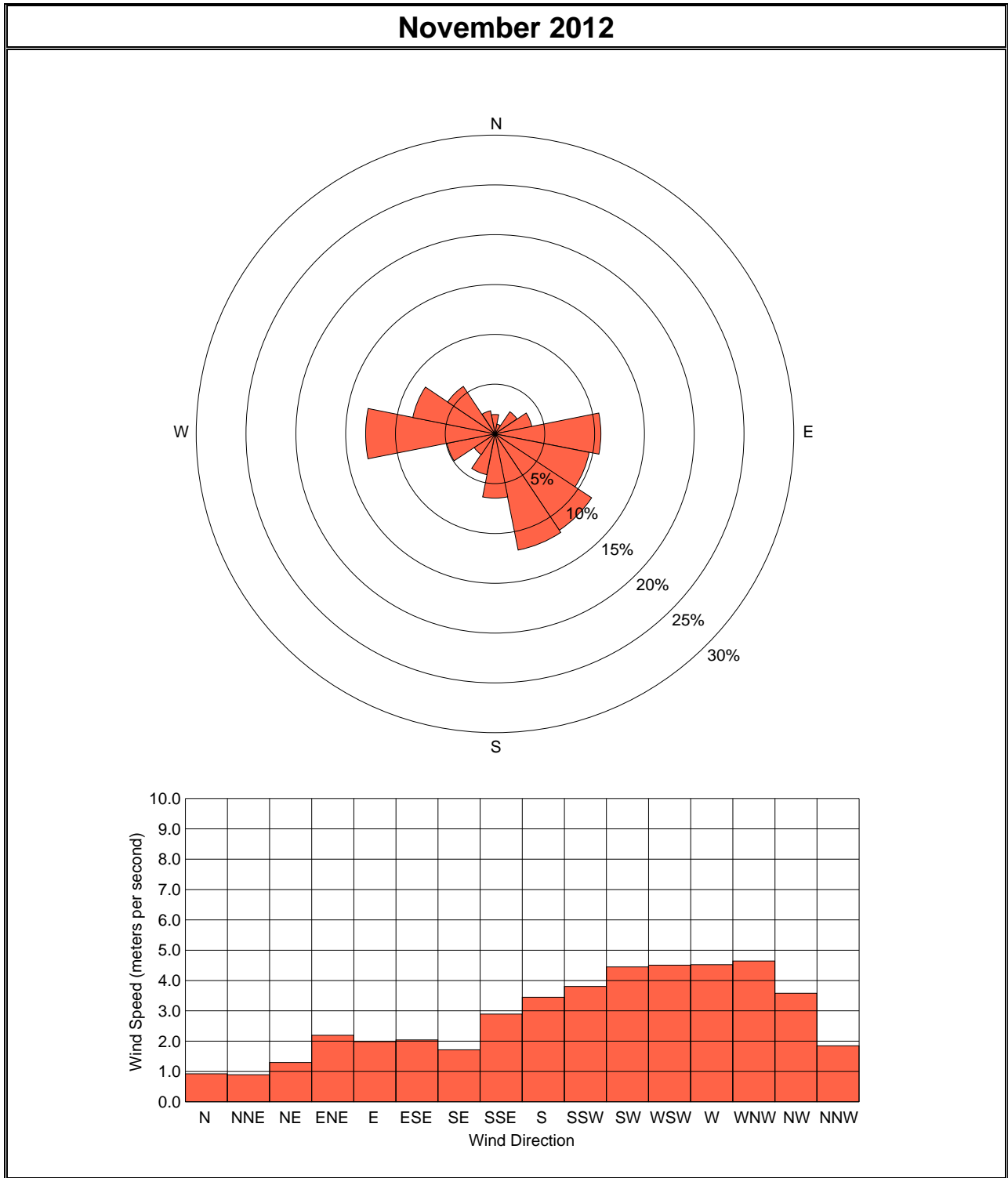
**Table 7. Quarterly Wind Rose Summary, Black Butte Copper Project Met Tower**

<b>Fourth Quarter 2012</b>																		
Direction>>>	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total	
Wind Speed (meters per second)	0.1 - 1.0	1.4	1.2	1.3	2.0	2.2	2.3	3.0	2.9	1.0	0.7	0.3	0.1	0.5	0.4	1.2	1.2	21.5
	1.1 - 2.0	0.6	0.1	1.2	1.7	3.4	4.4	4.9	2.2	1.2	0.5	0.5	0.7	1.2	0.8	0.9	0.4	24.9
	2.1 - 3.0	0.1	0.0	0.4	0.8	2.9	2.4	1.3	0.8	0.4	0.5	0.3	1.1	2.0	1.5	1.0	0.4	15.7
	3.1 - 4.0	0.1	0.1	0.0	0.2	1.3	0.4	0.3	0.9	0.3	0.5	0.4	1.0	2.4	1.6	0.7	0.4	10.5
	4.1 - 5.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	1.1	0.6	0.5	0.4	0.8	1.9	1.0	0.5	0.2	7.9
	5.1 - 6.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.8	0.3	0.5	0.3	0.7	2.5	1.1	0.4	0.3	7.4
	6.1 - 7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.2	0.5	2.4	0.9	0.5	0.0	5.7
	7.1 - 8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.3	1.6	0.3	0.1	0.0	2.9
	8.1 - 9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.4	0.7	0.4	0.0	0.0	1.9
	9.1 - 10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.7
	10.1 - 11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.5
	11.1 - 12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	12.1 - 13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	13.1 - 14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	14.1 - 15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	15.1 - 16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	16.1 - 17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	17.1 - 18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18.1 - 19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	19.1 - 20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
> 20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Calm																		0.0
Total	2.3	1.5	2.9	4.9	10.2	9.8	9.8	9.3	4.5	4.0	2.7	5.7	16.1	8.2	5.4	2.9	100.0	
Average Speed	1.4	1.1	1.3	1.6	2.0	1.8	1.5	2.6	3.2	3.7	3.9	4.3	5.1	4.3	3.1	2.2	3.0	

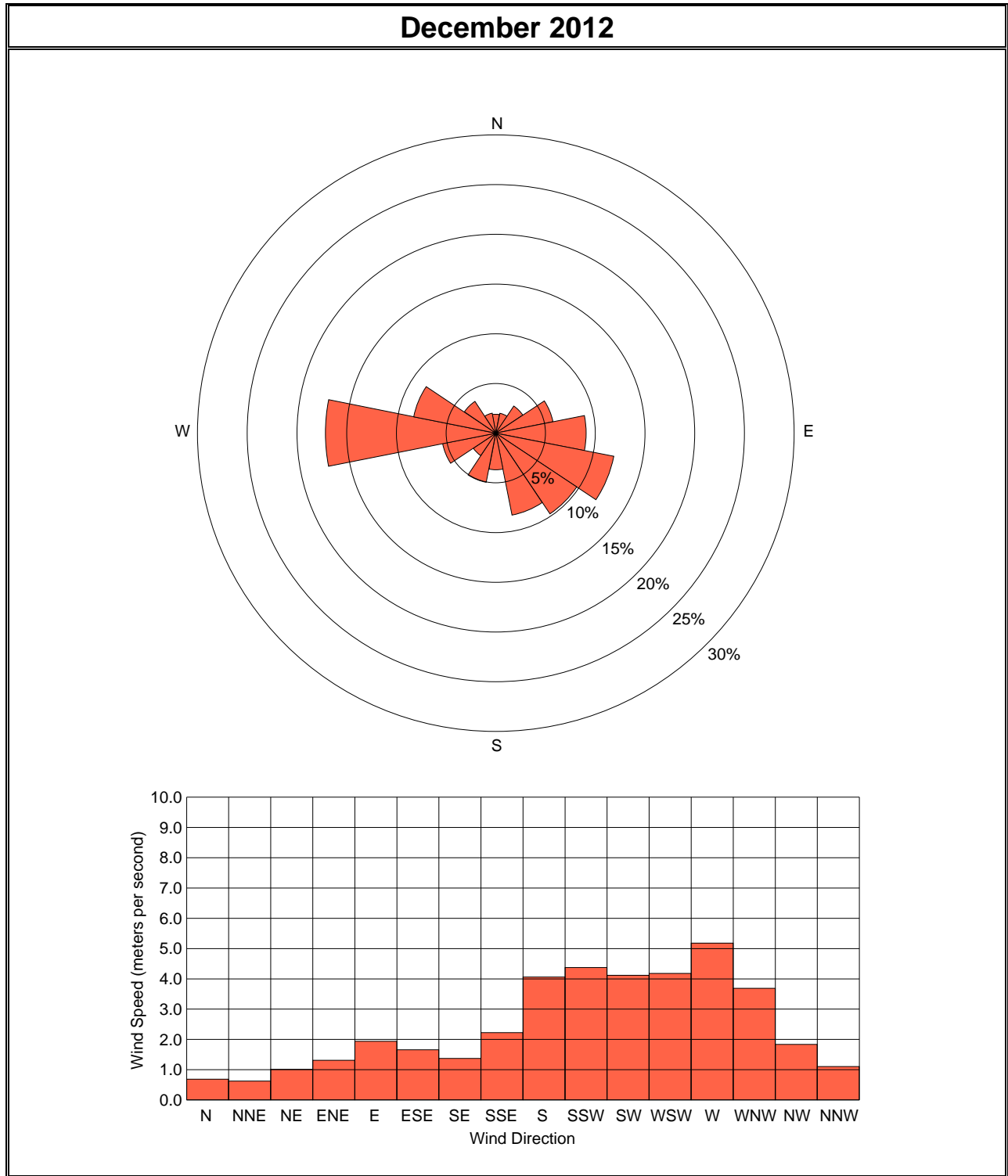
**Figure 2. Monthly Wind Rose, Black Butte Copper Project Met Tower**



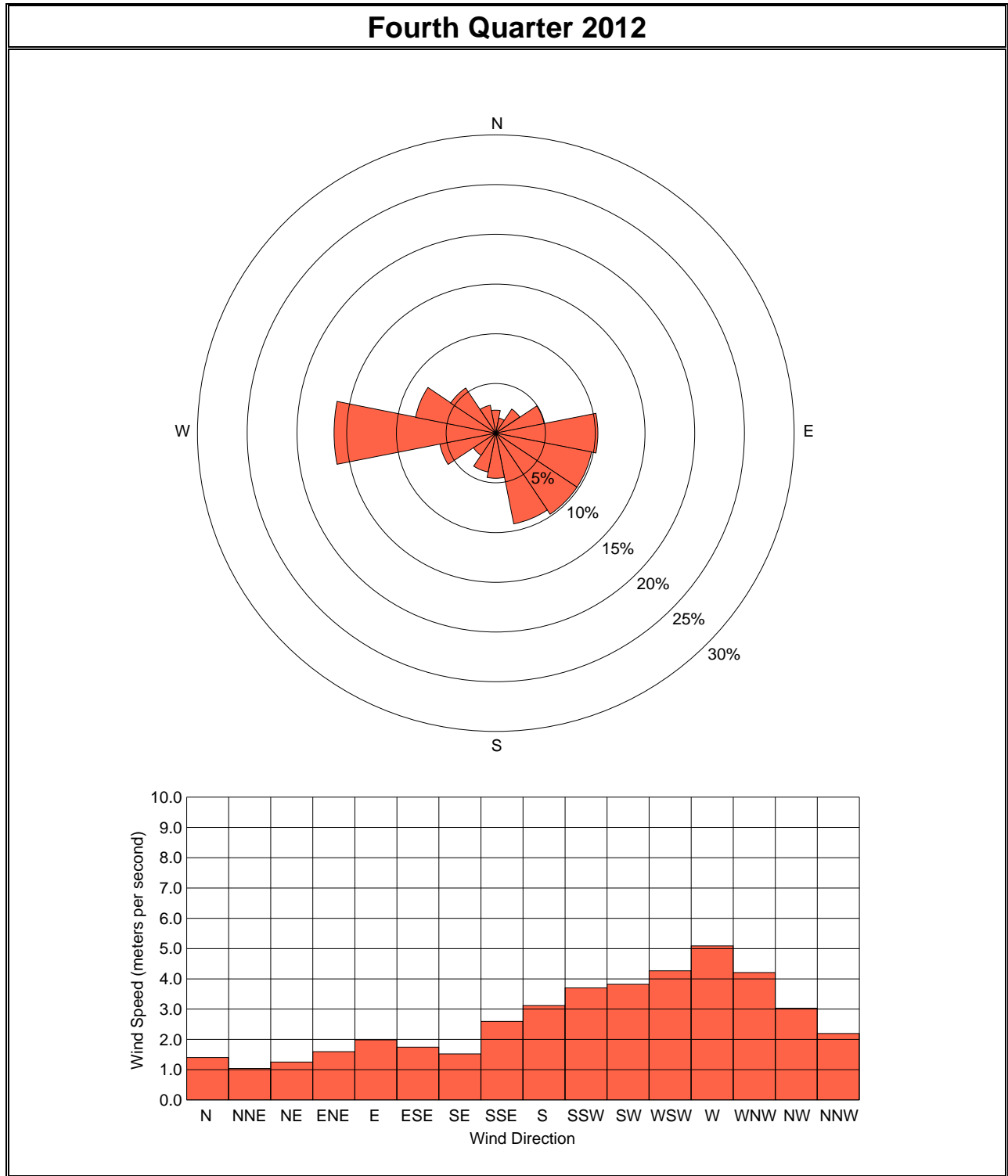
**Figure 3. Monthly Wind Rose, Black Butte Copper Project Met Tower**



**Figure 4. Monthly Wind Rose, Black Butte Copper Project Met Tower**



**Figure 5. Quarterly Wind Rose, Black Butte Copper Project Met Tower**





**APPENDIX A: HOURLY AIR QUALITY AND  
METEOROLOGICAL DATA, FOURTH QUARTER 2012**

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Wind Speed (meters per second)**  
**October 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	1.2	0.8	0.6	1.1	0.7	1.1	1.5	0.9	0.8	2.1	4.9	6.1	6.2	6.3	7.5	8.9	7.4	6.7	2.1	1.3	1.8	2.9	3.0	3.0	3.3	8.9	0.6
2	2.4	7.4	10.2	8.3	8.3	8.0	5.8	4.6	6.3	8.0	10.7	9.1	9.7	10.8	9.9	10.6	8.1	7.0	5.0	4.2	6.5	6.5	3.0	1.3	7.2	10.8	1.3
3	2.7	5.0	4.8	5.1	5.3	5.4	5.8	4.2	3.1	3.7	3.2	4.3	6.5	7.3	5.7	3.6	4.4	3.0	2.2	2.7	2.8	3.1	2.3	2.1	4.1	7.3	2.1
4	1.8	1.5	0.9	1.1	1.0	0.8	0.7	0.7	0.9	2.6	4.3	3.9	4.4	3.6	2.6	2.1	3.0	1.0	1.5	2.0	1.9	0.8	0.8	0.6	1.9	4.4	0.6
5	1.1	1.2	0.7	0.9	0.8	0.9	0.7	0.8	1.8	2.8	2.3	3.4	2.9	4.0	4.6	5.5	5.4	3.8	1.7	1.6	2.5	3.2	3.2	2.8	2.4	5.5	0.7
6	2.2	2.1	2.0	0.7	1.2	1.6	0.9	0.6	0.7	0.8	2.1	3.1	4.1	5.0	6.3	6.3	4.7	2.9	2.2	1.5	1.3	0.7	1.4	1.5	2.3	6.3	0.6
7	1.0	1.0	1.1	1.4	0.7	0.7	1.0	0.8	0.8	1.3	3.7	5.7	6.3	5.6	6.1	6.2	5.2	3.7	2.0	3.9	3.6	2.2	1.0	0.8	2.7	6.3	0.7
8	1.0	0.5	1.0	0.7	0.6	0.7	0.9	0.9	0.9	2.2	3.0	2.0	3.4	4.6	4.0	2.7	2.7	4.0	4.0	3.9	4.1	3.7	3.1	3.7	2.4	4.6	0.5
9	2.1	2.3	2.5	1.2	0.6	1.3	0.9	1.1	0.6	0.8	1.4	3.7	4.8	5.4	5.3	4.2	3.8	1.9	2.5	3.2	2.9	2.5	1.5	0.9	2.4	5.4	0.6
10	0.9	1.2	0.7	1.1	1.1	1.1	1.1	1.0	0.8	0.9	3.3	4.1	4.3	3.6	4.2	5.3	4.7	3.2	1.8	1.8	1.7	1.8	2.5	2.2	2.3	5.3	0.7
11	2.3	2.9	2.7	1.8	2.2	3.5	6.0	5.7	6.1	5.4	6.2	5.5	4.1	2.1	1.7	2.5	2.7	2.9	2.5	1.4	1.2	0.6	0.8	1.0	3.1	6.2	0.6
12	0.8	0.8	0.9	1.0	0.6	0.9	0.6	1.0	0.6	0.9	2.5	7.1	6.9	7.3	7.1	6.7	6.8	3.9	2.6	2.1	1.9	2.2	2.8	3.7	3.0	7.3	0.6
13	2.0	1.7	1.7	1.8	1.5	1.1	1.5	1.3	0.8	3.1	5.0	5.7	9.4	8.6	8.4	9.1	8.1	5.8	3.3	4.4	5.5	2.6	2.8	2.4	4.1	9.4	0.8
14	1.8	2.4	1.9	1.5	2.7	1.9	1.4	1.2	1.3	3.7	6.3	6.4	3.9	3.1	2.7	1.4	1.6	1.9	1.2	2.0	2.6	1.2	1.0	1.9	2.4	6.4	1.0
15	1.9	4.2	3.8	2.2	1.3	1.7	1.4	1.7	3.7	2.4	2.6	3.4	5.7	5.1	5.8	6.6	6.5	4.6	2.9	1.9	1.5	1.3	1.6	1.8	3.1	6.6	1.3
16	1.3	1.6	0.9	1.8	2.5	4.7	4.4	4.8	6.4	5.2	4.5	6.6	8.8	15.6	13.7	13.2	13.0	10.6	12.1	10.8	11.0	7.2	6.6	6.7	7.3	15.6	0.9
17	5.7	6.1	6.8	5.9	5.4	5.1	5.1	6.8	6.6	7.8	9.6	9.4	10.4	10.0	9.3	8.4	6.1	5.2	5.6	4.5	4.6	2.5	1.2	1.4	6.2	10.4	1.2
18	1.6	1.9	1.2	1.4	1.1	1.3	1.0	1.1	0.8	1.0	4.4	5.3	6.8	5.5	6.0	6.8	3.6	1.5	4.1	3.6	3.4	2.4	2.3	2.0	2.9	6.8	0.8
19	1.9	2.3	2.3	0.8	1.1	1.0	1.6	2.9	3.3	4.0	6.1	6.1	4.6	8.2	10.6	7.5	6.8	6.7	5.3	5.5	4.4	3.3	3.1	2.4	4.2	10.6	0.8
20	3.1	4.0	2.5	5.1	4.0	4.9	6.0	5.7	5.8	6.4	6.3	7.5	8.5	8.2	8.0	8.9	7.8	6.5	4.8	2.9	4.1	4.2	2.6	1.3	5.4	8.9	1.3
21	1.8	0.9	1.0	1.4	0.5	0.6	0.9	0.9	0.6	0.9	1.5	2.3	2.5	1.9	2.2	2.9	4.6	4.2	1.5	1.8	2.9	4.7	2.9	2.5	2.0	4.7	0.5
22	2.3	1.2	0.7	0.9	0.6	0.6	0.6	0.7	0.7	0.9	1.1	0.7	4.5	5.5	3.6	4.2	1.9	4.8	5.5	3.8	3.4	4.2	2.7	1.0	2.3	5.5	0.6
23	3.0	1.3	1.4	0.9	1.0	1.1	0.9	0.7	0.6	1.0	2.5	3.4	2.9	3.8	3.8	3.4	4.9	3.1	2.2	2.6	2.6	1.2	0.6	0.6	2.1	4.9	0.6
24	0.7	0.7	0.5	0.6	0.9	1.2	1.1	0.5	0.4	0.4	0.6	3.1	3.1	3.7	3.4	3.2	2.5	1.8	2.5	2.4	1.4	1.0	1.5	2.3	1.6	3.7	0.4
25	2.7	1.5	2.5	2.3	2.1	1.7	0.8	1.8	2.2	1.9	2.4	3.5	4.3	4.3	4.7	4.3	4.0	2.9	1.7	0.8	0.6	0.7	0.8	0.9	2.3	4.7	0.6
26	0.8	0.9	0.8	0.8	0.7	0.7	0.9	1.0	1.0	1.7	2.8	2.3	3.1	3.4	2.1	1.5	1.0	1.5	1.5	1.2	1.4	1.1	0.9	1.0	1.4	3.4	0.7
27	0.7	0.6	0.4	0.4	0.6	0.5	1.2	1.6	1.3	0.9	0.4	0.6	0.9	0.5	0.8	0.8	2.7	2.4	1.4	1.0	0.9	1.7	1.5	1.2	1.0	2.7	0.4
28	1.9	1.5	2.1	1.8	2.5	3.0	2.7	2.7	1.0	2.3	1.9	1.9	2.9	1.9	0.7	0.9	1.2	2.0	3.1	3.0	3.1	2.0	2.0	1.0	2.0	3.1	0.7
29	1.4	1.3	1.6	1.5	1.3	1.6	1.4	1.2	1.0	2.1	1.1	2.0	6.4	6.3	3.6	2.6	3.0	2.8	3.9	1.9	1.9	3.1	2.1	3.5	2.4	6.4	1.0
30	1.7	3.1	3.4	2.1	2.0	2.1	1.8	2.1	1.2	2.7	3.7	4.6	5.4	5.1	3.0	4.1	2.7	1.8	1.1	2.8	3.1	1.8	0.7	0.9	2.6	5.4	0.7
31	0.9	1.3	1.0	2.2	1.2	1.1	0.9	0.6	0.6	0.5	2.4	4.7	4.4	3.5	2.7	1.6	3.0	4.3	3.6	1.9	1.2	0.9	1.2	2.6	2.0	4.7	0.5
Avg	1.8	2.1	2.1	1.9	1.8	2.0	2.0	2.0	2.0	2.6	3.6	4.4	5.2	5.5	5.2	5.0	4.6	3.8	3.1	2.9	3.0	2.5	2.0	2.0	3.1	6.5	0.8
Max	5.7	7.4	10.2	8.3	8.3	8.0	6.0	6.8	6.6	8.0	10.7	9.4	10.4	15.6	13.7	13.2	13.0	10.6	12.1	10.8	11.0	7.2	6.6	6.7	7.3	15.6	2.1
Min	0.7	0.5	0.4	0.4	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.6	0.9	0.5	0.7	0.8	1.0	1.0	1.1	0.8	0.6	0.6	0.6	0.6	1.0	2.7	0.4

A-1

**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Wind Speed (meters per second)**  
**November 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	1.9	1.6	2.2	2.3	1.8	1.5	1.3	1.9	1.8	1.6	3.3	5.5	5.0	5.2	5.0	3.3	2.4	3.5	3.7	5.1	5.2	4.0	3.7	2.3	3.1	5.5	1.3
2	2.6	3.1	3.7	1.5	2.3	2.3	2.6	1.3	1.0	2.3	3.6	4.3	4.4	5.2	5.1	5.9	4.5	4.0	1.8	2.1	2.2	1.9	1.5	0.8	2.9	5.9	0.8
3	0.8	1.0	1.3	1.2	1.1	0.7	0.7	0.9	0.7	0.7	0.9	3.8	5.7	6.1	4.4	2.9	1.4	2.2	2.6	2.8	1.6	5.4	6.9	5.2	2.5	6.9	0.7
4	3.0	3.5	3.6	6.3	5.3	6.3	6.1	6.0	5.7	5.7	5.5	6.0	7.1	6.9	7.9	7.3	5.1	4.1	3.8	4.5	2.8	1.4	1.3	1.5	4.9	7.9	1.3
5	1.3	1.7	1.7	2.2	1.3	1.1	2.0	1.9	3.1	6.7	5.8	5.5	5.8	8.2	8.8	7.7	5.8	4.9	8.5	10.5	8.4	5.0	3.7	1.8	4.7	10.5	1.1
6	2.9	3.4	2.4	2.1	2.4	2.1	2.0	1.5	1.0	0.7	0.9	0.8	0.7	1.8	2.3	2.4	2.6	3.5	3.0	2.4	1.9	1.0	0.9	1.3	1.9	3.5	0.7
7	1.1	2.3	2.7	4.8	3.4	3.8	5.2	3.2	2.4	4.5	7.3	8.5	8.5	8.5	8.4	8.2	8.3	6.5	5.0	6.7	3.4	2.1	2.2	1.8	5.0	8.5	1.1
8	1.8	1.5	1.2	0.8	0.9	1.2	4.0	1.8	1.8	0.9	1.6	1.3	2.3	4.8	5.2	5.3	5.8	6.4	7.3	6.4	6.1	3.5	2.8	2.3	3.2	7.3	0.8
9	3.9	2.0	1.9	2.2	1.3	1.5	2.1	3.3	3.7	3.2	2.7	3.5	6.0	5.3	5.5	5.1	5.0	3.6	4.0	7.0	7.2	7.0	5.9	6.3	4.1	7.2	1.3
10	5.1	5.4	5.5	6.1	6.2	6.3	6.0	4.8	4.0	2.7	4.7	6.5	5.9	5.1	4.9	3.2	2.9	1.1	0.6	0.5	0.3	0.4	1.5	1.5	3.8	6.5	0.3
11	0.7	0.8	0.8	0.9	0.6	0.6	1.1	1.0	0.9	1.1	2.3	7.0	7.2	6.4	5.3	3.9	2.7	1.2	1.5	1.5	1.5	2.2	2.3	1.6	2.3	7.2	0.6
12	2.0	1.6	1.5	1.6	1.0	0.9	1.3	1.0	0.9	1.2	1.0	1.5	1.2	2.7	0.9	1.2	1.1	1.1	1.2	1.6	1.5	0.8	1.7	2.9	1.4	2.9	0.8
13	2.0	1.4	1.5	0.9	1.2	1.0	2.4	2.0	4.8	5.8	4.2	3.8	2.0	2.7	2.1	1.3	1.8	1.4	1.5	1.3	1.7	1.1	1.0	1.1	2.1	5.8	0.9
14	1.0	0.6	0.8	0.8	0.8	0.7	0.9	1.0	1.2	1.7	1.0	1.6	6.0	5.7	5.2	4.7	4.7	3.5	1.4	1.2	2.0	2.0	1.6	0.8	2.1	6.0	0.6
15	0.9	0.7	0.8	0.9	0.8	0.9	0.7	0.6	0.6	0.4	0.5	2.1	4.8	5.0	5.0	4.4	3.7	3.3	1.4	2.0	2.3	2.4	1.0	0.9	1.9	5.0	0.4
16	1.1	1.1	1.4	1.2	1.4	1.4	2.1	1.6	1.9	1.3	0.9	0.9	1.2	2.0	1.5	2.5	2.3	2.9	3.5	2.3	1.8	1.4	1.5	1.4	1.7	3.5	0.9
17	1.9	1.4	1.7	1.5	1.4	1.6	0.7	1.2	0.9	0.7	1.0	3.6	4.0	4.9	5.0	5.5	4.1	2.7	3.2	1.6	2.0	2.6	2.8	2.5	2.4	5.5	0.7
18	1.5	1.9	2.2	5.4	3.0	3.8	5.0	4.4	6.8	4.8	8.1	9.3	6.7	3.6	5.6	4.2	2.4	1.9	2.0	1.6	1.8	1.5	1.4	1.1	3.8	9.3	1.1
19	0.9	1.0	1.5	1.8	1.9	5.6	6.1	4.6	6.7	5.3	4.7	7.5	5.8	5.5	6.4	6.6	5.0	6.2	2.2	8.5	7.8	7.6	4.0	3.3	4.9	8.5	0.9
20	2.9	2.2	4.7	9.5	5.2	3.3	4.4	5.8	5.8	7.0	6.6	9.8	10.1	8.1	5.7	5.8	6.6	5.1	4.1	3.2	2.5	1.4	1.4	1.4	5.1	10.1	1.4
21	1.6	1.1	2.5	3.2	2.3	5.5	6.1	6.8	4.3	2.0	2.4	2.3	2.1	1.8	2.0	4.5	2.6	2.1	5.6	5.3	6.1	5.7	4.7	4.4	3.6	6.8	1.1
22	2.7	2.6	5.5	5.0	5.8	5.5	5.5	6.2	6.3	7.6	6.8	6.1	6.0	6.3	5.6	5.3	3.9	2.4	2.1	3.1	2.9	2.6	2.0	1.7	4.6	7.6	1.7
23	0.9	1.1	1.5	1.7	2.1	2.7	4.3	4.9	2.9	2.8	3.1	2.9	2.3	1.6	1.8	1.8	3.9	3.4	3.9	3.7	2.4	2.0	2.7	3.1	2.6	4.9	0.9
24	4.0	5.1	4.8	4.9	3.9	3.1	2.1	2.6	4.2	5.1	5.2	5.1	6.3	5.9	8.8	8.7	6.7	2.6	3.3	4.2	3.4	2.4	1.6	3.7	4.5	8.8	1.6
25	3.7	3.1	0.7	1.8	1.7	1.3	1.1	2.5	2.0	4.0	4.8	5.1	5.4	5.1	4.4	3.4	1.7	2.3	3.8	1.7	1.2	1.1	0.9	1.1	2.7	5.4	0.7
26	0.7	0.9	0.9	0.9	1.1	0.9	0.7	0.7	0.6	0.5	0.4	0.7	1.0	1.4	0.7	0.9	1.9	1.8	2.1	1.7	2.3	1.9	1.5	1.1	1.1	2.3	0.4
27	1.2	0.8	0.8	0.5	0.8	0.9	0.8	0.7	1.1	0.7	0.7	0.8	1.0	2.0	1.1	1.4	2.9	2.9	1.8	1.7	1.5	1.0	1.3	1.4	1.2	2.9	0.5
28	1.1	0.9	1.2	1.2	1.2	1.6	1.2	2.0	1.5	1.2	1.3	1.1	0.8	1.1	1.5	2.6	3.6	3.0	1.6	1.8	1.7	1.5	2.3	1.8	1.6	3.6	0.8
29	1.7	1.2	2.4	2.2	2.3	2.5	1.3	0.9	1.1	0.9	1.5	1.3	1.8	3.5	4.1	5.1	2.6	4.5	2.8	2.7	1.4	3.6	2.5	2.0	2.3	5.1	0.9
30	2.2	3.2	2.3	6.9	4.2	4.1	6.1	4.7	5.9	3.2	3.2	5.1	7.9	4.3	2.8	2.0	3.1	2.2	2.2	1.6	1.4	1.4	1.1	0.2	3.4	7.9	0.2
Avg	2.0	1.9	2.2	2.7	2.3	2.5	2.9	2.7	2.9	2.9	3.2	4.1	4.5	4.6	4.4	4.2	3.7	3.2	3.0	3.3	2.9	2.6	2.3	2.1	3.1	6.3	0.9
Max	5.1	5.4	5.5	9.5	6.2	6.3	6.1	6.8	6.8	7.6	8.1	9.8	10.1	8.5	8.8	8.7	8.3	6.5	8.5	10.5	8.4	7.6	6.9	6.3	5.1	10.5	1.7
Min	0.7	0.6	0.7	0.5	0.6	0.6	0.7	0.6	0.6	0.4	0.4	0.7	0.7	1.1	0.7	0.9	1.1	1.1	0.6	0.5	0.3	0.4	0.9	0.2	1.1	2.3	0.2

**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Wind Speed (meters per second)**  
**December 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1	2.0	4.9	4.0	3.9	4.1	4.7	5.2	6.2	7.2	5.4	2.9	2.5	1.4	1.7	1.2	1.5	2.6	7.2	0.2
2	2.9	4.8	5.2	6.1	6.1	6.3	8.0	6.8	8.4	8.2	6.5	7.3	8.6	9.2	8.7	7.8	7.6	6.7	6.8	7.2	7.7	9.2	7.9	7.4	7.1	9.2	2.9
3	8.7	4.6	5.1	8.6	5.4	5.1	5.4	2.8	3.1	3.6	4.6	6.0	5.9	6.5	7.9	7.7	7.3	6.6	4.0	4.2	2.5	4.0	2.3	1.8	5.2	8.7	1.8
4	2.0	1.9	2.8	2.5	3.1	3.8	3.8	2.6	4.9	3.7	4.2	3.0	4.1	4.5	5.2	4.0	3.9	6.6	7.3	5.1	1.9	2.3	4.8	4.7	3.9	7.3	1.9
5	5.5	5.5	6.5	7.2	5.2	2.6	4.4	7.9	7.5	8.5	7.9	7.6	8.4	11.5	9.5	8.0	10.2	9.6	5.5	4.1	4.7	5.3	3.1	4.3	6.7	11.5	2.6
6	3.3	3.5	3.2	1.3	1.3	1.1	2.4	3.3	3.0	3.6	4.4	4.4	3.8	4.5	4.4	4.3	2.5	1.3	1.4	0.8	0.4	0.5	1.0	1.1	2.5	4.5	0.4
7	0.9	0.8	1.9	1.4	0.8	1.7	5.1	5.9	6.3	6.1	6.3	7.6	8.1	6.7	4.3	5.2	3.4	2.9	5.3	4.4	7.0	2.8	1.7	4.7	4.2	8.1	0.8
8	6.8	5.0	6.7	7.0	8.0	5.8	8.0	7.7	6.9	4.4	5.2	6.3	6.5	6.3	5.1	3.1	1.9	0.9	1.6	1.2	0.8	0.7	0.6	0.6	4.5	8.0	0.6
9	0.7	0.2	0.5	0.5	0.5	0.7	0.6	0.7	0.8	0.7	0.7	1.1	4.0	2.6	4.5	3.8	3.6	6.0	6.2	4.9	3.6	4.8	2.4	2.8	2.4	6.2	0.2
10	3.6	3.1	2.4	1.2	1.1	1.7	0.7	0.7	2.5	4.7	4.9	4.4	5.1	5.5	6.2	5.9	5.5	3.4	3.1	1.8	1.9	1.3	0.9	1.0	3.0	6.2	0.7
11	0.4	0.5	0.5	0.9	1.1	1.5	1.9	1.8	5.6	3.4	2.0	1.9	1.7	2.8	3.5	4.5	3.1	3.7	2.9	3.2	1.9	1.5	1.6	1.9	2.2	5.6	0.4
12	1.7	1.0	0.9	1.2	1.1	0.8	0.7	0.5	0.7	0.5	0.5	0.4	0.7	2.4	2.6	2.4	3.0	1.1	0.8	1.0	1.2	1.1	1.1	1.2	1.2	3.0	0.4
13	1.3	0.8	0.9	0.9	0.7	1.6	1.7	1.5	1.5	1.2	2.0	3.7	2.9	4.1	3.5	2.6	0.9	2.3	1.5	1.4	0.8	0.6	0.8	0.4	1.6	4.1	0.4
14	0.5	0.5	0.8	0.5	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.4	1.0	0.8	1.2	0.9	0.9	0.8	0.5	0.8	1.3	1.4	1.3	1.5	0.8	1.5	0.4
15	1.3	1.0	1.2	0.9	0.7	0.6	0.7	0.5	0.6	0.8	0.6	0.9	5.0	3.9	2.8	3.0	1.7	1.1	1.5	0.8	0.8	0.7	0.6	0.3	1.3	5.0	0.3
16	0.5	0.5	0.4	0.7	0.9	0.8	0.8	1.1	1.3	1.0	3.1	6.6	8.2	7.1	7.9	5.7	1.5	2.1	2.2	1.9	1.6	1.2	2.5	1.9	2.6	8.2	0.4
17	2.0	4.3	4.2	3.6	4.5	2.9	2.6	2.2	2.0	2.1	2.1	3.5	2.6	1.5	3.2	5.2	6.7	7.8	8.3	6.8	7.3	6.9	5.7	7.6	4.4	8.3	1.5
18	8.5	7.8	7.7	7.0	6.6	6.9	6.1	7.4	6.7	6.3	7.2	7.9	8.1	8.4	7.5	7.2	6.0	3.3	3.7	3.2	1.6	2.2	2.2	2.0	5.9	8.5	1.6
19	1.8	1.1	0.8	0.9	0.6	0.6	0.7	0.8	0.6	0.8	0.7	1.0	5.5	6.6	4.6	3.5	2.7	1.8	2.1	2.8	1.9	1.9	1.9	1.9	2.0	6.6	0.6
20	2.2	2.9	2.9	2.5	3.5	5.0	4.0	4.4	4.9	5.4	3.5	4.8	6.3	Au	Au	Au	4.4	2.2	2.6	3.2	1.7	3.0	3.5	5.1	3.7	6.3	1.7
21	5.3	5.0	5.2	4.1	3.0	2.4	2.6	5.4	3.2	2.1	2.8	4.5	3.9	3.1	5.1	4.4	3.0	1.7	2.0	2.5	1.8	1.4	1.6	2.6	3.3	5.4	1.4
22	3.5	3.4	2.1	2.5	1.6	1.4	1.3	1.1	0.9	1.1	0.7	1.4	1.4	2.0	1.4	1.0	1.9	3.1	4.2	2.2	1.5	2.0	2.3	1.6	1.9	4.2	0.7
23	1.5	1.5	4.8	6.7	2.8	2.7	2.6	1.0	1.7	1.9	1.5	2.5	3.6	3.0	4.4	3.1	2.1	3.6	4.3	2.9	1.4	0.7	1.2	1.2	2.6	6.7	0.7
24	4.0	3.2	2.4	4.5	4.3	4.0	2.7	3.5	3.3	2.6	3.2	3.2	3.4	2.8	3.2	2.1	2.4	2.2	1.3	0.8	0.4	0.7	0.8	0.9	2.6	4.5	0.4
25	1.1	0.7	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.6	0.7	1.0	2.2	2.1	2.0	1.5	1.8	1.0	1.7	1.3	1.8	1.0	2.2	0.4
26	1.3	1.2	1.4	0.9	1.0	0.8	1.1	1.4	1.4	1.1	1.6	2.5	1.6	0.8	1.4	2.2	1.3	0.8	1.5	1.7	0.8	0.6	0.4	0.8	1.2	2.5	0.4
27	0.6	0.6	0.7	0.6	0.5	0.5	0.4	0.8	1.5	0.7	0.8	0.9	1.4	1.8	2.6	1.9	1.4	0.8	1.3	1.4	1.0	0.6	0.8	1.1	1.0	2.6	0.4
28	0.5	0.6	0.8	4.0	4.0	5.0	5.9	5.2	0.8	1.6	1.2	3.8	7.3	7.4	6.2	4.3	2.3	1.3	2.6	2.8	1.6	1.1	1.2	1.0	3.0	7.4	0.5
29	1.0	0.7	0.6	0.7	0.7	0.7	1.0	1.0	1.0	0.9	0.5	0.5	0.7	0.7	0.9	1.4	1.2	2.4	2.0	1.4	1.1	1.3	1.2	0.8	1.0	2.4	0.5
30	0.8	0.6	0.7	0.7	0.6	0.6	0.3	0.8	0.5	0.4	0.6	2.6	2.5	3.6	3.3	3.1	2.7	2.2	1.5	1.7	1.5	0.7	0.7	0.9	1.4	3.6	0.3
31	0.6	0.5	0.7	0.7	0.8	0.7	0.8	1.1	1.0	0.6	1.0	1.0	2.7	3.7	3.5	2.5	2.2	1.3	1.0	1.4	2.2	2.3	1.4	1.2	1.5	3.7	0.5
Avg	2.4	2.2	2.4	2.6	2.3	2.2	2.5	2.6	2.8	2.7	2.7	3.4	4.2	4.3	4.4	4.0	3.4	3.1	3.0	2.6	2.1	2.1	1.9	2.2	2.8	5.8	0.8
Max	8.7	7.8	7.7	8.6	8.0	6.9	8.0	7.9	8.4	8.5	7.9	7.9	8.6	11.5	9.5	8.0	10.2	9.6	8.3	7.2	7.7	9.2	7.9	7.6	7.1	11.5	2.9
Min	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.4	0.4	0.4	0.6	0.7	0.9	0.9	0.9	0.8	0.5	0.8	0.4	0.5	0.4	0.3	0.8	1.5	0.2

A-3

**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Wind Direction (degrees)**  
**October 2012**

Day	<< Hour >>																								Prev
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	147	162	61	80	77	94	126	106	352	319	264	256	246	256	263	258	259	283	211	178	135	100	82	92	165
2	300	285	288	276	268	269	286	271	291	275	259	267	276	277	268	276	292	308	291	279	293	307	170	248	278
3	271	329	308	330	348	346	346	340	326	313	311	329	330	324	333	329	309	307	302	324	359	12	330	310	326
4	144	164	99	22	235	116	20	169	42	171	169	193	287	352	331	48	51	44	300	357	7	340	310	277	18
5	227	287	316	318	187	212	188	159	301	359	42	25	340	342	20	11	350	5	11	115	103	89	77	72	12
6	100	94	100	80	67	144	101	126	281	64	315	266	274	280	288	321	311	295	268	333	102	169	65	104	41
7	144	81	61	119	192	337	13	49	92	74	280	281	267	280	288	281	275	271	145	83	82	63	58	42	39
8	75	57	139	276	124	154	105	70	69	330	321	321	320	330	307	290	249	272	349	319	323	330	259	260	324
9	294	299	297	186	318	276	60	282	85	147	281	271	271	285	280	273	277	245	103	85	88	82	148	76	280
10	116	134	91	122	144	169	170	168	338	355	288	275	269	321	306	312	7	328	291	345	6	74	323	288	326
11	249	252	264	270	292	164	154	155	158	158	161	168	163	145	153	142	155	159	144	160	163	141	131	159	169
12	143	146	160	149	104	106	155	133	342	357	315	254	268	262	264	254	267	265	272	269	265	140	106	90	213
13	83	89	88	82	82	39	98	45	321	296	272	252	261	267	267	271	270	272	302	292	279	242	277	68	302
14	1	47	64	89	79	112	109	129	86	266	275	257	234	218	206	175	101	101	129	59	69	93	181	109	114
15	250	261	261	164	137	102	220	196	268	214	239	248	258	273	277	266	243	255	246	157	141	135	118	127	219
16	140	123	86	52	113	160	196	184	271	267	248	260	257	276	273	277	277	272	280	280	279	275	271	274	253
17	283	286	284	282	280	275	272	275	275	273	276	278	286	293	288	313	318	322	313	288	300	317	318	317	292
18	281	165	115	105	51	80	61	75	335	10	271	253	269	277	277	263	270	286	87	68	71	87	120	139	51
19	150	139	146	334	81	348	185	89	96	218	222	226	248	259	251	250	265	270	257	260	248	253	243	245	234
20	258	281	280	267	262	246	267	252	266	270	272	279	279	281	283	283	291	287	289	274	280	273	326	97	276
21	90	26	41	140	118	97	135	218	324	117	332	125	205	201	209	166	146	121	40	115	100	154	133	151	128
22	137	127	139	118	99	93	119	108	161	26	134	168	177	162	160	165	206	165	148	155	167	258	273	283	151
23	251	353	299	309	38	123	59	289	4	210	263	282	309	323	312	312	308	297	263	279	300	248	280	269	297
24	140	133	216	155	79	118	171	308	14	70	356	288	282	283	316	289	257	266	271	270	281	326	266	65	282
25	85	104	86	83	87	92	108	303	267	265	279	265	261	276	257	254	256	297	258	335	343	103	76	230	282
26	178	178	153	189	267	212	104	142	28	166	149	195	253	242	239	243	285	109	117	137	127	140	129	146	171
27	91	174	200	145	122	180	105	94	83	59	350	2	45	75	57	48	82	70	122	126	98	118	99	138	97
28	132	129	136	108	89	87	81	99	113	89	81	88	85	38	5	71	244	153	94	107	55	85	59	136	95
29	94	108	69	125	151	122	136	149	104	103	166	233	230	229	225	208	74	246	254	170	159	96	35	271	153
30	274	335	94	20	116	126	92	102	91	272	226	228	213	211	212	211	232	232	307	82	96	91	232	138	175
31	31	128	123	82	48	132	158	197	173	93	115	154	157	165	182	121	97	90	100	114	148	173	163	116	129
Prev	152	128	110	106	101	127	123	143	2	316	270	255	262	273	273	270	276	277	272	92	74	108	120	139	233

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Wind Direction (degrees)**  
**November 2012**

Day	<< Hour >>																								Prev
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	113	101	123	98	56	90	55	90	22	72	195	222	204	222	259	248	279	189	165	292	293	283	270	299	194
2	281	296	240	267	295	291	314	351	340	273	278	260	271	256	267	264	269	261	280	130	107	98	103	86	279
3	89	66	94	107	134	154	126	168	355	7	22	271	260	260	268	268	247	79	70	62	131	277	280	279	99
4	308	296	299	292	296	288	286	291	290	283	285	284	278	261	253	260	271	266	266	272	262	225	176	149	273
5	140	106	111	70	88	288	125	107	235	268	272	259	241	250	258	262	268	273	282	282	290	308	312	331	266
6	84	72	91	76	109	69	71	38	100	353	303	12	338	85	84	91	98	114	115	111	129	181	147	153	88
7	71	51	63	217	90	163	217	158	99	199	226	224	226	251	292	300	293	273	283	296	297	274	288	314	256
8	324	321	162	128	165	149	112	195	120	105	116	143	146	159	166	166	163	160	155	159	163	174	147	149	151
9	150	175	185	176	250	277	275	259	255	257	249	291	268	267	262	276	312	328	323	316	321	323	326	326	275
10	324	329	326	325	319	318	311	312	285	288	258	254	258	254	254	276	269	181	320	159	49	359	317	301	296
11	331	142	103	84	63	96	150	147	37	2	327	288	270	254	267	280	267	222	113	131	131	116	112	117	123
12	130	132	122	142	164	158	120	90	94	252	39	45	115	158	165	115	179	273	80	193	114	94	188	207	136
13	78	137	165	74	36	248	306	306	297	285	273	289	232	243	197	185	207	108	4	128	98	110	191	60	196
14	310	304	113	99	164	359	99	124	111	159	346	279	273	267	252	270	268	266	178	215	87	121	137	166	195
15	159	158	153	187	138	154	164	128	143	203	342	156	152	165	166	152	146	157	138	110	128	123	212	180	155
16	157	158	131	130	72	50	71	86	89	178	3	263	89	148	98	97	121	117	87	103	95	136	162	141	113
17	151	156	156	144	155	140	333	143	170	147	58	147	162	187	166	164	135	102	103	103	78	102	112	110	135
18	107	95	181	164	142	151	176	202	269	280	255	250	271	327	276	306	292	183	146	142	137	149	126	145	188
19	91	31	195	122	173	164	173	177	170	151	152	168	151	163	197	209	199	197	108	202	157	151	130	147	161
20	97	148	216	226	162	171	129	144	121	179	156	191	187	189	174	179	181	178	161	132	200	243	132	52	167
21	171	77	86	126	175	190	180	245	276	256	261	86	82	147	143	285	270	262	268	264	272	291	294	264	229
22	264	248	250	251	270	265	267	272	272	279	284	280	277	284	288	268	259	244	134	89	79	91	78	126	263
23	168	114	134	140	125	127	109	103	126	111	93	94	108	120	112	315	245	259	84	80	99	122	67	111	115
24	89	78	70	75	77	83	48	314	297	280	285	277	289	275	278	283	310	294	293	289	284	285	208	267	303
25	259	257	265	42	34	88	39	320	320	331	319	289	274	308	293	311	289	307	301	331	291	347	155	155	311
26	310	109	148	83	88	142	135	147	153	30	302	341	338	4	48	66	91	82	90	93	79	110	130	127	88
27	137	160	139	26	100	313	32	51	146	194	359	319	45	330	358	88	95	90	89	114	132	140	129	146	92
28	137	144	125	135	137	128	100	123	136	109	83	310	354	138	150	93	91	104	122	121	126	135	120	138	120
29	130	226	133	95	94	93	123	120	1	124	89	51	269	225	206	218	206	195	154	90	102	185	118	170	141
30	247	192	124	207	188	139	195	165	181	181	208	197	198	194	180	160	218	100	114	132	92	177	138	182	173
Prev	129	128	141	123	123	143	120	142	147	232	297	263	243	227	223	240	235	199	123	134	116	151	150	152	168

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Wind Direction (degrees)**  
**December 2012**

Day	<< Hour >>																								Prev
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	138	114	46	100	260	117	62	126	182	198	167	174	196	207	204	211	237	289	298	246	94	115	156	124	166
2	139	181	180	152	148	170	185	184	190	196	196	191	187	200	205	210	278	277	280	268	263	259	260	272	210
3	277	263	256	243	213	203	218	214	195	213	226	227	247	250	257	257	266	283	257	273	258	275	248	135	242
4	93	109	98	113	107	87	84	158	167	144	147	109	177	179	195	171	201	174	155	159	141	104	190	188	144
5	183	200	195	199	208	229	238	218	215	211	206	258	271	276	262	281	278	286	293	289	276	288	294	297	249
6	305	291	286	260	264	53	269	272	251	260	256	241	259	271	271	282	337	75	86	31	57	84	296	287	288
7	76	64	75	122	71	264	261	270	266	277	271	265	270	273	249	231	198	190	202	220	225	221	65	252	239
8	256	261	261	266	265	268	283	292	312	304	306	283	281	285	287	268	280	166	126	106	60	79	117	42	280
9	130	44	104	61	191	140	117	154	145	40	168	354	266	211	218	241	279	278	267	266	271	287	339	299	230
10	292	321	342	56	53	56	9	13	321	303	294	292	301	288	279	272	273	277	296	66	116	90	59	92	336
11	253	132	78	126	21	255	305	323	276	296	302	268	192	232	203	224	244	259	283	284	49	133	253	203	254
12	78	74	1	104	153	117	80	90	142	333	139	32	319	305	287	262	276	259	163	142	65	122	178	112	105
13	144	141	199	138	212	294	269	162	173	116	255	248	277	261	301	283	320	101	109	96	76	87	97	20	176
14	105	54	117	39	26	75	17	82	143	344	Wx	2	156	342	300	199	229	320	324	118	123	121	116	81	70
15	58	43	88	24	58	118	151	126	333	99	154	43	260	257	277	249	189	140	136	156	129	153	148	157	128
16	137	158	94	141	113	72	19	150	314	143	273	267	259	266	283	287	242	111	115	95	81	96	88	112	127
17	128	159	149	143	149	102	112	147	122	104	148	195	248	78	246	253	267	279	274	260	270	270	258	264	195
18	266	274	276	269	273	273	272	272	274	268	265	263	263	258	263	267	273	278	262	299	46	47	103	82	275
19	73	49	51	70	102	17	114	134	115	140	359	98	265	270	234	243	224	114	84	114	121	124	147	129	111
20	119	114	104	109	109	90	105	96	117	126	148	166	152	Au	Au	Au	185	98	88	92	131	91	85	90	114
21	78	86	90	106	117	117	113	77	99	100	120	121	112	141	150	150	151	83	111	64	69	128	115	109	109
22	87	97	94	96	83	103	113	121	100	131	92	64	62	122	107	113	130	154	163	143	119	98	130	129	110
23	147	214	255	261	288	272	251	192	77	108	55	265	254	262	232	213	127	97	93	114	132	127	203	163	189
24	160	159	168	165	286	283	274	284	294	285	294	281	287	278	267	267	286	274	269	275	78	305	151	213	262
25	141	26	330	125	150	327	117	168	132	3	22	346	6	314	40	145	129	131	139	132	147	127	160	145	109
26	146	149	149	139	149	164	117	116	119	118	126	133	129	360	329	300	313	330	76	79	93	123	185	145	123
27	128	98	119	68	135	118	44	327	263	287	64	7	310	288	297	296	323	145	113	148	118	87	109	98	82
28	34	115	43	293	277	276	274	296	108	88	80	261	259	265	265	267	238	127	94	91	103	76	113	126	122
29	164	137	178	155	165	161	136	133	135	138	161	6	286	10	306	222	66	73	45	67	71	324	88	9	112
30	79	326	100	101	5	57	31	119	297	195	318	295	298	273	275	272	256	302	122	90	105	75	82	117	30
31	33	317	122	151	16	111	149	178	180	162	36	326	298	275	277	264	268	310	343	345	306	312	273	61	307
Prev	120	112	112	124	142	123	122	159	176	165	189	278	258	267	261	246	251	217	137	120	101	105	140	125	174

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Standard Deviation of Wind Direction (degrees)**  
**October 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	29	68	84	29	67	38	22	51	66	79	17	15	15	18	12	13	16	11	46	59	62	36	23	26	38	84	11
2	74	11	9	10	13	10	14	14	26	16	16	15	16	13	14	12	13	10	10	12	9	10	68	86	21	86	9
3	48	13	23	48	22	17	13	12	10	10	14	22	17	10	17	26	25	12	32	68	25	13	25	20	23	68	10
4	45	15	65	47	75	35	91	66	73	49	14	26	56	23	28	49	19	54	47	26	18	46	37	54	44	91	14
5	25	25	23	46	62	62	32	18	45	32	47	20	43	41	15	15	14	15	35	85	33	10	13	14	32	85	10
6	26	20	51	80	39	15	48	75	96	78	74	29	28	22	19	10	14	29	25	63	50	61	18	39	42	96	10
7	36	34	38	23	46	40	69	72	88	72	29	15	20	20	16	14	14	14	76	10	12	19	41	56	36	88	10
8	48	78	47	76	58	65	82	88	55	31	9	13	11	7	16	23	14	12	44	17	13	15	19	6	35	88	6
9	24	18	20	51	39	46	68	33	54	65	64	31	24	14	22	23	15	59	16	16	11	28	25	37	33	68	11
10	38	38	48	39	41	44	43	51	80	61	36	29	22	35	27	26	21	37	63	54	48	28	53	12	41	80	12
11	11	12	23	27	28	60	8	6	6	8	7	7	15	35	62	24	12	7	11	21	21	55	60	65	25	65	6
12	78	51	61	52	87	83	85	71	65	53	83	15	15	14	17	14	15	12	19	68	89	75	69	43	51	89	12
13	42	45	51	53	47	46	47	69	92	41	15	16	10	13	12	11	11	12	25	18	11	73	42	61	36	92	10
14	68	54	38	50	28	41	75	64	58	67	15	25	28	12	19	66	32	27	48	45	39	71	86	91	48	91	12
15	46	10	14	32	51	63	96	61	17	39	18	13	12	13	11	13	17	12	56	67	58	67	55	66	38	96	10
16	40	48	51	63	39	47	14	12	28	11	17	15	16	13	15	12	10	11	9	9	9	11	11	10	22	63	9
17	12	12	10	9	9	10	10	10	11	10	13	11	15	13	12	11	10	7	8	10	10	20	69	40	15	69	7
18	34	22	52	24	42	33	68	79	52	50	31	19	16	17	18	15	21	100	19	22	29	30	33	24	35	100	15
19	30	18	16	67	73	92	84	13	50	37	11	10	20	16	10	12	15	11	11	9	11	21	12	12	28	92	9
20	14	12	23	17	23	12	12	15	17	16	12	11	12	15	14	12	15	13	14	22	8	16	86	49	19	86	8
21	61	74	50	27	94	88	34	92	81	78	50	41	86	96	67	51	16	49	46	55	57	16	27	29	57	96	16
22	16	25	65	33	86	87	63	72	98	44	72	72	60	9	9	10	56	12	9	13	11	46	64	70	46	98	9
23	59	63	70	68	92	47	99	73	80	69	45	13	23	10	6	7	7	9	24	20	15	27	23	89	43	99	6
24	64	49	62	83	85	83	84	80	63	84	64	16	20	16	23	26	16	23	18	17	65	65	40	42	50	85	16
25	7	47	6	7	6	10	39	35	20	26	18	18	14	17	7	6	7	17	27	49	36	82	18	41	23	82	6
26	48	94	40	65	53	78	81	78	94	25	12	83	19	12	21	17	51	43	20	39	30	29	26	14	45	94	12
27	40	73	96	39	20	56	20	10	8	35	35	22	16	42	34	30	9	27	31	32	25	39	20	26	33	96	8
28	32	18	10	18	6	8	33	40	96	47	29	31	15	32	62	54	65	63	13	30	40	37	59	54	37	96	6
29	30	38	49	46	53	29	57	43	47	24	77	91	9	10	12	67	31	76	13	73	78	26	79	18	45	91	9
30	50	85	59	96	32	43	51	63	58	84	21	18	17	14	12	27	11	65	62	50	21	47	93	57	47	96	11
31	77	41	49	35	47	41	49	85	64	89	74	14	13	15	24	49	17	6	12	39	61	59	50	31	43	89	6
Avg	40	39	42	44	47	46	51	50	55	46	34	25	23	21	21	24	20	28	29	36	32	38	43	41	36	87	10
Max	78	94	96	96	94	92	99	92	98	89	83	91	86	96	67	67	65	100	76	85	89	82	93	91	57	100	16
Min	7	10	6	7	6	8	8	6	6	8	7	7	9	7	6	6	7	6	8	9	8	10	11	6	15	63	6

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Standard Deviation of Wind Direction (degrees)**  
**November 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	31	45	24	24	41	48	62	40	94	64	66	28	22	29	13	24	24	29	80	11	20	24	23	55	38	94	11
2	35	21	15	53	19	27	34	28	52	67	15	15	18	13	17	11	9	11	68	43	19	18	23	35	28	68	9
3	42	38	42	28	21	69	56	45	72	51	84	44	13	15	16	19	67	49	23	47	87	8	10	17	40	87	8
4	21	39	21	12	9	8	9	12	10	12	11	12	11	16	11	10	10	9	15	12	49	29	63	29	18	63	8
5	64	61	53	80	57	84	80	51	50	14	20	20	12	13	11	10	12	10	9	8	12	20	32	38	34	84	8
6	29	19	34	37	31	39	43	42	52	82	74	68	65	8	7	7	20	21	21	21	28	38	59	41	37	82	7
7	67	40	38	44	29	77	15	28	32	17	14	10	11	17	14	9	13	9	11	9	18	34	31	23	25	77	9
8	78	71	63	93	95	58	28	83	30	67	65	74	34	10	9	7	9	8	8	11	14	35	24	13	41	95	7
9	10	52	37	13	48	24	18	12	9	10	13	23	12	12	9	16	16	16	12	9	10	7	9	6	17	52	6
10	7	10	6	6	8	8	8	10	14	21	11	5	6	6	7	31	12	93	73	73	88	79	21	16	26	93	5
11	76	33	52	36	68	75	51	72	64	41	26	10	14	10	13	12	13	81	35	63	61	28	33	83	44	83	10
12	50	54	57	69	82	77	76	75	90	101	94	91	74	11	83	61	97	50	73	75	47	59	78	61	70	101	11
13	38	28	68	101	94	87	29	45	13	8	13	18	47	27	11	24	62	74	64	59	39	58	58	67	47	101	8
14	83	70	54	67	74	80	71	74	43	96	75	95	13	13	11	12	10	10	78	56	25	18	21	74	51	96	10
15	67	65	54	91	58	54	76	79	64	78	60	90	10	7	8	8	12	27	60	40	26	26	97	82	52	97	7
16	54	86	66	68	55	87	61	46	61	83	90	71	54	9	27	10	14	21	11	18	16	23	23	69	47	90	9
17	21	39	15	32	18	28	97	58	76	70	89	17	13	17	10	9	13	31	32	75	19	21	29	46	36	97	9
18	71	64	67	10	26	22	12	19	16	21	14	8	25	29	13	20	19	57	54	60	38	44	66	37	34	71	8
19	90	90	57	65	54	15	10	15	10	18	31	19	16	24	15	15	19	25	79	18	17	23	43	91	36	91	10
20	34	50	78	9	75	46	32	16	17	36	17	11	9	10	13	11	10	10	20	25	58	60	78	70	33	78	9
21	82	83	6	30	47	11	10	34	15	68	72	28	37	78	47	12	26	51	12	17	12	20	16	14	35	83	6
22	60	30	12	14	12	11	11	9	11	10	13	13	12	9	11	13	8	50	37	16	23	13	14	38	19	60	8
23	43	68	23	24	20	18	17	17	23	20	14	14	35	25	43	71	18	67	9	30	42	64	69	35	34	71	9
24	19	12	13	13	23	34	41	73	24	17	14	13	11	11	12	10	9	17	12	8	9	15	54	9	20	73	8
25	7	12	49	39	33	73	42	19	33	9	16	18	20	15	22	17	22	15	12	22	79	88	52	79	33	88	7
26	93	52	48	38	54	65	57	67	49	101	54	36	25	22	36	35	19	45	19	33	17	24	28	40	44	101	17
27	32	56	47	85	67	88	82	85	24	74	71	81	34	44	47	31	30	14	24	32	29	48	24	19	49	88	14
28	56	66	43	53	33	43	80	31	30	64	75	22	47	80	36	13	11	17	25	37	36	61	21	18	42	80	11
29	35	95	54	43	18	9	70	40	98	80	30	44	39	32	18	13	27	14	42	28	74	21	67	47	43	98	9
30	66	33	63	8	37	62	10	14	15	15	22	12	10	12	14	36	52	80	29	52	44	62	28	62	35	80	8
Avg	49	49	42	43	44	48	43	41	40	47	42	34	25	21	20	19	23	34	35	34	35	36	40	44	37	84	9
Max	93	95	78	101	95	88	97	85	98	101	94	95	74	80	83	71	97	93	80	75	88	88	97	91	70	101	17
Min	7	10	6	6	8	8	8	9	9	8	11	5	6	6	7	7	8	8	8	8	9	7	9	6	17	52	5

**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Standard Deviation of Wind Direction (degrees)**  
**December 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	75	92	78	48	74	63	65	65	65	20	26	27	18	13	15	12	40	11	15	38	50	55	80	60	46	92	11
2	59	18	21	8	11	15	12	13	10	11	10	11	11	10	11	12	23	11	14	15	12	10	10	9	14	59	8
3	12	14	26	9	24	10	9	27	30	18	14	13	13	12	13	13	15	12	14	27	23	20	51	62	20	62	9
4	77	59	21	20	22	8	11	67	13	16	10	22	27	11	10	31	24	12	8	13	64	64	33	15	27	77	8
5	16	14	10	9	13	47	19	11	10	11	10	25	14	11	16	12	9	10	22	17	13	12	16	9	15	47	9
6	12	17	17	21	75	78	53	26	16	17	13	13	14	13	12	16	20	31	17	46	92	97	90	58	36	97	12
7	88	69	15	36	85	46	11	10	10	11	14	14	11	12	18	16	19	24	16	13	11	34	62	12	27	88	10
8	10	14	10	11	9	11	13	11	9	10	11	7	7	7	13	26	31	40	21	39	74	49	78	75	24	78	7
9	48	74	65	72	72	42	80	67	34	86	85	69	12	38	13	22	14	11	10	11	14	11	32	50	43	86	10
10	27	15	17	37	54	65	46	41	12	9	12	9	11	10	10	8	8	10	34	42	15	26	57	32	25	65	8
11	74	77	70	70	51	56	25	49	12	17	49	24	63	15	28	10	11	13	17	21	67	85	39	93	43	93	10
12	25	81	100	42	32	72	82	50	44	21	45	74	72	13	12	14	18	43	40	24	76	63	78	65	49	100	12
13	56	57	60	57	99	45	57	27	91	42	71	18	22	9	10	21	77	31	44	37	59	80	67	100	52	100	9
14	75	84	79	89	89	94	81	88	75	84	Wx	10	59	57	25	48	56	46	87	84	56	34	42	35	64	94	10
15	42	44	34	70	67	64	53	67	92	97	95	72	14	13	15	28	35	36	22	48	49	40	26	58	49	97	13
16	59	85	101	81	77	72	68	83	70	91	39	11	11	14	13	11	62	28	33	64	72	82	12	28	53	101	11
17	43	9	13	13	7	18	28	41	61	26	29	37	61	27	48	15	12	9	9	10	10	10	10	10	23	61	7
18	12	12	10	11	11	10	11	12	11	11	12	11	10	9	9	9	12	15	10	25	24	27	21	32	14	32	9
19	26	45	45	46	73	77	71	58	78	76	98	71	19	13	26	15	36	73	54	19	24	50	28	27	48	98	13
20	46	23	15	17	19	7	16	18	33	17	23	16	9	Au	Au	Au	12	55	45	26	68	32	12	10	25	68	7
21	8	21	19	19	21	33	55	23	44	45	27	12	15	15	11	7	36	32	31	67	65	25	45	36	30	67	7
22	33	34	37	27	43	48	45	46	65	79	68	69	50	18	50	63	49	17	11	23	38	26	18	62	42	79	11
23	39	76	27	13	37	34	20	92	51	23	48	39	22	54	20	34	21	18	17	23	67	74	86	47	41	92	13
24	16	10	14	7	38	15	11	21	9	19	11	11	15	17	16	21	6	19	75	46	86	44	84	98	30	98	6
25	76	73	73	77	88	91	50	85	94	92	74	37	65	51	22	25	17	19	35	39	56	46	32	18	56	94	17
26	22	36	17	45	21	42	36	20	17	14	12	9	16	57	16	17	71	94	22	70	89	82	64	65	40	94	9
27	69	95	87	59	27	40	92	46	31	73	44	72	26	24	12	18	20	72	49	53	73	51	51	50	51	95	12
28	73	98	52	18	20	11	7	23	59	14	86	17	11	12	11	13	41	24	26	33	40	53	52	57	35	98	7
29	48	71	63	50	50	68	33	35	53	34	87	79	72	33	56	39	37	25	32	34	69	79	49	58	52	87	25
30	47	43	73	94	87	69	52	24	93	87	63	37	19	21	15	16	29	24	60	30	49	76	52	83	52	94	15
31	87	98	59	78	99	79	47	44	48	68	82	56	13	15	15	16	19	30	40	15	8	9	50	31	46	99	8
Avg	45	50	43	40	48	46	41	42	43	40	42	32	26	21	19	20	28	29	30	34	49	47	46	47	38	84	10
Max	88	98	101	94	99	94	92	92	94	97	98	79	72	57	56	63	77	94	87	84	92	97	90	100	64	101	25
Min	8	9	10	7	7	7	7	10	9	9	10	7	7	7	9	7	6	9	8	10	8	9	10	9	14	32	6

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Temperature 9 Meters (degrees Celsius)**  
**October 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.8	-0.3	-0.6	-0.9	-2.2	-2.0	-2.5	-1.4	3.2	10.6	13.6	14.6	16.1	17.6	18.2	18.8	18.6	18.2	15.7	12.8	11.9	11.1	9.4	9.8	8.8	18.8	-2.5
2	12.3	15.5	15.2	14.6	14.3	13.6	13.0	12.9	13.7	14.5	15.4	16.1	16.7	17.4	17.7	17.5	16.8	15.0	13.3	12.1	8.4	4.6	2.8	2.0	13.1	17.7	2.0
3	2.2	2.0	0.7	-0.5	-0.2	-0.4	-0.3	-0.3	-0.7	-0.7	-0.3	1.1	1.8	1.5	0.8	0.1	0.6	0.1	-0.8	-1.2	-1.1	-1.3	-1.5	-1.6	0.0	2.2	-1.6
4	-3.6	-5.2	-6.3	-5.7	-4.8	-4.3	-4.1	-3.7	-1.8	-0.6	0.0	0.9	1.1	0.1	-0.7	-0.1	-1.2	-0.9	-1.0	-1.3	-1.5	-1.7	-1.8	-2.0	-2.1	1.1	-6.3
5	-2.3	-2.5	-2.7	-2.9	-3.4	-3.9	-3.6	-3.2	-2.7	-2.1	-1.3	-0.6	-0.4	-0.3	-0.5	-0.1	-0.6	-1.5	-2.7	-4.5	-6.4	-7.7	-8.9	-9.8	-3.1	-0.1	-9.8
6	-11.2	-11.7	-12.3	-13.6	-13.8	-14.3	-14.5	-13.7	-10.2	-6.4	-1.5	0.2	2.1	3.5	4.4	4.1	3.5	2.5	1.8	1.1	0.3	0.5	0.3	0.4	-4.1	4.4	-14.5
7	0.2	-1.0	-2.0	-3.5	-5.2	-5.8	-6.2	-5.3	-2.1	2.3	5.4	7.1	8.8	9.9	10.8	11.0	11.2	10.1	6.6	2.7	0.7	-0.7	-2.5	-2.9	2.1	11.2	-6.2
8	-3.5	-4.6	-4.1	-3.5	-2.5	-2.7	-2.7	-2.1	0.9	3.3	3.3	3.8	4.6	4.9	4.9	4.6	4.3	3.9	2.8	1.8	1.4	1.0	-0.2	-0.9	0.8	4.9	-4.6
9	-1.1	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-0.5	0.7	2.7	5.0	6.4	7.5	8.3	8.7	8.5	6.4	2.4	0.5	-1.1	-1.9	-3.4	-4.7	1.5	8.7	-4.7
10	-5.3	-6.0	-5.7	-6.4	-6.9	-7.6	-7.6	-6.7	-2.8	4.2	9.7	11.1	12.2	13.1	13.8	13.4	11.9	9.2	6.5	4.4	4.1	4.2	3.7	3.1	2.9	13.8	-7.6
11	2.6	1.9	0.7	-0.1	0.2	0.6	0.6	0.3	0.0	0.3	0.9	1.6	2.6	3.9	5.9	6.9	7.2	4.8	1.6	-0.1	-1.6	-3.6	-4.3	-5.9	1.1	7.2	-5.9
12	-6.8	-7.9	-7.6	-7.1	-6.8	-5.9	-6.2	-5.1	-2.1	4.5	12.5	15.1	15.8	16.6	17.2	17.5	17.2	15.7	14.1	13.5	11.9	9.5	7.0	4.6	5.7	17.5	-7.9
13	3.2	2.4	2.4	2.2	1.6	1.5	2.1	3.2	3.4	5.8	6.6	8.2	9.2	10.0	10.1	10.6	10.3	9.4	8.7	8.4	7.9	6.2	5.7	5.1	6.0	10.6	1.5
14	5.1	4.9	4.5	3.5	2.5	0.8	-0.2	0.0	3.7	9.4	11.2	11.9	11.4	11.2	11.2	11.3	11.0	10.1	8.2	6.5	4.9	4.3	3.7	5.4	6.5	11.9	-0.2
15	10.1	11.0	10.9	8.4	7.6	6.6	7.3	8.8	9.5	7.8	7.8	8.1	8.6	9.8	10.4	9.3	8.3	8.2	7.0	4.3	2.8	1.8	0.9	1.1	7.4	11.0	0.9
16	1.9	2.2	4.2	4.8	7.5	9.9	10.1	9.8	8.3	7.3	7.6	7.8	9.0	7.5	7.0	6.1	5.2	3.8	2.8	2.5	2.2	1.7	1.4	0.8	5.5	10.1	0.8
17	0.6	0.3	0.3	0.1	0.0	-0.1	-0.2	0.1	0.5	1.3	2.2	2.4	2.9	3.4	3.7	3.6	3.1	2.4	1.7	0.9	0.0	-1.5	-1.4	-2.9	1.0	3.7	-2.9
18	-4.1	-4.6	-6.4	-7.9	-8.9	-8.9	-9.7	-8.9	-5.7	0.0	3.8	5.6	7.0	8.1	8.9	9.0	8.2	7.4	2.8	0.6	-0.1	-1.3	-2.2	-2.6	-0.4	9.0	-9.7
19	-1.9	-1.6	-1.0	-0.2	0.8	1.8	2.0	4.9	6.9	9.9	11.5	11.5	11.6	12.1	12.7	13.1	13.5	12.2	11.4	10.5	9.8	8.8	8.3	8.1	7.4	13.5	-1.9
20	8.3	8.0	6.9	7.6	7.3	7.1	7.0	7.0	7.6	6.9	6.5	6.4	7.0	7.6	7.3	5.7	4.5	2.8	2.2	1.7	1.0	-0.6	-1.4	-3.2	5.0	8.3	-3.2
21	-3.6	-4.0	-5.0	-5.5	-6.2	-7.2	-8.0	-8.7	-6.4	-0.9	1.3	2.6	3.5	3.8	4.5	5.0	4.7	2.9	2.3	1.7	1.6	1.0	-0.1	-0.2	-0.9	5.0	-8.7
22	-1.1	-1.7	-3.0	-4.7	-6.3	-6.7	-6.4	-7.3	-6.6	-4.2	-1.3	1.1	2.0	2.4	1.5	0.8	0.2	0.1	-0.2	-0.3	-0.3	-2.4	-4.9	-4.7	-2.2	2.4	-7.3
23	-4.1	-3.8	-3.5	-3.4	-4.0	-6.5	-8.7	-8.5	-7.9	-5.1	-2.7	-1.1	-1.1	-1.2	-1.5	-1.8	-4.5	-5.4	-6.1	-6.7	-7.2	-7.5	-7.4	-8.2	-4.9	-1.1	-8.7
24	-9.4	-10.3	-9.9	-9.6	-9.6	-8.9	-8.0	-7.8	-7.0	-5.7	-3.5	-2.0	-1.4	-1.0	-0.9	-0.8	-1.8	-3.8	-6.3	-7.9	-7.5	-8.3	-8.1	-8.6	-6.2	-0.8	-10.3
25	-10.0	-11.0	-10.7	-10.1	-10.3	-10.5	-10.0	-9.5	-9.0	-8.3	-7.8	-7.4	-6.8	-6.6	-7.1	-7.3	-7.3	-7.9	-8.1	-8.1	-8.0	-7.9	-7.8	-7.7	-8.6	-6.6	-11.0
26	-7.7	-7.7	-8.0	-7.7	-7.4	-7.4	-7.9	-8.1	-6.8	-5.2	-4.0	-2.9	-1.9	-1.5	-1.6	-1.6	-2.0	-3.0	-3.9	-4.5	-4.6	-4.6	-4.8	-5.3	-5.0	-1.5	-8.1
27	-5.0	-4.8	-4.8	-4.7	-4.6	-4.7	-4.6	-4.2	-3.8	-3.3	-2.8	-2.5	-2.0	-1.5	-0.9	-0.2	-0.4	-0.8	-1.3	-1.4	-1.3	-1.4	-1.6	-1.3	-2.7	-0.2	-5.0
28	-0.3	-0.5	0.0	-0.1	0.0	0.3	0.7	0.8	0.8	1.4	1.7	2.0	2.6	2.5	2.5	2.9	3.6	3.5	2.4	2.4	2.6	2.7	2.0	1.5	1.6	3.6	-0.5
29	1.4	1.3	1.4	1.5	1.7	2.6	2.5	2.1	2.8	4.9	4.6	6.6	9.5	9.8	9.3	8.4	7.5	7.0	7.6	7.0	4.1	3.3	3.2	6.5	4.9	9.8	1.3
30	5.8	4.1	2.4	2.8	3.2	1.9	0.5	0.4	1.7	5.6	9.4	10.6	11.9	12.2	11.7	12.2	11.7	9.5	7.0	5.5	3.6	3.3	3.3	3.1	6.0	12.2	0.4
31	3.1	3.3	2.7	2.8	2.7	2.4	2.6	2.6	3.2	5.1	11.1	12.7	13.4	14.4	14.5	13.9	12.8	9.0	7.7	6.3	3.7	3.3	3.1	3.5	6.7	14.5	2.4
Avg	-0.8	-1.1	-1.4	-1.6	-1.8	-1.9	-2.1	-1.7	-0.3	2.0	4.0	5.1	5.9	6.4	6.6	6.5	6.0	4.9	3.4	2.3	1.4	0.5	-0.2	-0.6	1.7	7.2	-4.5
Max	12.3	15.5	15.2	14.6	14.3	13.6	13.0	12.9	13.7	14.5	15.4	16.1	16.7	17.6	18.2	18.8	18.6	18.2	15.7	13.5	11.9	11.1	9.4	9.8	13.1	18.8	2.4
Min	-11.2	-11.7	-12.3	-13.6	-13.8	-14.3	-14.5	-13.7	-10.2	-8.3	-7.8	-7.4	-6.8	-6.6	-7.1	-7.3	-7.3	-7.9	-8.1	-8.1	-8.0	-8.3	-8.9	-9.8	-8.6	-6.6	-14.5

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Temperature 9 Meters (degrees Celsius)**  
**November 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	2.1	1.1	1.6	2.2	2.1	1.3	0.9	1.6	2.2	4.7	9.8	11.5	11.1	10.7	9.7	9.4	8.6	6.1	4.9	4.7	4.6	4.3	2.8	3.1	5.0	11.5	0.9
2	3.4	2.9	2.6	2.3	2.3	1.5	1.6	1.3	1.7	3.0	3.9	5.1	5.6	5.7	5.5	5.9	5.6	4.5	4.1	1.6	-1.0	-2.2	-3.3	-4.2	2.5	5.9	-4.2
3	-4.3	-4.5	-5.2	-5.6	-6.0	-6.6	-6.5	-6.7	-5.6	-1.5	3.6	7.1	8.0	8.7	8.8	8.4	7.1	4.9	5.8	5.1	5.2	7.4	7.4	6.7	1.7	8.8	-6.7
4	6.6	6.8	6.1	6.1	6.1	6.3	6.4	6.5	6.5	7.0	7.4	8.2	8.3	8.7	8.8	9.0	8.3	8.0	7.9	7.9	7.4	6.8	4.4	3.4	7.0	9.0	3.4
5	2.4	2.7	3.5	4.8	5.9	7.4	7.6	7.1	9.3	10.7	11.1	11.5	11.9	12.6	12.8	12.5	12.0	11.3	10.7	10.1	9.3	8.6	8.2	6.5	8.8	12.8	2.4
6	3.6	0.9	-0.2	-0.6	-0.1	-1.0	-1.0	-1.0	-0.4	1.4	3.6	5.7	7.5	9.7	10.4	10.8	9.9	7.0	5.2	3.2	2.5	1.9	0.4	-0.2	3.3	10.8	-1.0
7	-0.3	2.2	3.9	9.7	4.9	7.7	10.2	5.3	5.8	12.3	13.1	12.7	13.1	13.7	11.3	8.8	7.2	5.4	4.7	3.7	2.9	2.0	1.4	0.1	6.7	13.7	-0.3
8	-0.8	-2.2	-2.8	-4.0	-3.0	-2.3	-1.1	-2.8	-2.4	-2.3	-2.0	-2.6	-2.6	-3.1	-3.6	-4.3	-4.5	-4.6	-4.8	-4.8	-4.8	-4.8	-4.7	-4.8	-3.3	-0.8	-4.8
9	-4.4	-4.8	-4.8	-5.1	-5.4	-5.5	-5.8	-8.7	-10.6	-11.5	-11.3	-9.6	-10.7	-11.2	-11.5	-10.6	-10.6	-10.8	-11.3	-12.2	-12.6	-12.9	-13.1	-13.5	-9.5	-4.4	-13.5
10	-13.8	-14.1	-14.4	-14.8	-15.2	-15.7	-15.9	-16.3	-16.9	-17.1	-17.2	-17.0	-16.9	-16.5	-16.4	-16.2	-16.7	-17.4	-17.3	-17.0	-16.7	-16.4	-16.1	-15.8	-16.2	-13.8	-17.4
11	-15.7	-16.4	-19.2	-20.9	-22.1	-21.6	-19.2	-18.2	-17.8	-14.0	-12.3	-10.1	-9.5	-9.2	-9.3	-9.1	-9.5	-10.8	-12.0	-13.6	-13.6	-14.4	-14.8	-15.2	-14.5	-9.1	-22.1
12	-15.2	-15.6	-16.9	-16.6	-17.3	-17.8	-18.0	-17.6	-16.3	-13.1	-10.7	-7.0	-3.6	-2.0	-1.7	-1.7	-2.9	-3.5	-3.3	-3.3	-2.4	-2.3	-2.8	-2.3	-8.9	-1.7	-18.0
13	-2.3	-3.0	-2.8	-3.1	-3.3	-3.5	-2.2	-2.1	-1.6	-0.5	0.0	0.4	0.8	1.0	0.7	0.4	-0.2	-0.8	-1.4	-0.9	-1.3	-2.3	-2.9	-2.4	-1.4	1.0	-3.5
14	-2.4	-2.7	-2.5	-2.9	-3.1	-3.0	-3.0	-3.3	-2.8	-1.6	-0.9	0.5	1.5	1.3	1.3	1.3	1.0	0.3	-1.6	-1.6	-2.2	-4.0	-5.3	-6.2	-1.7	1.5	-6.2
15	-6.9	-7.7	-9.4	-10.5	-11.0	-11.8	-12.7	-13.6	-13.6	-11.3	-8.2	-3.7	-0.3	1.2	1.6	1.3	-0.3	-1.3	-3.6	-5.7	-6.4	-6.4	-6.7	-7.4	-6.4	1.6	-13.6
16	-7.9	-8.9	-7.6	-7.3	-6.4	-7.1	-7.3	-7.1	-7.4	-5.6	-2.9	-0.4	2.4	3.9	4.4	4.4	4.1	3.4	1.8	1.7	1.5	0.3	-0.6	-1.8	-2.1	4.4	-8.9
17	-2.9	-3.4	-5.2	-6.3	-6.3	-6.1	-6.7	-6.5	-5.4	-3.6	-1.1	4.3	5.7	6.3	6.3	6.0	4.9	2.6	0.9	1.9	3.4	2.2	-0.3	-1.1	-0.4	6.3	-6.7
18	-0.4	-1.3	-0.8	3.4	4.0	3.6	4.3	4.6	2.8	2.2	2.8	2.7	2.5	2.3	2.6	1.8	1.3	-1.4	-3.1	-4.9	-6.8	-7.6	-8.5	-8.0	-0.1	4.6	-8.5
19	-9.0	-9.1	-7.7	-7.5	-5.7	0.0	0.5	0.1	1.8	3.1	4.3	5.1	5.9	6.4	6.7	6.8	6.1	5.2	4.9	5.6	5.8	5.6	6.0	6.5	2.0	6.8	-9.1
20	6.4	6.0	6.7	7.5	7.2	7.0	6.7	7.0	6.5	7.7	7.7	7.9	8.2	8.4	8.4	7.9	7.6	7.3	6.8	6.8	6.1	6.0	6.2	5.8	7.1	8.4	5.8
21	5.6	5.6	5.3	3.9	4.9	7.0	6.9	5.8	2.1	0.6	1.2	1.1	1.7	1.6	1.7	1.5	1.0	0.4	0.1	-0.7	-1.7	-2.6	-3.1	-3.2	1.9	7.0	-3.2
22	-3.3	-4.0	-2.9	-3.2	-3.1	-3.3	-3.7	-3.9	-3.3	-2.9	-2.6	-2.2	-1.9	-1.8	-1.7	-1.6	-2.6	-4.3	-5.7	-8.3	-9.0	-9.5	-10.3	-11.1	-4.4	-1.6	-11.1
23	-11.6	-11.8	-11.6	-11.4	-10.8	-10.0	-8.5	-7.0	-5.7	-3.6	-1.8	0.3	2.0	3.0	3.7	3.9	4.8	3.0	-0.1	-0.5	-1.3	-1.4	-1.2	-0.7	-3.3	4.8	-11.8
24	-1.6	-2.1	-1.8	-1.0	-1.8	-0.7	0.9	1.9	3.1	3.5	3.5	3.3	2.2	2.6	3.4	3.3	2.5	1.8	1.1	1.1	0.9	0.8	0.0	0.3	1.1	3.5	-2.1
25	-0.3	-0.5	-1.1	-2.2	-3.1	-3.0	-2.8	-2.5	-2.5	-1.9	-1.8	-1.8	-1.8	-2.2	-2.7	-3.8	-4.2	-4.5	-4.9	-5.5	-6.1	-6.1	-6.2	-7.5	-3.3	-0.3	-7.5
26	-7.8	-8.1	-10.9	-13.8	-15.7	-16.7	-17.7	-18.5	-18.7	-16.4	-12.7	-9.4	-5.4	-3.8	-3.5	-3.8	-5.4	-7.8	-8.3	-9.9	-10.8	-12.3	-13.4	-13.9	-11.0	-3.5	-18.7
27	-14.7	-14.8	-14.7	-14.4	-13.6	-13.1	-12.1	-11.1	-10.7	-9.6	-7.1	-3.9	-0.5	0.7	1.0	0.0	-2.5	-4.6	-6.8	-7.3	-7.5	-7.7	-8.7	-8.7	-8.0	1.0	-14.8
28	-8.8	-8.1	-8.2	-7.8	-7.6	-7.2	-6.9	-6.7	-7.1	-5.1	-1.8	0.6	4.2	7.0	6.9	4.7	1.4	-0.2	-1.6	-2.3	-2.0	-2.3	-1.7	-1.6	-2.6	7.0	-8.8
29	-1.4	-0.6	1.0	0.9	0.4	0.5	0.4	0.0	-0.4	-0.3	0.9	3.0	4.6	5.3	6.1	6.2	5.7	5.3	4.2	2.8	1.5	4.2	4.1	3.8	2.4	6.2	-1.4
30	4.2	5.3	5.3	6.0	5.7	5.6	7.0	6.3	6.4	6.5	6.5	6.7	6.5	5.3	4.8	4.4	3.6	2.5	1.4	0.8	0.0	-0.3	-0.7	-1.0	4.1	7.0	-1.0
Avg	-3.4	-3.7	-3.8	-3.7	-3.9	-3.6	-3.3	-3.5	-3.4	-2.0	-0.5	1.0	2.0	2.5	2.5	2.3	1.4	0.2	-0.7	-1.4	-1.8	-2.2	-2.8	-3.1	-1.4	3.6	-7.1
Max	6.6	6.8	6.7	9.7	7.2	7.7	10.2	7.1	9.3	12.3	13.1	12.7	13.1	13.7	12.8	12.5	12.0	11.3	10.7	10.1	9.3	8.6	8.2	6.7	8.8	13.7	5.8
Min	-15.7	-16.4	-19.2	-20.9	-22.1	-21.6	-19.2	-18.5	-18.7	-17.1	-17.2	-17.0	-16.9	-16.5	-16.4	-16.2	-16.7	-17.4	-17.3	-17.0	-16.7	-16.4	-16.1	-15.8	-16.2	-13.8	-22.1

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Temperature 9 Meters (degrees Celsius)**  
**December 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	-1.3	-0.8	-0.4	-0.2	-1.4	-1.4	-0.9	1.1	2.1	3.2	4.2	4.8	5.4	5.8	6.2	6.5	5.1	1.8	1.6	1.9	0.6	-0.4	0.5	2.2	1.9	6.5	-1.4
2	3.2	4.7	5.3	5.9	6.5	7.3	7.4	7.4	7.7	7.8	7.6	8.1	8.4	8.6	8.7	7.1	2.6	1.1	1.2	0.7	-0.3	-1.2	-1.1	-1.3	4.7	8.7	-1.3
3	-1.1	-1.4	-1.5	-0.9	-1.1	-1.2	-1.1	-0.7	-0.9	-0.6	-0.2	0.8	1.4	1.7	2.1	2.0	1.3	0.8	0.7	0.5	0.0	0.2	0.0	-2.1	-0.1	2.1	-2.1
4	-3.7	-3.9	-5.1	-4.9	-3.9	-2.9	-2.5	-1.2	-1.5	-0.8	0.3	1.5	3.4	4.1	4.3	4.6	4.9	5.3	5.0	4.8	4.6	4.9	5.8	6.0	1.2	6.0	-5.1
5	5.7	5.7	5.5	5.5	5.7	6.1	6.7	6.4	6.2	6.5	6.5	6.0	5.4	5.1	3.9	3.0	2.1	1.0	0.0	-0.7	-1.1	-1.8	-2.3	-2.6	3.5	6.7	-2.6
6	-2.8	-3.0	-3.1	-3.6	-3.7	-3.8	-3.4	-3.4	-3.7	-3.7	-3.2	-3.3	-3.5	-3.1	-2.9	-3.3	-4.3	-4.6	-4.8	-5.2	-5.2	-5.2	-5.1	-5.5	-3.9	-2.8	-5.5
7	-5.7	-5.5	-5.5	-6.0	-5.8	-5.1	-4.4	-4.3	-4.4	-4.2	-3.6	-3.0	-2.8	-2.9	-2.8	-2.6	-2.7	-2.7	-2.6	-2.6	-3.2	-3.7	-4.2	-4.3	-3.9	-2.6	-6.0
8	-4.6	-4.9	-5.2	-6.0	-6.7	-7.5	-8.5	-11.2	-12.2	-12.0	-11.7	-11.8	-11.9	-11.5	-11.9	-13.0	-14.1	-15.5	-17.7	-19.8	-21.5	-21.9	-22.9	-23.8	-12.8	-4.6	-23.8
9	-23.6	-24.2	-24.4	-25.0	-25.1	-24.8	-25.4	-24.0	-22.9	-20.3	-17.2	-13.9	-11.6	-10.2	-10.0	-10.1	-10.2	-9.5	-9.4	-9.4	-9.4	-9.0	-8.9	-8.3	-16.1	-8.3	-25.4
10	-8.0	-8.4	-9.1	-9.8	-10.5	-11.0	-10.6	-9.3	-6.8	-5.9	-5.8	-5.0	-4.3	-4.3	-4.0	-4.3	-4.3	-5.1	-6.5	-8.5	-11.8	-14.6	-16.5	-17.0	-8.4	-4.0	-17.0
11	-16.5	-15.3	-14.5	-11.7	-5.6	-3.5	-2.7	-2.4	-1.2	-1.1	-0.8	-0.2	-0.3	0.2	0.6	1.2	1.0	0.7	0.5	-0.1	-1.3	-1.4	-1.6	-1.7	-3.2	1.2	-16.5
12	-2.3	-2.5	-2.8	-2.9	-3.2	-3.2	-3.4	-3.3	-3.4	-3.4	-3.0	-2.6	-2.1	-1.2	-1.3	-1.8	-1.9	-2.6	-3.2	-4.0	-4.5	-4.4	-5.5	-5.9	-3.1	-1.2	-5.9
13	-6.6	-7.6	-7.9	-7.8	-7.3	-5.6	-5.0	-7.8	-10.7	-8.3	-5.2	-3.8	-3.5	-3.0	-3.3	-3.9	-6.4	-9.3	-12.0	-14.2	-15.3	-16.2	-17.4	-18.1	-8.6	-3.0	-18.1
14	-18.1	-19.1	-19.1	-19.3	-18.6	-18.4	-18.0	-17.6	-16.9	-15.3	-12.1	-8.9	-7.0	-4.3	-1.4	-1.1	-1.6	-2.3	-2.8	-3.8	-4.7	-7.1	-9.8	-12.1	-10.8	-1.1	-19.3
15	-13.3	-13.5	-14.7	-15.4	-15.0	-15.0	-15.5	-15.9	-17.0	-16.1	-14.0	-10.1	-5.3	-4.5	-4.3	-4.6	-6.5	-9.9	-12.3	-13.6	-15.0	-16.0	-17.2	-17.4	-12.6	-4.3	-17.4
16	-17.4	-16.9	-16.7	-16.1	-15.1	-12.3	-10.1	-8.7	-7.5	-7.2	-5.6	-4.2	-4.0	-3.9	-5.5	-5.6	-6.7	-9.7	-12.6	-12.1	-10.8	-8.9	-7.9	-8.2	-9.7	-3.9	-17.4
17	-7.3	-5.8	-5.3	-4.4	-3.9	-3.4	-3.8	-3.0	-2.4	-2.1	-1.6	-1.0	-1.4	-0.9	-0.3	-0.1	-1.3	-1.7	-2.3	-3.1	-3.8	-4.6	-5.4	-5.6	-3.1	-0.1	-7.3
18	-6.0	-6.1	-6.2	-6.5	-6.9	-7.1	-7.4	-7.7	-8.1	-8.5	-8.1	-7.6	-7.4	-7.3	-7.4	-7.5	-8.2	-9.4	-9.5	-9.8	-11.4	-12.1	-14.3	-17.2	-8.7	-6.0	-17.2
19	-18.9	-20.2	-21.2	-21.8	-20.6	-20.1	-20.1	-20.5	-21.3	-19.9	-17.8	-14.3	-9.2	-8.2	-8.0	-8.4	-9.8	-12.3	-15.5	-16.7	-18.1	-17.5	-16.8	-15.5	-16.4	-8.0	-21.8
20	-14.2	-14.6	-14.8	-13.9	-11.8	-12.2	-10.5	-10.8	-9.7	-6.4	-5.2	-2.7	-2.0	Au	Au	Au	-1.9	-2.9	-4.4	-4.1	-4.7	-5.6	-2.9	-3.3	-7.6	-1.9	-14.8
21	-4.4	-7.3	-7.7	-8.9	-10.0	-9.8	-8.3	-4.1	-5.5	-5.0	-1.9	0.8	1.4	1.6	1.2	0.4	-1.9	-1.1	-1.4	-2.2	-2.6	-2.6	-4.0	-5.3	-3.7	1.6	-10.0
22	-6.8	-7.8	-9.6	-9.9	-11.0	-11.6	-11.8	-12.0	-11.0	-10.4	-8.3	-5.9	-2.5	1.8	2.1	1.8	0.6	-1.2	-1.1	-3.1	-2.9	-0.9	-0.6	-0.7	-5.1	2.1	-12.0
23	-1.1	-2.4	-1.1	-3.0	-3.6	-4.0	-5.2	-5.2	-4.2	-6.9	-4.6	-2.7	-1.8	-1.5	-1.3	-1.7	-2.9	-6.5	-7.8	-9.3	-9.9	-9.8	-9.5	-6.8	-4.8	-1.1	-9.9
24	-6.4	-7.4	-6.7	-7.1	-11.9	-15.1	-16.3	-17.7	-18.3	-18.3	-18.2	-18.6	-18.8	-18.6	-19.1	-19.1	-19.3	-20.2	-20.4	-20.3	-20.1	-20.7	-21.7	-21.0	-16.7	-6.4	-21.7
25	-20.9	-20.3	-19.4	-18.7	-17.9	-17.5	-17.0	-16.6	-16.2	-15.6	-14.7	-13.1	-11.3	-9.5	-8.1	-7.3	-8.1	-10.8	-12.4	-12.4	-11.8	-11.6	-11.6	-12.8	-14.0	-7.3	-20.9
26	-13.2	-12.5	-12.2	-11.5	-11.3	-10.8	-9.9	-9.2	-8.7	-7.9	-7.3	-6.3	-5.9	-6.0	-5.9	-5.8	-6.5	-10.0	-12.1	-10.7	-10.7	-10.2	-10.0	-9.8	-9.3	-5.8	-13.2
27	-9.7	-9.6	-9.4	-9.3	-9.1	-9.0	-8.4	-8.0	-7.9	-8.0	-7.8	-7.3	-7.2	-6.4	-6.3	-6.2	-6.5	-6.9	-7.6	-10.1	-12.2	-13.1	-11.8	-9.9	-8.7	-6.2	-13.1
28	-8.4	-8.0	-7.7	-6.4	-6.1	-6.2	-6.2	-7.2	-9.2	-10.3	-9.4	-5.9	-4.8	-4.8	-4.7	-5.2	-6.4	-7.6	-12.4	-13.7	-15.0	-16.4	-17.6	-18.1	-9.1	-4.7	-18.1
29	-18.8	-19.6	-19.4	-19.5	-19.0	-18.7	-17.1	-15.7	-15.2	-15.0	-14.0	-13.0	-11.3	-9.5	-7.8	-7.3	-7.5	-9.2	-10.2	-11.5	-12.4	-13.4	-15.4	-16.3	-14.0	-7.3	-19.6
30	-16.0	-16.4	-15.0	-14.3	-13.9	-13.7	-13.6	-14.0	-14.2	-13.4	-12.5	-9.3	-8.3	-8.1	-8.1	-8.1	-8.6	-9.9	-11.3	-12.8	-14.7	-15.4	-15.2	-15.5	-12.6	-8.1	-16.4
31	-15.7	-15.4	-15.0	-14.6	-14.3	-15.7	-17.1	-18.7	-19.3	-19.2	-15.5	-11.7	-9.5	-8.8	-8.5	-8.4	-8.6	-8.9	-8.8	-8.7	-8.8	-8.8	-8.6	-8.6	-12.4	-8.4	-19.3
Avg	-9.2	-9.4	-9.4	-9.3	-9.1	-8.9	-8.7	-8.6	-8.6	-8.0	-6.8	-5.3	-4.3	-3.7	-3.5	-3.6	-4.5	-5.8	-6.8	-7.6	-8.3	-8.7	-9.0	-9.2	-7.4	-2.3	-13.6
Max	5.7	5.7	5.5	5.9	6.5	7.3	7.4	7.4	7.7	7.8	7.6	8.1	8.4	8.6	8.7	7.1	5.1	5.3	5.0	4.8	4.6	4.9	5.8	6.0	4.7	8.7	-1.3
Min	-23.6	-24.2	-24.4	-25.0	-25.1	-24.8	-25.4	-24.0	-22.9	-20.3	-18.2	-18.6	-18.8	-18.6	-19.1	-19.1	-19.3	-20.2	-20.4	-20.3	-21.5	-21.9	-22.9	-23.8	-16.7	-8.4	-25.4

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Temperature 2 Meters (degrees Celsius)**  
**October 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	-1.0	-1.8	-2.0	-2.8	-3.5	-3.6	-4.5	-1.7	3.6	11.1	14.3	15.6	17.3	18.7	19.1	19.4	18.8	17.6	14.5	11.2	9.6	8.7	7.6	8.2	8.1	19.4	-4.5
2	10.8	15.0	14.9	14.3	14.0	13.3	12.5	12.5	13.8	14.9	16.3	17.2	17.8	18.3	18.5	18.1	17.0	14.7	12.4	10.9	7.6	4.3	2.4	1.5	13.0	18.5	1.5
3	2.1	1.8	0.3	-0.5	-0.1	-0.4	-0.3	-0.2	-0.5	-0.4	0.1	1.9	2.8	2.3	1.3	0.3	1.2	0.2	-0.8	-1.1	-1.1	-1.3	-1.5	-1.8	0.2	2.8	-1.8
4	-4.5	-6.5	-7.2	-5.7	-4.9	-4.4	-4.1	-3.6	-1.5	-0.1	0.7	1.9	1.8	0.5	-0.3	0.2	-0.9	-0.7	-1.0	-1.3	-1.5	-1.6	-1.7	-2.0	-2.0	1.9	-7.2
5	-2.2	-2.5	-2.6	-3.0	-3.7	-4.2	-3.6	-3.1	-2.5	-1.9	-0.7	0.1	0.1	0.0	-0.2	0.3	-0.4	-1.7	-3.6	-5.4	-7.0	-7.9	-9.3	-10.0	-3.1	0.3	-10.0
6	-11.9	-12.6	-13.4	-14.8	-14.8	-16.0	-15.8	-14.3	-10.0	-6.0	-0.8	1.0	3.0	4.5	5.4	4.6	3.8	2.5	1.7	1.1	0.3	0.6	0.4	0.5	-4.2	5.4	-16.0
7	0.1	-1.2	-2.5	-4.6	-6.1	-6.7	-7.5	-5.8	-1.9	2.9	6.2	8.0	9.8	10.9	11.7	11.6	11.5	9.6	5.3	2.1	0.3	-1.5	-3.8	-4.2	1.8	11.7	-7.5
8	-5.2	-6.0	-5.1	-4.0	-3.0	-3.4	-3.6	-2.1	1.0	3.6	3.4	4.1	5.0	5.3	5.1	4.5	4.2	3.8	2.7	1.7	1.3	1.0	-0.2	-0.9	0.6	5.3	-6.0
9	-1.0	-1.0	-0.9	-1.0	-1.0	-1.2	-1.2	-1.1	-0.3	0.9	3.1	5.8	7.4	8.4	9.3	9.4	8.7	5.4	1.7	0.1	-1.9	-3.1	-5.5	-6.2	1.5	9.4	-6.2
10	-7.2	-7.7	-7.9	-8.3	-8.8	-9.4	-9.3	-7.7	-2.5	4.6	10.4	12.0	13.2	14.0	14.5	14.0	12.2	8.6	5.8	3.2	3.4	4.2	3.8	3.2	2.4	14.5	-9.4
11	2.7	2.0	0.8	0.0	0.2	0.7	0.6	0.4	0.2	0.7	1.6	2.6	3.6	4.5	6.3	7.4	7.5	4.3	1.1	-1.4	-4.1	-5.0	-6.4	-7.5	1.0	7.5	-7.5
12	-8.1	-9.0	-9.2	-9.0	-8.8	-7.9	-8.3	-6.5	-1.9	4.8	13.0	16.0	16.6	17.5	17.9	17.9	17.1	14.5	13.1	12.6	10.1	7.4	4.9	3.5	4.9	17.9	-9.2
13	2.7	1.8	1.7	1.3	0.8	0.7	1.9	2.5	3.2	5.6	6.8	8.6	9.6	10.5	10.4	10.8	10.2	9.1	8.3	8.0	7.2	5.2	4.4	4.0	5.6	10.8	0.7
14	4.1	3.6	1.9	1.9	1.1	-0.2	-1.1	-0.6	3.6	9.8	11.8	12.5	11.6	11.4	11.4	11.3	10.8	9.5	7.2	5.5	3.9	2.9	2.4	3.1	5.8	12.5	-1.1
15	8.6	10.1	9.4	7.0	6.2	5.4	5.7	7.9	9.0	7.6	7.8	8.1	8.7	10.0	10.5	9.3	8.4	7.9	5.7	3.3	1.9	0.8	0.0	0.3	6.7	10.5	0.0
16	0.9	1.6	3.3	3.9	6.7	9.3	9.5	9.1	8.0	7.2	7.6	7.6	9.4	7.6	7.5	6.3	5.2	3.6	2.6	2.4	2.0	1.5	1.3	0.6	5.2	9.5	0.6
17	0.3	0.0	0.1	-0.1	-0.4	-0.4	-0.4	0.1	0.6	1.5	2.5	2.7	3.2	3.7	4.1	3.9	3.0	1.9	1.1	0.1	-1.0	-2.9	-2.3	-4.4	0.7	4.1	-4.4
18	-5.4	-6.2	-7.2	-9.0	-9.5	-9.8	-10.5	-9.4	-5.3	0.3	4.4	6.4	7.8	8.8	9.4	9.3	8.1	6.3	1.7	0.2	-0.8	-2.1	-3.3	-3.8	-0.8	9.4	-10.5
19	-3.2	-2.7	-2.3	-1.3	-0.5	-0.3	0.7	3.3	6.4	9.9	11.8	11.7	11.7	12.3	12.9	13.2	13.5	11.9	11.0	10.1	9.3	8.2	7.6	7.4	6.8	13.5	-3.2
20	7.9	7.7	6.2	7.4	7.0	6.7	6.5	6.6	7.6	7.1	6.6	6.5	7.6	8.2	7.7	5.8	4.6	2.7	2.0	1.4	0.0	-1.6	-2.3	-4.3	4.8	8.2	-4.3
21	-4.6	-4.6	-5.5	-6.4	-7.1	-8.2	-9.2	-9.6	-6.1	-0.5	1.8	3.1	4.2	4.2	4.9	5.6	5.0	2.8	2.0	1.5	1.7	1.1	0.0	-0.4	-1.0	5.6	-9.6
22	-1.4	-2.0	-4.4	-6.8	-7.1	-7.6	-7.5	-8.5	-7.1	-3.9	-1.2	1.2	2.2	2.5	1.7	0.9	0.2	0.1	-0.1	-0.2	-0.3	-2.3	-4.7	-4.6	-2.5	2.5	-8.5
23	-4.2	-3.8	-3.4	-3.4	-4.8	-7.8	-9.7	-8.8	-7.7	-4.9	-2.4	-0.8	-0.6	-0.5	-1.0	-1.5	-4.3	-5.2	-6.0	-6.6	-7.1	-7.4	-7.4	-8.8	-4.9	-0.5	-9.7
24	-10.4	-10.9	-10.0	-9.8	-10.0	-9.1	-8.0	-7.8	-6.9	-5.5	-3.1	-1.7	-1.0	-0.6	-0.5	-0.6	-1.7	-4.1	-6.8	-7.7	-7.2	-8.2	-7.9	-8.3	-6.2	-0.5	-10.9
25	-9.7	-11.1	-10.5	-9.9	-10.2	-10.3	-9.9	-9.3	-8.8	-8.0	-7.4	-6.9	-6.1	-5.9	-6.6	-6.9	-7.1	-7.7	-8.0	-8.0	-7.9	-7.7	-7.6	-7.6	-8.3	-5.9	-11.1
26	-7.6	-7.7	-7.9	-7.5	-7.3	-7.4	-8.4	-8.3	-6.7	-5.0	-3.7	-2.6	-1.5	-1.1	-1.4	-1.5	-2.2	-3.1	-4.1	-4.7	-4.5	-4.6	-4.9	-5.3	-5.0	-1.1	-8.4
27	-4.9	-4.7	-4.7	-4.7	-4.6	-4.8	-4.6	-4.1	-3.7	-3.0	-2.6	-2.2	-1.7	-1.3	-0.7	-0.3	-0.7	-1.0	-1.3	-1.4	-1.4	-1.6	-2.1	-1.7	-2.7	-0.3	-4.9
28	-0.6	-0.4	-0.1	-0.1	-0.1	0.3	0.6	0.7	0.7	1.3	1.6	1.8	2.4	2.4	2.3	2.7	2.9	2.7	1.9	2.1	2.2	2.3	1.5	1.3	1.3	2.9	-0.6
29	1.2	1.0	1.1	1.3	1.2	2.2	2.2	1.7	2.0	3.7	3.9	6.2	8.9	9.4	9.1	7.4	6.5	6.3	6.9	6.2	3.1	2.0	1.7	5.9	4.2	9.4	1.0
30	4.9	2.4	1.5	1.8	1.4	0.4	-0.7	-0.4	0.9	5.2	9.7	11.0	12.4	12.7	11.6	12.1	11.0	7.9	5.6	4.3	3.3	2.9	2.7	2.6	5.3	12.7	-0.7
31	2.6	2.7	2.1	2.4	2.3	1.8	2.0	1.9	2.9	5.3	11.2	12.8	13.7	14.5	14.4	13.3	12.0	8.1	7.1	5.0	2.3	1.8	1.6	2.3	6.1	14.5	1.6
Avg	-1.4	-1.7	-2.0	-2.3	-2.4	-2.7	-2.8	-2.1	-0.3	2.2	4.3	5.6	6.5	6.9	7.0	6.7	6.0	4.5	2.9	1.8	0.8	-0.1	-0.9	-1.2	1.5	7.5	-5.4
Max	10.8	15.0	14.9	14.3	14.0	13.3	12.5	12.5	13.8	14.9	16.3	17.2	17.8	18.7	19.1	19.4	18.8	17.6	14.5	12.6	10.1	8.7	7.6	8.2	13.0	19.4	1.6
Min	-11.9	-12.6	-13.4	-14.8	-14.8	-16.0	-15.8	-14.3	-10.0	-8.0	-7.4	-6.9	-6.1	-5.9	-6.6	-6.9	-7.1	-7.7	-8.0	-8.0	-7.9	-8.2	-9.3	-10.0	-8.3	-5.9	-16.0

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Temperature 2 Meters (degrees Celsius)**  
**November 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.7	-0.1	0.2	1.2	1.0	0.4	-0.2	1.0	1.9	4.6	9.9	11.7	11.3	10.8	9.7	9.5	8.1	5.7	4.7	4.3	4.3	3.8	2.1	2.6	4.5	11.7	-0.2
2	3.1	2.6	2.4	2.1	1.9	1.1	1.3	0.9	1.8	3.2	4.2	5.8	5.9	5.8	5.5	6.0	5.5	4.0	3.6	0.7	-1.4	-3.1	-4.3	-5.4	2.2	6.0	-5.4
3	-5.3	-5.4	-6.3	-6.7	-7.1	-7.6	-7.7	-7.8	-5.5	-1.1	4.0	7.5	8.6	9.3	9.1	8.3	6.2	4.4	5.3	4.9	4.5	6.9	7.2	6.4	1.3	9.3	-7.8
4	6.4	6.5	5.7	5.6	5.6	5.9	6.1	6.3	6.3	7.0	7.6	8.6	8.5	9.0	9.2	9.3	8.1	7.9	7.7	7.8	7.0	6.1	3.7	2.3	6.8	9.3	2.3
5	1.2	2.0	2.0	3.0	3.6	6.4	6.7	6.5	8.8	10.6	11.2	11.7	11.9	12.7	12.9	12.3	11.6	10.8	10.2	9.8	8.9	8.0	7.6	5.6	8.2	12.9	1.2
6	1.6	0.0	-0.7	-1.2	-0.7	-1.4	-1.7	-1.7	-0.9	1.5	3.7	5.9	7.6	9.7	10.3	10.6	9.2	6.5	4.5	2.1	0.8	0.0	-0.9	-1.9	2.6	10.6	-1.9
7	-1.9	0.0	2.6	8.9	3.6	6.7	9.3	4.2	4.5	12.5	13.5	12.7	13.2	13.8	11.4	8.8	7.1	5.2	4.5	3.4	2.7	1.7	1.1	-0.7	6.2	13.8	-1.9
8	-1.7	-2.8	-3.9	-4.9	-3.2	-2.4	-1.1	-2.7	-2.3	-2.2	-1.9	-2.5	-2.5	-3.0	-3.6	-4.2	-4.4	-4.6	-4.7	-4.8	-4.8	-4.8	-4.6	-4.8	-3.4	-1.1	-4.9
9	-4.4	-4.7	-4.8	-5.1	-5.3	-5.4	-5.8	-8.5	-10.5	-11.3	-11.1	-9.5	-10.6	-11.1	-11.4	-10.5	-10.5	-10.8	-11.3	-12.2	-12.6	-12.8	-13.0	-13.4	-9.4	-4.4	-13.4
10	-13.8	-14.1	-14.3	-14.7	-15.1	-15.5	-15.9	-16.4	-16.9	-17.0	-17.0	-16.8	-16.7	-16.3	-16.2	-16.2	-16.7	-17.6	-17.4	-17.0	-16.6	-16.3	-15.9	-15.8	-16.1	-13.8	-17.6
11	-15.7	-17.4	-21.3	-23.0	-23.6	-22.3	-20.4	-19.2	-18.4	-14.6	-12.2	-10.0	-9.5	-9.1	-9.5	-9.4	-10.2	-12.4	-13.8	-15.1	-15.6	-16.3	-16.5	-17.3	-15.5	-9.1	-23.6
12	-17.2	-17.4	-18.2	-18.0	-18.9	-19.6	-19.5	-18.7	-16.6	-13.2	-10.8	-7.6	-3.6	-1.8	-1.6	-1.9	-3.6	-3.8	-3.5	-3.4	-2.5	-2.5	-3.0	-2.6	-9.6	-1.6	-19.6
13	-2.5	-3.1	-2.9	-3.4	-3.8	-4.0	-2.7	-2.7	-2.1	-0.9	0.0	0.4	0.8	0.9	0.6	0.1	-1.1	-1.2	-1.9	-1.3	-1.8	-2.9	-3.5	-3.2	-1.8	0.9	-4.0
14	-3.1	-3.1	-2.9	-3.3	-3.4	-3.5	-3.8	-4.1	-3.2	-1.8	-1.0	0.5	1.5	1.3	1.2	1.2	0.6	-0.4	-2.6	-2.7	-3.7	-5.2	-7.0	-7.4	-2.3	1.5	-7.4
15	-8.1	-9.9	-11.5	-11.8	-12.9	-13.8	-14.3	-15.5	-15.0	-11.9	-8.5	-3.9	-0.6	1.2	1.5	0.9	-1.1	-2.8	-4.9	-7.5	-8.3	-8.8	-9.1	-10.2	-7.8	1.5	-15.5
16	-10.6	-11.3	-10.5	-10.2	-9.1	-9.3	-8.9	-8.2	-8.5	-6.2	-3.0	-0.7	1.7	3.4	4.0	3.5	3.7	3.2	1.7	1.5	1.1	0.0	-1.5	-2.8	-3.2	4.0	-11.3
17	-4.4	-5.2	-6.9	-7.9	-8.1	-8.1	-8.2	-8.3	-6.7	-4.3	-1.8	3.8	5.5	6.0	5.9	5.4	4.3	1.8	0.5	0.5	2.0	0.6	-1.7	-2.1	-1.6	6.0	-8.3
18	-2.1	-2.7	-2.6	2.3	3.2	2.5	3.4	3.6	2.6	2.1	2.7	2.5	2.4	2.2	2.2	1.1	0.5	-2.7	-4.7	-6.1	-7.8	-9.7	-9.7	-9.5	-1.0	3.6	-9.7
19	-10.1	-10.2	-9.0	-9.3	-7.3	-1.1	-0.2	-0.7	1.3	2.9	4.2	4.8	5.7	6.0	6.3	6.3	5.5	4.8	4.5	5.1	5.2	5.0	5.6	6.1	1.3	6.3	-10.2
20	5.8	5.1	5.9	6.9	6.6	6.5	6.2	6.4	6.2	7.1	7.2	7.3	7.6	7.9	7.8	7.4	7.1	6.8	6.3	6.4	5.4	5.2	5.5	5.1	6.5	7.9	5.1
21	4.9	4.8	3.9	2.9	4.2	6.4	6.4	5.5	1.9	0.6	1.0	1.0	1.8	1.6	1.7	1.4	0.7	0.0	-0.1	-0.8	-2.1	-3.0	-3.6	-3.6	1.6	6.4	-3.6
22	-3.7	-4.2	-3.0	-3.2	-3.2	-3.4	-3.8	-4.2	-3.3	-2.8	-2.4	-1.9	-1.5	-1.7	-1.6	-1.5	-3.4	-5.2	-6.8	-8.3	-9.0	-9.5	-10.3	-11.7	-4.6	-1.5	-11.7
23	-12.1	-12.4	-12.3	-12.0	-11.4	-10.5	-8.5	-6.9	-5.6	-3.5	-1.7	0.4	2.1	3.1	3.8	3.6	4.2	2.3	-0.4	-0.9	-1.6	-2.2	-1.6	-1.1	-3.6	4.2	-12.4
24	-1.9	-2.3	-2.4	-2.0	-2.9	-1.5	-0.1	1.0	2.8	3.4	3.5	3.2	2.2	2.6	3.3	3.1	2.3	1.4	0.5	0.9	0.6	0.5	-0.3	0.0	0.7	3.5	-2.9
25	-0.6	-0.9	-1.4	-2.8	-3.3	-3.2	-3.2	-3.0	-2.7	-1.7	-1.6	-1.5	-1.4	-2.0	-2.5	-3.7	-4.1	-4.5	-5.1	-6.0	-6.7	-6.7	-6.9	-8.7	-3.5	-0.6	-8.7
26	-8.5	-9.1	-13.2	-15.5	-17.8	-18.5	-19.4	-20.1	-19.7	-16.7	-12.5	-9.2	-5.1	-3.4	-3.3	-3.9	-6.1	-8.5	-8.7	-10.9	-11.6	-13.4	-15.1	-15.4	-11.9	-3.3	-20.1
27	-16.1	-16.1	-15.8	-15.1	-14.5	-13.8	-12.7	-11.8	-11.0	-9.7	-6.8	-3.7	-0.2	0.7	1.0	-0.6	-3.2	-4.9	-8.0	-8.4	-8.6	-8.9	-9.8	-10.2	-8.7	1.0	-16.1
28	-10.0	-9.1	-9.0	-8.9	-8.7	-8.1	-7.4	-7.5	-8.1	-5.2	-1.6	0.9	4.6	7.2	6.8	3.8	0.9	-0.5	-2.2	-3.1	-2.8	-3.2	-2.2	-2.4	-3.2	7.2	-10.0
29	-2.3	-1.4	0.9	0.7	0.3	0.5	0.2	-0.3	-0.9	-0.4	0.9	2.7	4.4	4.9	5.7	5.7	4.9	4.2	3.0	1.6	-0.1	3.3	3.3	2.9	1.9	5.7	-2.3
30	3.3	4.7	4.7	5.4	5.2	5.1	6.4	5.7	5.9	6.0	6.0	6.3	6.1	4.9	4.4	4.0	3.3	2.0	1.1	0.5	-0.2	-0.7	-1.3	-1.7	3.6	6.4	-1.7
Avg	-4.3	-4.6	-4.8	-4.7	-4.8	-4.4	-4.0	-4.2	-3.8	-2.1	-0.5	1.0	2.1	2.6	2.5	2.0	1.0	-0.3	-1.3	-2.0	-2.5	-3.0	-3.5	-4.0	-2.0	3.5	-8.1
Max	6.4	6.5	5.9	8.9	6.6	6.7	9.3	6.5	8.8	12.5	13.5	12.7	13.2	13.8	12.9	12.3	11.6	10.8	10.2	9.8	8.9	8.0	7.6	6.4	8.2	13.8	5.1
Min	-17.2	-17.4	-21.3	-23.0	-23.6	-22.3	-20.4	-20.1	-19.7	-17.0	-17.0	-16.8	-16.7	-16.3	-16.2	-16.2	-16.7	-17.6	-17.4	-17.0	-16.6	-16.3	-16.5	-17.3	-16.1	-13.8	-23.6

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Temperature 2 Meters (degrees Celsius)**  
**December 2012**

Day	<< Hour >>																								Avg	Max	Min	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1	-1.7	-1.1	-1.2	-1.2	-2.6	-2.6	-1.4	0.3	1.6	2.6	4.1	4.8	5.3	5.6	5.8	6.1	4.7	1.6	1.2	1.3	-0.3	-0.7	0.2	1.8	1.4	6.1	-2.6	
2	2.7	3.8	4.4	5.2	5.9	6.6	6.9	6.9	7.2	7.3	7.2	7.6	7.9	8.2	8.2	6.7	2.4	0.9	1.0	0.3	-0.7	-1.6	-1.6	-1.8	4.2	8.2	-1.8	
3	-1.6	-1.8	-1.9	-1.2	-1.5	-1.5	-1.4	-0.8	-1.1	-0.7	-0.3	0.9	1.4	1.7	2.1	1.8	0.9	0.5	0.2	-0.1	-0.6	-0.3	-0.6	-3.1	-0.4	2.1	-3.1	
4	-4.6	-4.7	-5.5	-5.4	-4.5	-3.2	-2.8	-1.4	-1.5	-0.8	0.2	1.5	3.3	4.0	4.1	4.3	4.4	4.8	4.5	4.3	4.1	4.5	5.3	5.5	0.9	5.5	-5.5	
5	5.3	5.4	5.1	5.1	5.3	5.7	6.2	6.0	5.8	6.2	6.3	5.9	5.4	5.2	3.9	2.9	1.8	0.7	-0.4	-1.3	-1.5	-2.0	-2.4	-2.9	3.2	6.3	-2.9	
6	-3.1	-3.3	-3.5	-3.9	-4.1	-3.9	-3.4	-3.5	-3.7	-3.6	-2.9	-3.1	-3.3	-2.9	-2.8	-3.2	-4.2	-4.5	-4.7	-5.1	-5.2	-5.3	-5.4	-5.8	-3.9	-2.8	-5.8	
7	-6.0	-6.0	-6.0	-6.1	-6.1	-5.4	-4.5	-4.4	-4.6	-4.3	-3.4	-2.8	-2.7	-2.9	-2.8	-2.7	-2.9	-2.9	-2.7	-2.8	-3.2	-3.7	-4.2	-4.3	-4.1	-2.7	-6.1	
8	-4.6	-5.0	-5.3	-6.0	-6.7	-7.5	-8.4	-11.1	-12.0	-11.8	-11.6	-11.8	-11.8	-11.8	-11.5	-11.9	-13.2	-14.6	-16.2	-19.2	-21.2	-23.0	-23.5	-24.7	-25.2	-13.2	-4.6	-25.2
9	-25.6	-25.9	-26.2	-26.4	-26.8	-26.7	-27.1	-24.8	-23.2	-20.2	-17.2	-14.2	-11.7	-10.1	-10.0	-10.1	-10.4	-9.7	-9.5	-9.5	-9.8	-9.4	-9.1	-8.4	-16.7	-8.4	-27.1	
10	-8.0	-8.6	-10.4	-11.3	-12.2	-11.3	-10.6	-9.4	-6.9	-6.0	-5.7	-5.0	-4.4	-4.7	-4.2	-4.5	-4.5	-5.8	-7.5	-10.5	-13.1	-16.1	-18.4	-19.2	-9.1	-4.2	-19.2	
11	-17.8	-15.9	-14.6	-12.3	-6.3	-4.1	-3.0	-2.8	-1.3	-1.3	-1.2	-0.4	-0.5	0.0	0.4	1.0	0.6	0.3	0.0	-1.0	-1.9	-2.1	-1.8	-1.9	-3.7	1.0	-17.8	
12	-2.5	-2.6	-2.9	-3.0	-3.4	-3.7	-3.6	-3.4	-3.6	-3.5	-3.0	-2.5	-2.1	-1.2	-1.3	-2.0	-2.0	-2.9	-4.0	-4.6	-5.2	-4.8	-6.2	-6.6	-3.4	-1.2	-6.6	
13	-7.4	-8.8	-8.8	-8.3	-7.6	-6.1	-6.1	-9.8	-12.5	-9.3	-5.9	-4.4	-3.9	-3.3	-4.2	-5.2	-7.2	-11.2	-13.7	-16.2	-17.1	-19.0	-19.9	-20.6	-9.9	-3.3	-20.6	
14	-21.3	-21.2	-21.4	-21.4	-20.7	-20.8	-20.6	-20.1	-18.9	-16.8	-12.7	-9.6	-7.5	-4.4	-1.4	-1.2	-1.9	-2.8	-3.2	-4.6	-6.3	-8.5	-11.3	-13.3	-12.2	-1.2	-21.4	
15	-14.8	-15.3	-16.3	-16.8	-16.0	-16.2	-16.9	-18.2	-18.2	-17.1	-14.4	-10.4	-5.8	-4.6	-4.5	-5.2	-8.3	-11.6	-14.3	-16.7	-17.9	-18.9	-19.7	-19.5	-14.1	-4.5	-19.7	
16	-20.0	-19.2	-19.0	-18.6	-16.8	-13.5	-10.8	-9.5	-8.2	-8.9	-6.2	-4.4	-4.2	-4.0	-5.6	-6.1	-7.8	-11.2	-14.8	-12.8	-12.3	-10.5	-9.5	-9.0	-11.0	-4.0	-20.0	
17	-8.3	-6.3	-5.6	-4.6	-4.0	-3.4	-3.8	-3.1	-2.5	-2.3	-1.8	-1.3	-1.6	-0.9	-0.3	-0.2	-1.5	-2.0	-2.6	-3.5	-4.1	-5.0	-5.9	-5.9	-3.4	-0.2	-8.3	
18	-6.4	-6.3	-6.4	-6.6	-7.0	-7.3	-7.6	-7.9	-8.4	-8.7	-8.2	-7.6	-7.4	-7.3	-7.5	-7.6	-8.6	-10.3	-10.5	-10.5	-12.3	-12.9	-15.6	-18.0	-9.0	-6.3	-18.0	
19	-19.9	-21.2	-22.5	-23.0	-21.3	-21.1	-21.7	-22.1	-22.2	-20.4	-18.8	-15.6	-9.7	-8.3	-8.1	-8.7	-11.7	-14.0	-16.3	-17.9	-19.7	-19.0	-18.8	-17.0	-17.5	-8.1	-23.0	
20	-15.4	-16.7	-15.8	-15.7	-13.5	-13.5	-11.7	-11.9	-10.8	-6.6	-5.3	-2.8	-2.1	Au	Au	Au	-2.6	-3.7	-5.4	-5.8	-6.4	-7.4	-4.6	-4.7	-8.7	-2.1	-16.7	
21	-5.4	-7.9	-8.3	-9.8	-11.5	-11.3	-9.9	-5.4	-6.2	-6.6	-2.6	0.6	1.1	1.3	0.5	-0.9	-3.5	-1.9	-2.0	-2.7	-2.9	-3.3	-5.0	-6.7	-4.6	1.3	-11.5	
22	-7.5	-8.8	-11.4	-11.3	-12.8	-13.2	-13.9	-13.4	-12.4	-11.8	-9.2	-7.2	-4.3	1.3	1.4	1.2	-0.1	-1.9	-2.3	-3.8	-4.1	-1.8	-1.0	-1.5	-6.2	1.4	-13.9	
23	-1.9	-3.2	-1.5	-3.1	-3.8	-4.8	-6.6	-6.0	-8.4	-8.4	-5.8	-2.9	-1.8	-1.6	-1.5	-2.2	-3.7	-7.3	-8.1	-10.3	-11.0	-11.1	-10.5	-8.1	-5.6	-1.5	-11.1	
24	-6.5	-7.4	-6.6	-7.0	-11.8	-15.0	-16.1	-17.5	-18.2	-18.1	-17.9	-18.3	-18.4	-18.2	-18.7	-18.9	-19.1	-20.0	-20.3	-20.2	-20.2	-21.1	-22.3	-21.3	-16.6	-6.5	-22.3	
25	-21.5	-20.2	-19.2	-18.6	-17.8	-17.4	-16.9	-16.6	-16.1	-15.4	-14.4	-12.8	-11.1	-9.4	-8.4	-7.6	-8.8	-13.2	-14.3	-13.3	-12.3	-11.9	-12.4	-14.9	-14.4	-7.6	-21.5	
26	-14.4	-13.5	-12.9	-12.3	-11.5	-10.9	-10.3	-9.5	-9.0	-8.1	-7.2	-6.1	-5.8	-5.8	-5.8	-6.0	-6.9	-11.1	-12.8	-10.9	-10.8	-10.3	-10.0	-10.0	-9.7	-5.8	-14.4	
27	-9.9	-9.7	-9.6	-9.4	-9.3	-9.1	-8.7	-8.1	-8.1	-8.1	-7.6	-7.1	-7.5	-6.5	-6.6	-6.5	-7.0	-7.6	-8.3	-12.5	-14.4	-15.2	-12.9	-10.9	-9.2	-6.5	-15.2	
28	-10.3	-9.1	-8.0	-6.6	-6.3	-6.4	-6.4	-8.0	-10.4	-12.7	-10.3	-6.1	-4.8	-4.9	-4.8	-5.7	-7.4	-10.3	-13.3	-14.7	-16.6	-18.2	-19.6	-20.1	-10.0	-4.8	-20.1	
29	-20.9	-21.2	-21.7	-20.9	-20.9	-20.2	-18.7	-17.4	-16.3	-16.2	-15.2	-13.6	-11.9	-10.1	-9.0	-8.4	-8.5	-9.7	-10.7	-12.2	-13.3	-14.7	-17.0	-17.9	-15.3	-8.4	-21.7	
30	-17.3	-17.0	-15.1	-14.3	-14.0	-14.2	-14.2	-14.7	-14.7	-13.4	-12.5	-9.4	-8.1	-7.9	-8.2	-8.6	-9.2	-11.0	-12.8	-14.6	-16.2	-16.5	-16.3	-16.7	-13.2	-7.9	-17.3	
31	-16.8	-16.3	-15.5	-15.0	-15.1	-17.8	-19.9	-20.7	-21.5	-20.8	-17.6	-11.8	-9.4	-8.8	-8.4	-8.3	-8.6	-8.9	-8.8	-8.7	-9.0	-8.9	-8.7	-8.7	-13.1	-8.3	-21.5	
Avg	-10.1	-10.2	-10.1	-10.0	-9.8	-9.7	-9.5	-9.3	-9.2	-8.6	-7.1	-5.5	-4.4	-3.7	-3.7	-4.0	-5.0	-6.5	-7.6	-8.5	-9.3	-9.7	-10.0	-10.2	-8.0	-2.5	-14.9	
Max	5.3	5.4	5.1	5.2	5.9	6.6	6.9	6.9	7.2	7.3	7.2	7.6	7.9	8.2	8.2	6.7	4.7	4.8	4.5	4.3	4.1	4.5	5.3	5.5	4.2	8.2	-1.8	
Min	-25.6	-25.9	-26.2	-26.4	-26.8	-26.7	-27.1	-24.8	-23.2	-20.8	-18.8	-18.3	-18.4	-18.2	-18.7	-18.9	-19.1	-20.0	-20.3	-21.2	-23.0	-23.5	-24.7	-25.2	-17.5	-8.4	-27.1	

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Temperature Delta T (degrees Celsius)**  
**November 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	1.37	1.25	1.36	0.99	1.06	0.89	1.15	0.55	0.36	0.12	-0.09	-0.20	-0.23	-0.10	-0.06	-0.12	0.54	0.39	0.23	0.46	0.34	0.51	0.70	0.51	0.50	1.37	-0.23
2	0.30	0.34	0.21	0.25	0.37	0.48	0.29	0.37	-0.07	-0.24	-0.32	-0.64	-0.32	-0.07	0.01	-0.15	0.13	0.55	0.55	0.84	0.37	0.91	1.05	1.16	0.27	1.16	-0.64
3	0.94	0.84	1.09	1.07	1.14	1.00	1.29	1.10	-0.18	-0.33	-0.32	-0.43	-0.60	-0.58	-0.31	0.11	0.86	0.52	0.53	0.25	0.72	0.48	0.24	0.33	0.41	1.29	-0.60
4	0.28	0.25	0.42	0.45	0.48	0.46	0.36	0.28	0.18	-0.03	-0.18	-0.38	-0.22	-0.35	-0.46	-0.36	0.16	0.16	0.18	0.14	0.39	0.70	0.73	1.05	0.20	1.05	-0.46
5	1.13	0.71	1.55	1.82	2.28	0.94	0.95	0.67	0.52	0.11	-0.07	-0.20	-0.07	-0.10	-0.03	0.15	0.35	0.53	0.44	0.35	0.41	0.58	0.52	0.94	0.60	2.28	-0.20
6	1.94	0.88	0.54	0.56	0.58	0.38	0.65	0.78	0.49	-0.14	-0.15	-0.16	-0.10	-0.05	0.04	0.23	0.69	0.43	0.70	1.06	1.62	1.89	1.35	1.70	0.66	1.94	-0.16
7	1.60	2.22	1.27	0.83	1.31	1.00	0.86	1.11	1.33	-0.21	-0.43	-0.02	-0.04	-0.12	-0.08	0.03	0.10	0.19	0.24	0.33	0.20	0.32	0.34	0.83	0.55	2.22	-0.43
8	0.92	0.57	1.10	1.00	0.23	0.11	-0.01	-0.10	-0.06	-0.11	-0.08	-0.11	-0.12	-0.12	-0.06	-0.10	-0.03	-0.02	-0.02	-0.02	-0.03	-0.04	-0.04	-0.03	0.12	1.10	-0.12
9	0.01	-0.03	-0.05	-0.05	-0.05	-0.04	-0.04	-0.07	-0.13	-0.14	-0.13	-0.17	-0.10	-0.15	-0.10	-0.03	-0.03	-0.03	0.01	0.00	-0.04	-0.04	-0.06	-0.06	-0.06	0.01	-0.17
10	-0.06	-0.05	-0.07	-0.08	-0.08	-0.09	-0.06	0.02	-0.04	-0.17	-0.15	-0.20	-0.26	-0.22	-0.18	-0.12	0.06	0.17	0.06	-0.07	-0.07	-0.07	-0.06	-0.07	-0.08	0.17	-0.26
11	-0.01	1.00	2.10	2.11	1.52	0.70	1.17	1.04	0.57	0.59	-0.07	-0.10	0.01	-0.08	0.15	0.24	0.69	1.53	1.81	1.59	1.96	1.89	1.62	2.05	1.00	2.11	-0.10
12	1.93	1.85	1.34	1.41	1.57	1.78	1.45	1.11	0.35	0.04	0.13	0.64	0.06	-0.14	-0.11	0.24	0.65	0.32	0.25	0.17	0.11	0.18	0.18	0.25	0.66	1.93	-0.14
13	0.22	0.07	0.15	0.29	0.47	0.52	0.50	0.58	0.58	0.34	0.06	-0.02	-0.04	0.11	0.14	0.31	0.92	0.43	0.51	0.42	0.53	0.62	0.52	0.79	0.38	0.92	-0.04
14	0.70	0.39	0.46	0.39	0.34	0.48	0.79	0.84	0.42	0.19	0.02	0.06	0.05	0.04	0.07	0.19	0.42	0.77	0.99	1.04	1.48	1.20	1.73	1.17	0.59	1.73	0.02
15	1.15	2.29	2.10	1.37	1.91	2.00	1.66	1.91	1.45	0.64	0.33	0.20	0.25	-0.03	0.09	0.34	0.79	1.49	1.38	1.80	1.91	2.36	2.35	2.80	1.36	2.80	-0.03
16	2.68	2.42	2.87	2.86	2.69	2.17	1.63	1.16	1.13	0.54	0.10	0.35	0.62	0.49	0.42	0.94	0.43	0.22	0.14	0.18	0.37	0.43	0.88	0.96	1.11	2.87	0.10
17	1.58	1.77	1.65	1.64	1.73	1.96	1.39	1.84	1.30	0.67	0.61	0.50	0.13	0.35	0.40	0.60	0.65	0.84	0.42	1.38	1.47	1.64	1.38	1.06	1.12	1.96	0.13
18	1.71	1.38	1.78	1.19	0.80	1.06	0.92	0.93	0.17	0.09	0.10	0.17	0.11	0.14	0.41	0.72	0.73	1.33	1.58	1.21	1.03	2.14	1.14	1.52	0.93	2.14	0.09
19	1.12	1.09	1.30	1.82	1.65	1.12	0.70	0.90	0.46	0.22	0.12	0.29	0.24	0.35	0.46	0.50	0.60	0.40	0.43	0.55	0.59	0.56	0.41	0.44	0.68	1.82	0.12
20	0.59	0.90	0.79	0.57	0.55	0.55	0.49	0.58	0.27	0.55	0.56	0.60	0.59	0.49	0.52	0.53	0.53	0.54	0.51	0.42	0.75	0.81	0.72	0.76	0.59	0.90	0.27
21	0.72	0.72	1.45	1.06	0.78	0.55	0.52	0.35	0.17	0.08	0.12	0.04	-0.04	-0.04	-0.04	0.14	0.31	0.46	0.22	0.19	0.38	0.37	0.43	0.36	0.39	1.45	-0.04
22	0.45	0.23	0.11	0.03	0.04	0.05	0.15	0.22	0.00	-0.12	-0.16	-0.27	-0.32	-0.11	-0.07	-0.10	0.74	0.93	1.06	0.09	0.09	0.00	0.04	0.53	0.15	1.06	-0.32
23	0.49	0.55	0.68	0.62	0.66	0.52	0.03	-0.04	-0.06	-0.01	-0.10	-0.11	-0.14	-0.05	-0.04	0.30	0.54	0.73	0.32	0.42	0.34	0.80	0.39	0.37	0.30	0.80	-0.14
24	0.23	0.15	0.63	0.96	1.13	0.84	1.13	0.90	0.32	0.05	0.05	0.10	-0.02	0.07	0.12	0.20	0.19	0.40	0.57	0.21	0.32	0.33	0.32	0.27	0.39	1.13	-0.02
25	0.33	0.37	0.22	0.65	0.22	0.26	0.40	0.53	0.20	-0.17	-0.16	-0.33	-0.31	-0.21	-0.20	-0.13	-0.03	0.00	0.13	0.47	0.55	0.55	0.62	1.10	0.21	1.10	-0.33
26	0.56	1.08	2.24	1.65	2.09	1.82	1.79	1.61	1.08	0.37	-0.18	-0.25	-0.25	-0.42	-0.23	0.10	0.64	0.63	0.40	0.97	0.91	1.14	1.66	1.49	0.87	2.24	-0.42
27	1.41	1.27	1.12	0.78	0.87	0.65	0.60	0.66	0.41	0.15	-0.24	-0.16	-0.34	-0.02	0.00	0.70	0.66	0.37	1.23	1.08	1.03	1.22	1.08	1.48	0.67	1.48	-0.34
28	1.22	0.99	0.93	1.07	1.05	0.85	0.52	0.81	1.04	0.13	-0.16	-0.30	-0.36	-0.20	0.16	0.89	0.46	0.30	0.67	0.80	0.84	0.92	0.54	0.86	0.58	1.22	-0.36
29	0.92	0.82	0.12	0.14	0.04	-0.01	0.15	0.29	0.46	0.03	0.01	0.24	0.23	0.43	0.42	0.47	0.72	1.04	1.19	1.21	1.66	0.91	0.71	0.95	0.55	1.66	-0.01
30	0.90	0.65	0.53	0.59	0.54	0.47	0.64	0.62	0.49	0.50	0.49	0.32	0.38	0.35	0.36	0.38	0.28	0.56	0.25	0.28	0.24	0.39	0.59	0.63	0.48	0.90	0.24
Avg	0.91	0.90	1.00	0.93	0.93	0.78	0.74	0.72	0.44	0.13	-0.01	-0.02	-0.04	-0.01	0.06	0.24	0.46	0.54	0.57	0.59	0.68	0.79	0.74	0.87	0.54	1.49	-0.15
Max	2.68	2.42	2.87	2.86	2.69	2.17	1.79	1.91	1.45	0.67	0.61	0.64	0.62	0.49	0.52	0.94	0.92	1.53	1.81	1.80	1.96	2.36	2.35	2.80	1.36	2.87	0.27
Min	-0.06	-0.05	-0.07	-0.08	-0.08	-0.09	-0.06	-0.10	-0.18	-0.33	-0.43	-0.64	-0.60	-0.58	-0.46	-0.36	-0.03	-0.03	-0.02	-0.07	-0.07	-0.07	-0.06	-0.07	-0.08	0.01	-0.64

**Tintina Resources, Inc.  
Black Butte Copper Project Met Tower Air Monitoring Summary  
Temperature Delta T (degrees Celsius)  
December 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.43	0.34	0.71	0.98	1.20	1.11	0.52	0.81	0.56	0.64	0.09	0.08	0.17	0.24	0.35	0.38	0.44	0.22	0.33	0.58	1.02	0.37	0.24	0.46	0.51	1.20	0.08
2	0.51	0.87	0.95	0.73	0.64	0.68	0.56	0.56	0.48	0.48	0.44	0.46	0.45	0.42	0.42	0.40	0.21	0.12	0.23	0.35	0.43	0.44	0.50	0.48	0.49	0.95	0.12
3	0.49	0.42	0.43	0.32	0.33	0.30	0.30	0.14	0.28	0.11	0.08	-0.04	-0.07	0.04	-0.02	0.13	0.34	0.37	0.47	0.63	0.71	0.59	0.67	1.01	0.33	1.01	-0.07
4	0.90	0.80	0.40	0.40	0.60	0.32	0.29	0.15	-0.01	-0.02	0.03	0.04	0.06	0.10	0.26	0.29	0.42	0.53	0.46	0.44	0.49	0.38	0.55	0.51	0.35	0.90	-0.02
5	0.41	0.38	0.40	0.43	0.44	0.41	0.50	0.42	0.39	0.28	0.25	0.16	0.00	-0.02	0.02	0.16	0.29	0.33	0.51	0.63	0.39	0.20	0.16	0.21	0.31	0.63	-0.02
6	0.26	0.33	0.39	0.32	0.34	0.04	0.05	0.09	0.04	-0.10	-0.31	-0.22	-0.20	-0.20	-0.13	-0.09	-0.08	-0.11	-0.10	-0.10	-0.05	0.09	0.23	0.32	0.03	0.39	-0.31
7	0.37	0.37	0.49	0.12	0.27	0.30	0.15	0.09	0.13	0.04	-0.17	-0.25	-0.11	0.01	0.01	0.07	0.23	0.24	0.13	0.17	0.03	0.00	0.01	0.00	0.11	0.49	-0.25
8	0.01	0.12	0.14	0.07	0.00	-0.03	-0.04	-0.03	-0.06	-0.09	-0.08	-0.06	-0.13	-0.12	-0.01	0.15	0.57	0.67	1.45	1.43	1.46	1.57	1.72	1.42	0.42	1.72	-0.13
9	2.03	1.65	1.87	1.44	1.64	1.82	1.65	0.86	0.28	-0.03	0.07	0.30	0.16	-0.11	0.00	-0.03	0.17	0.09	0.08	0.12	0.34	0.33	0.29	0.08	0.63	2.03	-0.11
10	-0.03	0.28	1.32	1.47	1.72	0.36	0.04	0.10	0.09	0.02	-0.05	-0.03	0.09	0.33	0.20	0.19	0.21	0.66	0.97	1.95	1.39	1.50	1.94	2.23	0.71	2.23	-0.05
11	1.37	0.56	0.02	0.58	0.64	0.62	0.32	0.36	0.16	0.24	0.40	0.23	0.23	0.32	0.22	0.23	0.43	0.38	0.54	0.95	0.62	0.71	0.25	0.18	0.44	1.37	0.02
12	0.20	0.10	0.15	0.08	0.18	0.46	0.21	0.11	0.23	0.02	-0.03	-0.11	-0.14	-0.01	0.05	0.11	0.10	0.37	0.81	0.60	0.63	0.31	0.70	0.68	0.24	0.81	-0.14
13	0.83	1.17	0.88	0.50	0.31	0.50	1.17	1.98	1.83	0.96	0.65	0.56	0.34	0.27	0.95	1.29	0.82	1.83	1.78	1.97	1.78	2.72	2.48	2.52	1.25	2.72	0.27
14	3.25	2.17	2.37	2.15	2.08	2.41	2.67	2.50	1.96	1.48	0.60	0.73	0.49	0.03	-0.03	0.12	0.33	0.50	0.43	0.82	1.63	1.33	1.50	1.23	1.36	3.25	-0.03
15	1.49	1.79	1.68	1.47	1.08	1.24	1.41	2.26	1.25	0.99	0.50	0.33	0.45	0.08	0.15	0.63	1.86	1.70	2.04	3.12	2.91	2.97	2.58	2.17	1.51	3.12	0.08
16	2.61	2.29	2.29	2.50	1.78	1.18	0.73	0.83	0.66	1.77	0.63	0.17	0.14	0.12	0.11	0.46	1.08	1.51	2.14	0.71	1.50	1.59	1.51	0.82	1.21	2.61	0.11
17	1.07	0.48	0.25	0.12	0.12	0.06	0.02	0.06	0.11	0.15	0.19	0.27	0.09	-0.02	0.07	0.15	0.23	0.32	0.33	0.37	0.23	0.43	0.54	0.30	0.25	1.07	-0.02
18	0.31	0.22	0.15	0.11	0.13	0.19	0.19	0.18	0.23	0.23	0.13	0.01	0.01	0.02	0.05	0.17	0.46	0.93	1.00	0.65	0.89	0.83	1.38	0.74	0.38	1.38	0.01
19	1.04	1.15	1.34	1.20	0.65	0.92	1.64	1.62	0.90	0.44	0.95	1.24	0.52	0.10	0.04	0.36	1.85	1.71	0.84	1.23	1.57	1.48	2.00	1.53	1.10	2.00	0.04
20	1.31	2.12	0.97	1.78	1.59	1.42	1.20	1.12	1.03	0.23	0.10	0.09	0.04	Au	Au	Au	0.69	0.84	1.07	1.70	1.62	1.86	1.72	1.41	1.14	2.12	0.04
21	0.99	0.62	0.62	0.85	1.50	1.45	1.65	1.31	0.72	1.64	0.61	0.15	0.25	0.35	0.64	1.34	1.55	0.85	0.66	0.47	0.34	0.69	0.92	1.35	0.90	1.65	0.15
22	0.76	0.98	1.75	1.32	1.83	1.62	2.12	1.41	1.44	1.40	0.97	1.35	1.84	0.54	0.64	0.64	0.72	0.74	1.19	0.64	1.20	0.88	0.48	0.80	1.14	2.12	0.48
23	0.73	0.83	0.38	0.11	0.21	0.81	1.40	0.78	1.08	1.44	1.28	0.18	0.05	0.04	0.24	0.56	0.79	0.80	0.34	0.91	1.14	1.28	0.95	1.26	0.73	1.44	0.04
24	0.12	-0.05	-0.02	-0.03	-0.09	-0.16	-0.19	-0.20	-0.16	-0.25	-0.25	-0.29	-0.36	-0.34	-0.30	-0.21	-0.17	-0.16	-0.12	-0.10	-0.03	0.40	0.68	0.31	-0.08	0.68	-0.36
25	0.61	-0.12	-0.12	-0.12	-0.12	-0.10	-0.10	-0.11	-0.12	-0.14	-0.23	-0.28	-0.29	-0.13	0.27	0.32	0.68	2.40	1.85	0.93	0.57	0.28	0.80	2.13	0.37	2.40	-0.29
26	1.27	0.99	0.69	0.76	0.17	0.08	0.35	0.33	0.30	0.13	-0.03	-0.16	-0.10	-0.19	-0.11	0.19	0.42	1.10	0.72	0.17	0.08	0.02	0.02	0.08	0.30	1.27	-0.19
27	0.12	0.10	0.14	0.09	0.13	0.08	0.26	0.08	0.12	0.14	-0.12	-0.19	0.30	0.14	0.32	0.29	0.52	0.67	0.71	2.33	2.19	2.13	1.11	1.01	0.53	2.33	-0.19
28	1.89	1.05	0.35	0.19	0.16	0.16	0.16	0.78	1.20	2.39	0.89	0.19	-0.01	0.09	0.16	0.54	0.98	2.67	0.98	1.14	1.59	1.81	2.04	2.02	0.98	2.67	-0.01
29	2.11	1.47	2.19	1.38	1.85	1.55	1.56	1.73	1.21	1.08	1.16	0.69	0.59	0.63	1.05	1.10	0.86	0.61	0.45	0.73	0.87	1.25	1.58	1.61	1.22	2.19	0.45
30	1.33	0.60	0.12	0.08	0.17	0.50	0.48	0.72	0.48	-0.04	-0.06	0.04	-0.15	-0.11	0.14	0.49	0.53	1.09	1.41	1.90	1.57	1.17	1.16	1.24	0.62	1.90	-0.15
31	1.09	0.94	0.58	0.38	0.76	2.11	2.73	2.03	2.13	1.66	2.04	0.04	-0.10	-0.03	-0.06	-0.04	-0.03	0.00	-0.01	-0.01	0.20	0.14	0.08	0.05	0.69	2.73	-0.10
Avg	0.96	0.81	0.77	0.70	0.72	0.72	0.77	0.74	0.61	0.56	0.35	0.18	0.15	0.09	0.19	0.35	0.56	0.77	0.76	0.88	0.95	0.96	0.99	0.97	0.65	1.72	-0.02
Max	3.25	2.29	2.37	2.50	2.08	2.41	2.73	2.50	2.13	2.39	2.04	1.35	1.84	0.63	1.05	1.34	1.86	2.67	2.14	3.12	2.91	2.97	2.58	2.52	1.51	3.25	0.48
Min	-0.03	-0.12	-0.12	-0.12	-0.12	-0.16	-0.19	-0.20	-0.16	-0.25	-0.31	-0.29	-0.36	-0.34	-0.30	-0.21	-0.17	-0.16	-0.12	-0.10	-0.05	0.00	0.01	0.00	-0.08	0.39	-0.36

**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Solar Radiation (watts m<sup>2</sup>)**  
**October 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.0	0.0	0.0	0.0	0.0	0.0	17.9	158.7	317.5	423.3	488.2	568.8	614.8	599.7	516.7	358.2	190.1	22.5	1.0	0.0	0.0	0.0	0.0	0.0	178.2	614.8	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	9.2	58.4	157.5	344.6	625.0	669.2	667.0	606.1	522.1	380.6	209.6	52.0	0.3	0.0	0.0	0.0	0.0	0.0	179.2	669.2	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	3.5	40.9	115.4	159.3	288.8	616.8	708.3	450.1	226.5	106.1	262.3	28.8	0.0	0.0	0.0	0.0	0.0	0.0	125.3	708.3	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	5.6	77.4	181.4	153.3	291.9	569.1	253.4	98.9	180.4	112.8	51.4	9.7	0.0	0.0	0.0	0.0	0.0	0.0	82.7	569.1	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	2.3	16.2	41.8	115.7	469.5	466.3	217.3	125.4	148.3	287.7	168.1	30.3	0.0	0.0	0.0	0.0	0.0	0.0	87.0	469.5	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	7.8	69.8	257.5	355.0	575.2	630.0	640.1	598.5	502.6	196.1	118.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0	165.1	640.1	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	4.1	115.8	271.5	453.3	556.2	591.9	626.9	576.2	479.8	320.9	197.2	23.3	0.0	0.0	0.0	0.0	0.0	0.0	175.7	626.9	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	5.3	46.9	106.6	88.0	59.8	97.6	164.0	156.7	44.1	26.9	11.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	33.7	164.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	28.3	75.2	174.2	443.9	609.7	616.9	576.0	484.8	331.2	140.2	16.0	0.0	0.0	0.0	0.0	0.0	0.0	145.8	616.9	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	4.5	104.8	272.0	418.0	523.3	589.7	601.9	563.9	418.3	326.8	170.3	26.9	0.0	0.0	0.0	0.0	0.0	0.0	167.5	601.9	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	1.4	21.1	54.7	95.1	208.8	311.8	374.8	396.4	450.1	319.9	171.0	26.6	0.0	0.0	0.0	0.0	0.0	0.0	101.3	450.1	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	3.4	89.6	280.2	432.7	542.2	607.6	613.9	561.7	464.1	326.1	164.8	10.4	0.0	0.0	0.0	0.0	0.0	0.0	170.7	613.9	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	1.1	17.6	28.5	57.9	217.7	363.4	313.6	383.4	209.7	251.7	93.9	8.3	0.0	0.0	0.0	0.0	0.0	0.0	81.1	383.4	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	4.6	47.7	182.3	404.2	477.2	328.3	92.7	110.7	79.5	65.2	34.1	3.2	0.0	0.0	0.0	0.0	0.0	0.0	76.2	477.2	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.5	14.1	22.3	54.2	76.6	108.6	205.4	286.7	96.3	43.9	104.0	17.2	0.0	0.0	0.0	0.0	0.0	0.0	42.9	286.7	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	8.3	56.2	97.1	138.1	492.9	422.6	499.4	278.3	133.5	5.4	0.0	0.0	0.0	0.0	0.0	0.0	89.1	499.4	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	1.4	28.6	82.4	156.7	267.1	169.5	213.7	234.4	282.6	170.1	42.9	9.5	0.0	0.0	0.0	0.0	0.0	0.0	69.1	282.6	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	3.0	81.2	253.0	390.8	498.3	561.9	554.2	501.9	391.8	269.2	82.8	7.3	0.0	0.0	0.0	0.0	0.0	0.0	149.8	561.9	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.8	34.1	117.5	132.8	279.6	152.4	107.6	239.4	204.4	143.1	116.2	9.8	0.0	0.0	0.0	0.0	0.0	0.0	64.1	279.6	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	1.1	47.7	123.8	123.7	62.5	98.3	392.2	375.8	232.8	83.7	54.8	7.3	0.0	0.0	0.0	0.0	0.0	0.0	66.8	392.2	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.7	46.1	242.6	396.9	506.0	567.3	541.4	410.4	361.3	324.4	164.9	7.4	0.0	0.0	0.0	0.0	0.0	0.0	148.7	567.3	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	39.2	62.1	130.8	188.5	165.6	85.8	61.8	34.8	14.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	33.2	188.5	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	100.8	210.6	430.8	525.4	532.6	460.7	259.4	79.6	10.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	109.7	532.6	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	56.0	133.2	463.1	514.8	554.5	540.5	424.0	253.4	110.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	127.6	554.5	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	67.3	172.2	220.2	345.8	596.0	373.3	170.8	101.8	35.6	1.1	0.0	0.0	0.0	0.0	0.0	0.0	87.7	596.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.1	21.7	84.7	163.2	254.4	393.5	421.7	328.4	207.5	152.3	32.8	1.2	0.0	0.0	0.0	0.0	0.0	0.0	85.9	421.7	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	22.3	42.5	62.9	69.4	59.1	101.4	172.3	77.5	22.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	26.6	172.3	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.8	61.7	110.8	155.4	145.3	153.9	109.3	127.3	97.6	24.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	41.5	155.4	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	21.5	46.1	79.6	282.2	342.1	233.7	145.0	75.4	25.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.3	342.1	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	54.1	226.4	435.4	449.8	619.6	446.9	102.7	115.2	44.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	104.5	619.6	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.2	14.1	69.7	209.6	346.2	230.3	285.9	233.4	124.1	98.6	45.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	69.1	346.2	0.0
Avg	0.0	0.0	0.0	0.0	0.0	0.0	2.6	41.6	121.6	205.2	326.9	385.8	411.1	360.9	277.1	187.4	98.3	11.1	0.0	0.0	0.0	0.0	0.0	0.0	101.2	464.6	0.0
Max	0.0	0.0	0.0	0.0	0.0	0.0	17.9	158.7	317.5	453.3	625.0	669.2	708.3	606.1	522.1	380.6	262.3	52.0	1.0	0.0	0.0	0.0	0.0	0.0	179.2	708.3	0.0
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	8.3	42.5	59.8	69.4	59.1	85.8	44.1	26.9	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.6	155.4	0.0

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**Tintina Resources, Inc.**  
**Black Butte Copper Project Met Tower Air Monitoring Summary**  
**Solar Radiation (watts m^2)**  
**November 2012**

Day	<< Hour >>																								Avg	Max	Min
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.4	50.6	88.9	256.7	209.8	205.6	106.8	79.7	121.9	27.2	0.0	0.0	0.0	0.0	0.0	0.0	48.9	256.7	0.0	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	141.5	222.7	282.6	384.6	200.9	56.4	38.6	107.5	32.5	0.3	0.0	0.0	0.0	0.0	0.0	61.9	384.6	0.0	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.5	201.0	283.2	416.3	439.3	461.0	438.3	248.9	91.9	22.9	0.0	0.0	0.0	0.0	0.0	0.0	109.4	461.0	0.0	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.6	79.8	98.8	144.8	263.9	157.6	239.5	287.5	221.7	15.1	0.0	0.0	0.0	0.0	0.0	0.0	63.6	287.5	0.0	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	34.0	82.6	128.2	194.0	111.2	172.5	138.7	53.2	12.4	0.5	0.0	0.0	0.0	0.0	0.0	38.8	194.0	0.0	
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	89.5	130.9	139.8	151.3	156.0	171.1	153.2	105.4	33.4	0.4	0.0	0.0	0.0	0.0	0.0	47.9	171.1	0.0	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	163.9	308.8	441.0	156.7	158.5	169.7	129.6	54.2	33.8	0.0	0.0	0.0	0.0	0.0	0.0	67.9	441.0	0.0	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	14.0	20.5	27.4	29.3	45.4	78.0	51.9	51.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	13.7	78.0	0.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	19.3	45.5	82.4	146.3	126.0	175.9	146.1	83.8	19.8	0.0	0.0	0.0	0.0	0.0	0.0	35.3	175.9	0.0	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	62.3	203.6	338.1	440.5	371.7	214.5	149.1	97.8	22.2	0.0	0.0	0.0	0.0	0.0	0.0	79.6	440.5	0.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	70.2	183.3	228.8	485.7	306.2	300.7	121.1	187.4	40.8	0.0	0.0	0.0	0.0	0.0	0.0	80.7	485.7	0.0	
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	50.6	126.3	222.7	193.9	380.0	234.8	182.3	86.6	18.7	0.0	0.0	0.0	0.0	0.0	0.0	62.7	380.0	0.0	
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	125.7	286.6	380.8	292.0	365.4	194.5	104.3	39.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	75.2	380.8	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	43.0	94.4	119.6	160.5	163.0	155.4	176.9	111.9	26.6	0.0	0.0	0.0	0.0	0.0	0.0	43.9	176.9	0.0	
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	68.1	275.4	385.7	435.3	438.3	393.7	300.7	178.3	35.7	0.0	0.0	0.0	0.0	0.0	0.0	104.9	438.3	0.0	
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	109.6	247.0	296.7	211.1	157.8	137.6	132.4	72.4	7.1	0.0	0.0	0.0	0.0	0.0	0.0	57.6	296.7	0.0	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	96.3	259.2	356.4	406.6	423.9	369.2	244.1	137.2	15.6	0.0	0.0	0.0	0.0	0.0	0.0	96.5	423.9	0.0	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	35.2	125.6	336.5	350.5	337.2	262.7	224.9	101.6	14.6	0.0	0.0	0.0	0.0	0.0	0.0	74.6	350.5	0.0	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	91.4	195.1	325.0	332.4	363.9	259.7	287.1	139.1	22.7	0.0	0.0	0.0	0.0	0.0	0.0	84.3	363.9	0.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	44.5	190.6	143.8	128.6	155.5	188.2	109.3	57.6	10.0	0.0	0.0	0.0	0.0	0.0	0.0	43.0	190.6	0.0	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	9.7	9.1	35.4	129.3	133.7	50.6	44.3	29.7	7.4	0.0	0.0	0.0	0.0	0.0	0.0	18.7	133.7	0.0	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	72.5	214.9	138.1	168.1	201.1	97.0	110.8	131.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	48.1	214.9	0.0	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	42.8	79.5	136.1	199.9	218.8	166.0	166.0	92.4	11.1	0.0	0.0	0.0	0.0	0.0	0.0	46.5	218.8	0.0	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	40.6	107.2	74.1	32.2	110.2	139.2	161.4	46.4	7.7	0.0	0.0	0.0	0.0	0.0	0.0	30.0	161.4	0.0	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	124.5	205.1	105.5	256.9	148.3	103.6	66.7	25.7	6.7	0.0	0.0	0.0	0.0	0.0	0.0	43.6	256.9	0.0	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	49.8	98.8	150.7	217.5	370.1	322.0	159.2	76.7	11.4	0.0	0.0	0.0	0.0	0.0	0.0	60.8	370.1	0.0	
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	44.4	126.6	238.2	301.7	279.1	214.8	140.1	48.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	58.5	301.7	0.0	
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	50.3	196.3	300.1	356.9	380.5	304.2	187.7	60.8	11.1	0.0	0.0	0.0	0.0	0.0	0.0	77.0	380.5	0.0	
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	28.7	190.8	166.8	183.1	171.8	111.1	106.1	67.4	6.1	0.0	0.0	0.0	0.0	0.0	0.0	43.0	190.8	0.0	
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	16.7	39.0	69.5	45.8	41.8	31.4	19.9	1.5	0.0	0.0	0.0	0.0	0.0	0.0	11.5	69.5	0.0	
Avg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	68.8	157.1	214.6	244.2	238.2	195.7	149.3	90.0	17.1	0.0	0.0	0.0	0.0	0.0	0.0	57.6	289.2	0.0	
Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.4	201.0	308.8	441.0	485.7	461.0	438.3	300.7	221.7	40.8	0.5	0.0	0.0	0.0	0.0	0.0	109.4	485.7	0.0	
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	9.1	27.4	29.3	45.4	41.8	31.4	19.9	1.5	0.0	0.0	0.0	0.0	0.0	11.5	69.5	0.0	

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## Tintina Resources, Inc.

### Black Butte Copper Project Met Tower Air Monitoring Summary

#### Solar Radiation (watts m<sup>2</sup>)

#### December 2012

Day	<< Hour >>																								Avg	Max	Min	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	15.9	117.9	266.1	241.2	180.0	136.1	73.0	81.5	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.5	266.1	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	16.9	28.2	42.4	43.2	41.6	32.1	14.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	43.2	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	32.1	56.5	226.8	385.0	335.2	218.0	306.7	135.1	21.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.6	385.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	36.1	48.1	50.0	177.0	163.4	80.1	19.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.6	177.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	31.4	96.0	101.6	90.3	245.0	338.6	214.7	129.0	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.7	338.6	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	26.6	118.9	142.0	63.9	52.9	61.8	39.3	16.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.9	142.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	22.2	126.7	307.6	391.4	251.6	114.1	79.6	41.6	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.0	391.4	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.2	56.4	103.8	211.1	376.8	294.3	182.5	66.2	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.3	376.8	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	25.5	117.7	278.1	191.6	206.1	352.8	172.6	56.3	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.7	352.8	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	37.0	112.5	246.6	364.7	166.7	93.6	64.4	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3	364.7	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.9	53.7	65.7	65.2	89.5	67.2	77.5	35.8	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.2	89.5	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	34.3	58.8	66.1	71.2	98.1	95.5	35.6	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.8	98.1	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	32.9	124.5	176.4	358.5	371.7	327.4	245.2	131.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.2	371.7	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.6	77.2	145.5	329.6	251.0	296.6	104.6	39.4	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.9	329.6	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.4	89.6	209.0	273.5	364.2	328.9	267.5	136.1	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.8	364.2	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	102.1	154.1	337.8	371.7	339.3	126.7	48.5	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.7	371.7	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.8	98.3	157.7	159.6	150.2	217.5	104.6	101.1	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.8	217.5	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.1	72.3	251.2	401.7	389.4	300.4	230.0	158.1	16.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	76.8	401.7	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	23.8	82.0	164.5	184.9	331.6	331.4	275.8	129.7	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.0	331.6	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.2	90.9	251.3	340.3	378.4	Au	Au	Au	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.6	378.4	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4	99.0	182.4	239.6	261.9	234.6	164.2	84.7	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.1	261.9	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	18.6	68.6	129.5	135.2	161.8	164.9	88.5	38.9	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.7	164.9	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.7	146.2	268.8	342.9	352.4	319.8	228.0	99.8	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.2	352.4	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	92.2	124.2	154.8	231.2	161.0	100.3	45.2	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.0	231.2	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	22.9	73.6	138.0	171.3	206.1	278.2	186.1	144.9	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.6	278.2	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	46.7	105.9	159.4	125.3	119.2	102.1	44.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.1	159.4	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	60.5	186.3	239.0	261.2	256.4	172.3	108.4	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.5	261.2	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.7	196.8	286.2	323.5	483.3	352.4	270.2	94.0	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.2	483.3	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	17.9	85.3	170.1	137.5	141.5	164.3	144.6	57.7	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.6	170.1	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	35.9	72.1	94.8	140.9	160.2	161.5	114.5	15.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	161.5	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.5	141.2	304.1	292.8	201.9	166.9	109.8	45.4	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.2	304.1	0.0
Avg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	21.7	85.5	168.3	216.8	244.2	219.1	151.0	77.2	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.4	278.1	0.0
Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	46.7	196.8	307.6	401.7	483.3	352.8	306.7	158.1	21.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.2	483.3	0.0
Min	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	16.9	28.2	42.4	43.2	41.6	32.1	14.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	43.2	0.0





















**APPENDIX B: PERFORMANCE AUDIT REPORTS,  
FOURTH QUARTER 2012**

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Meteorological Parameters Audit Form

Audit Start Time : 13:15      Audit End Time : 15:15  
 Client: Tintina Resources      Date: 12/20/12  
 Site: Black Butte  
 AUDITOR: Chris Hiltunen      STATION OPERATOR: Jeff Bell

Temperature

Audit Device      Sensors  
 Control Company - digital thermometer Model 61220-601      Climatronics Model 100093  
 Serial Number      9935525  
 Last certified:      8/6/2010  
 Fahrenheit = centigrade \* 9/5 + 32  
 centigrade = (Fahrenheit - 32) \* 5/9

Audit Value	DAS 2m	DAS 19m	Diff 2m	Diff 19m	Diff 2m-19m
C	C	C	C	C	C
32.3	32.24	32.22	0.06	0.08	0.02
15.7	15.46	15.46	0.24	0.24	0.00
0.2	0.16	0.17	0.04	0.03	-0.01

Wind Direction

Sensor height: 10 Meter  
 Sensor (Make/model number): Climatronics/ WMIII  
 Serial Number :  
 Magnetic Declination 12.6 from NOAA website  
 Measured Crossarm Degrees 77  
 Difference 0.4  
 Audit Device: Climatronics 101966, SN 70  
 Windvane held on crossarm = 89.7

Linearity Check from DAS

Setpoint	Clockwise	Counter-CW	Diff CW	Diff CCW
0	0.1	0.1	0.1	0.14
30	30.4	29.3	0.4	-0.7
60	59.9	58.6	-0.1	-1.4
90	89.2	88.1	-0.8	-1.9
120	119.2	117.9	-0.8	-2.1
150	148.8	147.8	-1.2	-2.2
180	178.8	178.0	-1.2	-2.0
210	208.9	208.1	-1.1	-1.9
240	239.1	238.2	-0.9	-1.8
270	269.3	268.4	-0.7	-1.6
300	299.9	299.0	-0.1	-1.0
330	330.3	329.4	0.3	-0.6
MAX DIFF =			-1.2	-2.2

Threshold Torque  
 Started at 3.0 gm-cm setpoint on torque disk

Wind Speed

Sensor height: 10 Meter  
 Sensor (make/model number): Climatronics/ WMIII  
 Serial Number :  
 Calibration device: Climatronics Model 101252-1  
 SN 60.0

Torque watch - threshold results  
 CW 0.1 gm-cm  
 CCW 0.1 gm-cm

Known Value	Known Value	Station Value	DAS Value	Diff.
RPM	m/s	m/s	m/s	m/s
0	0.0	0.22	0.22	
300	6.6	NA	NA	- 300 RPM synchronous motor broken
600	13.1	13.18	0.08	

Relative Humidity

Audit Device: Dwyer Sling Psychrometer  
 Audit Value: NA %RH      Too cold for psychrometer to work.  
 Station Value: 43.0 %RH  
 Diff: NA %RH

**Barometric Pressure**

Audit Device: Control Company NIST Traceable, no SN. Calibrated to Bison Mercury barometer on 12/14/2012

Audit Value: 24.33 in Hg  
Station Value: 24.24 in Hg  
Diff: -0.09 in Hg

**Precipitation**

Rain Gauge = MetOne Model 375

Level checked OK

Wind Screen in place Heater was not plugged in, snow in funnel.

8" opening

200 ml water added 22 tips recorded  
Calibration is 8.24 ml per tip

$200/8.24 = 24.27$  tips - Audit Value  
 $\% \text{ diff} = 22-24.27/24.27*100 = -9.30\%$

Signature Site Operator : \_\_\_\_\_

Signature Auditor :  \_\_\_\_\_

Note: These preliminary results are subject to appropriate changes following verification of audit equipment, procedures, and calculations.